Creation of Metacognitive Knowledge and Self-Awareness in the Foreign Language Classroom: a Game-Theoretical Approach

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Abstract

The overall objective of this research has been the quest to increase the understanding of how metacognitive knowledge can be taught in the foreign language classroom. It revolves around the following research questions:

1. What kinds of metacognitive learner beliefs does the implementation of a separate Strategy Based Instruction (SBI) programme in three foreign language classrooms (German, French and Spanish) yield in terms of the metacognitive categories of Creating motivation, Seeking practice opportunities, and Acquisition of grammar, pronunciation and vocabulary?
2. What kind of information does the collective metacognitive structure of the learner beliefs expressed in research question 1. yield about the relevance of the SBI programme implemented for the purpose of this research?
3. What are the pedagogical implications of research questions 1. and 2. for separate SBI in the foreign language classroom in line with the recommendations of the *CEFR* [1] and the *LK06* [2] curriculum?

Metacognitive knowledge is the ability to close the gap between declarative and procedural knowledge in the language learning process (J. Michael O'Malley & Chamot, 1990). Anderson's ACT* theory (Anderson, 1996) was applied in order to analyse the collective cognitive structure of the metacognitive meaning constructed during the project period. The SBI programme was modelled as three conversational games (Osborne & Rubinstein, 1994; Pietarinen, 2007), during which the maximisation of relevance (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012) was induced. The research was a qualitative intervention which produced a multiple longitudinal exploratory case study. The analysis indicated that the constructed collective declarative knowledge provided the collective classroom context with scarce opportunites for proceduralisation. The time and quality of the effort spent on the objectives of the *CEFR* and the *LK06* were raised as critical issues. The argument is that SBI in the foreign language classroom should be more targeted than the general conversational model developed for the purpose of this research. This is allegedly due to the fact that a conversational model aimed at the development

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[1] Common European Framework of Reference for Languages.
[2] Guidelines for the teaching of foreign languages in Norway according to the 2006 national school reform.

of metacognitive knowledge needs to be firmly anchored in the individual needs of the learners in the foreign language classroom in order to produce the most relevant outcome at an aggregate level.

1 Introduction

1.1 Aims and scope

Patterns of conflict in Europe are partly due to linguistic differences (Rokkan & Hagtvet, 1989), and the development of linguistic competence is a clear goal of European integration polices such as reflected in the European Council for Language Education in Europe through the *Common European Framework of Reference for Languages* (*CEFR*). The Council defines the criteria for learning, teaching, and assessing languages across the European continent ("Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR)"). These guidelines are meant to make language education in Europe more efficient and purposeful. In the *CEFR*, there is a focus on learners being able to perform actions and tasks as a part of their development as autonomous language learners. This means that the learners' competence is related to their ability to analyse the task at hand in order to identify what has to be undertaken in order to achieve these goals. This competence is a core feature of metacognitive knowledge. Metacognitive knowledge implies being able to plan, implement and assess the language learning process for better learning efficiency and the development of self-efficacy and self-regulated learning (Dunlosky & Metcalfe, 2009; Hacker, Dunlosky, & Graesser, 2009; J. Michael O'Malley & Chamot, 1990; Oxford, 1990). In this way, metacognitive knowledge enables the learner to increase his/her control over the learning process in terms of planning, implementing and assessing the choices he/she makes during the acquisition of the target language[3].

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[3] *Target language* is used as a pedagogical concept aimed at describing the language the learners are actually learning, i.e. the L2 of the learners (The L1 is the first language, or mother tongue of the learners). The term *second language* describes the language which is used in a society alongside a dominant language used by the native speakers of the same language. An example of this phenomenon is the use of Spanish in the United States or the use of French in the former French colonies. A *foreign language* is a language which is being studied in a social context where that language is not used by a large enough population to be of relevance in that setting. This is the case with traditional instruction of the three languages represented in this research, i.e. Spanish,

The subject curriculum for foreign languages in Norway, the *LK06* national curriculum, defines three main areas for foreign language instruction in the Norwegian school system. These areas are *Language learning*, *Communication[4]* and *Language, culture and society*. The area *Language learning* reflects the above-mentioned aspects of metacognitive knowledge of the *CEFR*. According to this area, learners are to develop insight into the language learning process in resemblance to the overall perspective of the *CEFR*. The metacognitive elements of planning, implementation and assessment of language learning tasks are important features in this field[5]. The official Norwegian policies for the development of the Norwegian school system, as expressed in the work chaired by Professor Sten Ludvigsen, also emphasise the importance of metacognitive insight and self-regulated learning as a goal for the Norwegian school system. Reflective activities have been highlighted as important pedagogical tools in this respect (NOU, 2014).

The overall objective of the present research has thus been motivated by the quest to increase the understanding of how metacognitive knowledge related to

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French and German in Norwegian schools, since the learners normally do not encounter the L2 outside the school setting. However, there is a certain fuzziness regarding the use of these concepts (Cohen, 1998: 4). In this research, *target language*, *second language* and *foreign language* will therefore be used as synonyms since there is no pedagogical value to a differentiation between these three concepts for the purpose of this research. They all refer to the L2 of the learner. However, the research field will be consistently referred to as *Second Language Acquisition* (SLA) in accordance with tradition in the field.

[4] *Communication* includes both oral and written skills (Utdanningsdirektoratet). However, a revision of the Curriculum for English in 2013 divided Communication into two separate categories: Oral communication and written communication. In the case of foreign languages involved in this research (German, French and Spanish), the inclusion of oral and written skills in one category has not been altered.

[5] The other two areas are not directly related to the development of metacognitive knowledge. The main area *Communication* includes the elements of the language learning process which are traditionally related to productive and receptive skills. There is a focus on vocabulary, syntax and textual cohesion, as well as the ability to use adequate modes of written and oral communication both in terms of productive and receptive skills in the use of the target language (Utdanningsdirektoratet). The main area *Language, culture and society* covers topics traditionally related to intercultural communication.

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the learning of foreign languages can be taught in the foreign language classroom as a tool towards the development of autonomous learners. This overall objective was achieved through the analysis of data material produced by the creation and implementation of a Strategy Based Instruction (SBI) programme for the fostering of metacognitive knowledge in three upper secondary foreign language classrooms in Stavanger, Norway, during the school year of 2010-2011. The implementation of the SBI programme was a qualitative intervention in the three classrooms involved in the project. This intervention has produced a multiple longitudinal exploratory case study. There were no control groups, since causality in the form of learning outcomes were not studied. The actual evolution of the SBI programme was considered of interest *per se*. These validity aspects will be further explored in Section 3.4.

Strategy Based Instruction implies that the learners are provided with instruction related to the deployment of language learning strategies as a supportive tool in their development as language learners. Language learning strategies are learning-related and targeted actions a learner can make use of during the language learning process in order to improve self-regulated learning (J. Michael O'Malley & Chamot, 1990; Oxford, 1990). Focusing on strategy training is "perhaps the best means of increasing learners' awareness as to the benefits of systematically using strategies" (Cohen, 1998: 2). Moreover, inconsistent use of language learning strategies may be a problem in the language learning process (Cohen, 1998: 148). The development of teaching methods aimed at whole classes which cater for the diversity of individual learners' needs and styles is a way to cope with this problem (Macaro, 2001: 26-27), i.e. the challenge related to the above-mentioned inconsistent use of language learning strategies in the learners.

SBI instruction can be integrated into the normal instructional programme in the subject or it can be provided as a separate mode of instruction (Oxford, 2011: 177-180). In the present research, the SBI programme was organised as a separate instructional model, as a so-called separate SBI programme[6]. The

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[6] The rationale behind this separate SBI programme will be further explained in Section 3.3.

SBI programme was implemented in one group of learners of German, one group of learners of French and one group of learners of Spanish[7].

The project has been structured around three research questions:

1. What kinds of metacognitive learner beliefs[8] does the implementation of a separate SBI programme in three foreign language classrooms (German, French and Spanish) yield in terms of the metacognitive categories of Creating motivation, Seeking practice opportunities, and Acquisition of grammar, pronunciation and vocabulary[9]?
2. What kind of information does the collective metacognitive structure of the learner beliefs expressed in research question 1. yield about the relevance of the SBI programme implemented for the purpose of this research?
3. What are the pedagogical implications of research questions 1. and 2. for separate SBI in the foreign language classroom in line with the recommendations of the *CEFR* and the *LK06* curriculum?

The deployment of relevant learning strategies in the language learning classroom may contribute to the development of good language learners (Cohen, 1998; Cohen & Macaro, 2007; J. Michael O'Malley & Chamot, 1990;

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[7] These three languages are by far the most important foreign languages after English in the Norwegian school system (Utdanningsdirektoratet, 2013). In the Norwegian school system English, which has a separate curriculum, is not considered to be a foreign language at the same level as languages such as German, French and Spanish. English has the status of being the first language in Norway after Norwegian, which is the national language. Therefore, these three other languages may be combined in the way the present research project caters for because of their similar levels of learner proficiency. However, within the context of this research their combination with English would not be relevant since learners of English in Norwegian classrooms have a much higher proficiency level.

[8] The concept of *learner beliefs* will be further dealt with in Section 2.1. as a reflection of the knowledge the learners have constructed about the language learning process based on insight about themselves as foreign language learners.

[9] The specific content of these categories and their rationale for inclusion in this research will be further described in Section 2.4.

Oxford, 1990; Tornberg, 2000), since the frequent use of learning strategies is something which seems to be a significant characteristic of learners who perform well in the language learning process (Griffiths, 2008: 89). The frequency and efficiency of the use of metacognitive strategies correlate with higher-proficiency students to a larger extent than with lower-proficiency students (Cohen, 1998: 7). Therefore, it seems that insight into and awareness of the learning process and assessment of one's own work is an important factor in language learning processes and an important prerequisite for autonomous learning (Tornberg, 2000: 23; Anita Wenden, 1991).

The qualitative data which has emerged from the implementation of the SBI programme during 16 sessions in the three groups of learners has been treated in two different ways. The introductory and concluding sessions (Sessions 1 and 16) have been analysed based on a complete transcription of the sessions, whereas the intermediate sessions (Sessions 2-15) have been based on observation notes from the sessions. Consequently, the data elicitation procedures in the three groups of learners yielded data consisting of six transcribed sessions based on video recordings of the three introductory and the three concluding sessions during which the proposed SBI model was used. During the first session, the focus was on the learners' beliefs about the language learning process in general, but also related to the specific language they were learning. The same kind of discussion took place in the last session. The introductory and concluding sessions contained a thorough discussion related to the metacognitive behaviour of the learners. In this way the introductory and concluding sessions produced a contextual framework for the whole intervention. During the 14 intermediary sessions in the three groups of learners, i.e. a total of 42 sessions, the overall focus was on learner activities related to the topics prepared for each and every session.

The overall design of the 16 SBI sessions was divided into two parts. The first part (Sessions 2-5) dealt with basic principles and assumptions in language learning psychology, such as the dichotomy between declarative and procedural

knowledge[10], learning strategies and the importance of metacognition in the language learning process[11] (Dunlosky & Metcalfe, 2009; Zoltán Dörnyei, 2009; Israel, Block, Bauserman, & Kinnucan-Welsch, 2005; J. Michael O'Malley & Chamot, 1990; Tornberg, 2000). The second part of the SBI programme (Sessions 6-15) was based on the categorisation of metacognitive learning strategies developed by Oxford (1990). The purpose was to instigate classroom activities aimed at the development of metacognitive knowledge in the language learning process, since during the teaching process, the "[…] teachers can influence the accuracy of students' beliefs about L2 learning and their use of learning strategies" (Oxford, 2011: 71). The outcome of the influence of learner beliefs[12] during the L2 learning process should be the development of a meaningful systematic learning behaviour. This meaningful systematic learning behaviour can be represented in production systems (Anderson, 1996), i.e. a cognitive model which provides information in terms of how the learner has to behave in order to reach the goal of improving the language learning process. A production system is a cognitive model aimed at the proceduralisation of declarative knowledge, i.e. the ability to transfer theoretical knowledge into practical skills (Anderson, 1996; J. Michael O'Malley & Chamot, 1990). These production systems can be represented through a system of IF... THEN clauses, such as "IF I want to practise my [L2], THEN I must seek practice opportunities where the topic is [x]". The more such meaningful IF … THEN clauses are stored in long term memory in a given field, the more efficient these production systems will be for the learner. The

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[10] This dichotomy refers to the difference between knowledge which can be declared in some way, such as grammatical rules and the meaning of words when the concept is applied to language learning processes. Procedural knowledge is declarative knowledge used in a real life setting such as the actual use of the grammatical rules in a sentence or the correct use of a word according to its semantic meaning (J. Michael O'Malley & Chamot, 1990).

[11] The rationale behind the metacognitive approach to language teaching has been outlined in the first part of this introduction.

[12] The age group of the learners was 15-16 years. In Norway, the concept *students* is applied for learners at a college or university level. This is why the concept of *student beliefs* (Oxford, 2011: 71) has been transformed into *learner beliefs* for the purpose of this research. Both students and learners can be considered to be persons who receive the benefit of being provided with instruction in a subject.

proceduralisation of a given skill requires extensive rehearsal of the practical actions related to the declarative knowledge which has been developed.

In a Vygotskyan social learning model (Cole, John-Steiner, Scribner, & Souberman, 1978; Daniels, Cole, & Wertsch, 2007; Kozulin, Gindis, Ageyev, & Miller, 2007), the instructional process should be as sensitive as possible in order to develop the learners' Zone of Proximal Development (ZPD). The principle of development of the ZPD of the learner implies that the learning potential of the learners, as defined by a more competent person, is gradually expanded so as to extend the learning horizon the learner is potentially able to reach. Language is the vehicle through which this process is fostered. In terms of the acquisition of language learning strategies, the potential for learning to make adequate use of such strategies lies within the ZPD of the learner (Cohen & Macaro, 2007: 53). The process of influencing the learners' beliefs about L2 learning and their use of learning strategies should therefore be based on insight into how the learners actually create their own learning horizon during the instructional process in order to make the expansion of the ZPD as relevant as possible for the learner in the foreign language classroom.

1.2 Background

The current research is rooted in the field of Foreign Language Didactics (FLD). FLD studies aim at enhancing the quality of methods of second language instruction and acquisition. The overall aim of the present research is to increase the understanding of how language learners can be provided with Strategy Based Instruction in the foreign language classroom in compliance with the recommendations of the *CEFR* and the *LK06*. The teaching of metacognitive learning strategies is not based on an overall comprehensive and systematic method of language teaching. It is not particularly related to any of the conventional methods of language teaching, such as the grammar-translation method with its formal-deductive approach, the direct method with its informal-inductive approach, the audio-lingual method with its behaviourist approach, the communicative method with its focus on the autonomous use of

speech acts[13] or any of the alternative methods, such as Total Physical Response, Silent Way, Suggestopedia and Community Language Learning (Byram, 2004). However, it supports conventional and alternative ways of language teaching and may thus be combined with different methodological approaches.

SBI is based on the fact that, apart from teaching elements pertaining to different aspects of the language learning process, such as grammar, vocabulary and cultural knowledge, the teacher also provides learners with specific knowledge about the characteristics of the different learning strategies and their practical use as a support to the overall language learning process. This educational approach is in line with the guidelines provided by the *Common European Framework of Reference for Languages*, the *CEFR*. The *CEFR* is based on an action-oriented approach to language teaching, i.e. a shift from a content-directed approach to language teaching to a competence-directed curriculum[14]. The *CEFR* defines action-related approaches as ways to consider the language learner as "social agents", i.e. as "members of society who have tasks (not exclusively language-related) to accomplish in a given set of circumstances, in a specific environment and within a particular field of action" ("Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR)": 9). In this perspective metacognitive competence must be understood as an important step towards a gradual development of action-oriented linguistic competence in accordance with the

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[13] A speech act is an utterance which is made in order to achieve a certain purpose with the words used (Urmson & Sbisà, 1962, 1975). The purposes and intentions behind the speech act may be analysed according to their semantic value, such as [commanding], [asking], [promising] and [wondering].

[14] Within the framework of this research, such a focus on competence is closely related to the existence of relevant metacognitive production systems in the long term memory of the learners. Production systems are cognitive mental systems which organise a person's behavioural pattern, and within the framework of this research this behavioural pattern is related to the language learning process itself. The conceptual basis of such production systems has been dealt with in Section 1.1. and will be further enlightened in Section 2.3.

CEFR. This approach to the content of the learning culture[15] in foreign language classrooms is thus in line with salient points of political guidelines for European integration through the *CEFR*.

Studies which aim at developing the quality of second language instruction include research on written and spoken learner language in order to identify interlanguage[16] processes understood as the transitional development from first language (L1) to target language (L2), the importance of interactional approaches to language learning, and functional approaches to learner language through conversation analysis (Ellis & Barkhuizen, 2005; Lightbown & Spada, 2006; Mackey & Gass, 2005). This kind of both quantitative and qualitative research uses different samples of learner language, verbal reports and analysis of classroom interaction and conversation in order to develop a deeper understanding of the evolution of L2 learner output. On a narrower basis, interlanguage processes and cross-linguistic influence in language learning have contributed insight into issues such as semantics, syntax, discourse, phonetics and phonology. These approaches have importance for the understanding of aspects of the language learning process represented through the cross-section between different combinations of L1 and L2 (Ellis, 2008; Odlin, 1997; Saville-Troike, 2006). Research in the field aims at establishing systems and categories for a better understanding of interlanguage processes and second language acquisition. However, a systematic uptake of these insights into the language learning process in a one-year dialogic classroom interaction model aimed at the analysis of metacognitive learner development

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[15] Learning culture is understood as the aggregate set of beliefs, expectations, emotions and attitudes which create the groups dynamics in the foreign language classroom in accordance with the definitions and understanding of culture provided by Gesteland (2002), Hall (1977, 1989), Hinkel (1999), Hofstede (2001), Kramsch (1998), Trompenaars & Hampden-Turner (1998) and Valdes (1986).

[16] Interlanguage is the learner language which develops along the path of L2 acquisition from the knowledge of only the L1 towards a full-fledged mastery of the L2 (Byram, 2004: 307-309). The interlanguage process contains developmental characteristics related to the acquisition of all the aspects of the language learning process, such as grammar, pronunciation and vocabulary. These three important fields of learning are also reflected in the research questions as three of five aspects of the language learning process.

has not been reflected in FLD research as far as the scope of this research project has managed to establish.

The originality of this project lies first and foremost in the fact that a game-theoretical approach has been used in order to establish a formal pragmatic framework for the study of classroom interactions. A game-theoretical approach to the study of the implementation of the SBI programme implies that the classroom interactions are considered to be conversational games[17] during which the interactants make decisions which lead to a particular solution of the games. In this way, the classroom interactions are modelled formally as situations of human communication. This game-theoretical approach to the classroom interactions will be further established in Sections 3.1.1. and 3.1.2. in line with core principles pertaining to game theory (Osborne & Rubinstein, 1994) and game theory applied to pragmatics and linguistic meaning (Benz, Jäger, & Rooij, 2006; Pietarinen, 2007). The ACT* (Adaptive Control of Thought) theory[18] with its focus on cognitive models (Anderson, 1996) has been used in order to analyse the structure of the collective cognitive meaning which has been produced during this qualitative intervention.

1.2.1 Research areas in the field of second language learning strategies

Research on second language learning strategies has its origins in 40 years of research on interlanguage and its relationship with the communicative strategies of language learners. From a conceptual point of view, Oxford's and O'Malley and Chamot's seminal works on theoretical and practical approaches towards a categorisation of language learning strategies are important (J. Michael O'Malley & Chamot, 1990; Oxford, 1990, 2011). These research issues have spurred an interest in the possible effects of Strategy Based

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[17] A conversational game is a conversational structure which is analysed according to the principles of game theory. The concept of conversational games will be further described in Section 3.1.2.
[18] The ACT* theory and its foundation in cognitive models for the proceduralisation of knowledge will be further explored in Section 2.3.

Instruction (SBI) alongside conventional language instruction modes (Cohen, 1998; Cohen & Macaro, 2007).

Research on language learner strategies can be divided into research on strategy use and strategy instruction. However, a salient feature of research on learning strategies is the fact that these perspectives are often integrated in the studies in such a way that both the effect of the strategy instruction on learners' use of strategies and the strategies' effect on linguistic production and reception are combined (Cohen & Macaro, 2007). This situation makes it difficult to establish a clear research boundary between these two categories. To a certain extent, SBI schemes absorb knowledge about language learners' strategy use, since classifications of different learning strategies are based on an actual observation of the deployment of strategies as the learners approach different language learning tasks (J. Michael O'Malley & Chamot, 1990; Oxford, 1990, 2011).

Research areas include individual learner variables and their influence on strategy use, strategy use and its effect on the language learning process and strategy instruction programmes and their effect on different aspects of the language learning process. In his meta-analysis of 95 samples from 61 studies of the efficiency of instruction programmes aimed at the development of language learners' use of learning strategies, Plonsky (2011: 1018) found that several variables moderate that effect, such as context, age, proficiency, educational level, setting, type and number of strategies taught, outcome variable and duration of the instruction programme. However, in the studies reviewed there is a lack of coherence in terms of these variables. Learners tend to make less use of metacognitive learning strategies than, for instance, cognitive strategies, and they seem to be unaware of their importance (Oxford, 1990: 137-138). Learners' range of use when it comes to metacognitive strategies is also limited. Planning strategies are most frequently employed, but the tendency to use strategies which promote self-evaluation or self-monitoring seems rather reduced (Oxford, 1990: 138). Oxford (1990: 138) even states that "learners need to learn much more about the essential metacognitive strategies" and claims that "additional research is welcome on all aspects and types of strategy assistance for L2 learning" (Oxford, 2011: 197). Teachers should even

expand their traditional and innovative language teaching repertoire in order to help L2 learners towards better metacognitive skills (Oxford, 2011: 197).

Research on language learning strategies can also be divided into research on the use and instruction of listening strategies, reading strategies, oral communication strategies, writing strategies and vocabulary learning strategies (Cohen & Macaro, 2007)[19]. In terms of listening skills, research has been carried out on cognitive strategies with a special focus on comprehension monitoring. In the context of metacognitive strategies applied to the acquisition of listening skills, learner beliefs[20] about listening have been given some attention. These studies have indicated that learners are aware of their own beliefs about factors which influence listening (Cohen & Macaro, 2007: 174). Research on the instruction of metacognitive strategies in the acquisition of listening skills includes studies covering different listening strategies, such as selective attention, predicting, inferring, planning, defining goals, monitoring and evaluating, implemented over different periods of time. These span from eight days to one year with groups of learners with different linguistic backgrounds. Positive correlations between strategy instruction and strategy use have not been convincingly determined, although Cohen & Macaro (2007: 181-182), in their review of Kohler (2002), Seo (2000) and Thompson & Rubin (1996), conclude that there seems to be some positive effect on bottom-up strategies and metacognitive strategy development as a consequence of the interventions. Bottom-up cognitive processing in language learning processes refers to the deployment of knowledge related to the specific meanings of words in order to grasp the full meaning of a text as opposed to top-down processing whereby the learner deploys overall semantic and contextual knowledge in order to grasp the meaning of specific words in a text (J. Michael O'Malley & Chamot, 1990: 36). O'Malley & Chamot (1990: 36) thus combine aspects of

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[19] This research overview is in part dominated by Cohen & Macaro (2007). This is due to the fact that there are only a few sources available which chart the development of the research on language learning strategies. Cohen & Macaro (2007) provide a thorough analysis of thirty years of research and practice in relation to language learning strategies. Additional sources have been consulted whenever possible.

[20] The concept of learner beliefs and its relationship with metacognitive knowledge within the boundaries of this research will be further dealt with in Section 2.1.

cognitive psychology (Howard, 1985) with the cognitive processing of texts in the language learning process.

In the field of reading strategy instruction within foreign languages, there has been a focus on evaluation strategies and thus on metacognitive aspects. Research has been conducted across age groups with a focus on short-term studies. Cohen and Macaro (2007: 201-204) refer to the possible usefulness of metacognitive strategy-based instruction for improved comprehension in their review of Carrell, Pharis and Liberto (1989), Dreyer and Nel (2003), Kitajima (1997) and Kusiak (2001). Nevertheless, SBI aimed at the improvement of reading skills has not shown conclusive results, and long-term effects have not been measured since the focus has been on short-term studies (Cohen & Macaro, 2007: 204).

In the area of instruction in communication strategies, Cohen and Macaro (2007: 215-218), as a conclusion of their review of Bejarano, Levine, Olshtein and Steiner (1997), Dörnyei (1995), Nakatani (2005) and O'Malley, Chamot, Stewner-Manzanares, Russo and Küpper (1985), refer to the fact that research has indicated a significant positive effect of strategy instruction on learners' speaking skills within the restrictions of the studies, such as the influence of the instruction on conversational skills. These studies have covered monologues and self-description skills with the exception of Nakatani (2005), who also included interaction strategies. Studies which incorporated metacognitive strategies and awareness-raising have yielded particularly positive results (Cohen & Macaro, 2007: 218).

An SBI experiment related to speaking performance at the University of Minnesota included 55 language learners in intermediate-level foreign language classes. These language learners participated in a study with 32 students in the experimental group and 23 students in the comparison group. The study indicated that SBI makes a difference in speaking performance (Cohen, 1998: 143).

Although there is little evidence of the effect of SBI as a part of the process of acquiring writing skills, Cohen and Macaro (2007: 247) in their review of Ching (2002), Cresswell (2000), Sasaki (2000) and Sengupta (2000), claim that strategy instruction may have an influence on learners' approach to writing

tasks in terms of a multi-dimensional development of their mental models, as well as development of their confidence and autonomy. Teacher training, the length of the programme and the role of metacognition in the programme, are factors which contribute to the success of these kinds of programmes (Cohen & Macaro, 2007: 247).

In terms of vocabulary learning strategies, research indicates that time and practice with feedback, as well as awareness-raising of relevant learning steps, are important features for the successful implementation of instruction on vocabulary learning strategies (Cohen & Macaro, 2007: 267-268). In addition, there seems to be a positive effect of metacognitive instruction on vocabulary instruction, such as shown by Cohen and Macaro (2007: 268-269) in their review of Fraser (1999), Hosenfeld (1984) and Zaki and Ellis (1999). Studies on specific vocabulary learning strategies, in addition to task-induced instruction, have indicated similar results (Cohen & Macaro, 2007: 269-270).

Cohen and Macaro call for additional research in order to shed more light on issues such as intervention studies with a variety of language students in different educational and cultural settings (2007: 155). Other research topics which need to be delved more into are issues such as the careful description of methodology used, scope, and whether the research included metacognitive training, as well as the relationship between SBI and language proficiency and the longitudinal effects of strategy instruction. Investigation which promotes transfer and research that takes into account strategy training over a prolonged period of time based on rigorously evaluated programmes is due (Cohen & Macaro, 2007: 156). There is also a need to develop an experiential approach to the teaching of language learner strategies in order to provide language teachers with exposure to different aspects of SBI, such as practice and evaluation of teaching opportunities and planning of SBI integration into the curriculum (Cohen & Macaro, 2007: 157-158).

Research has thus been carried out on a vast array of fields pertaining to the use of language learning strategies, the influence of language learning strategies on the language learning process and on the effect and nature of SBI. However, in terms of SBI, there seems to be a lack of a systematic approach to the study of instructional classroom processes. The methods which have been used to foster

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learner awareness about strategy use range from explicit teaching to task-based modes of instruction. Nevertheless, there has been no focus on the creation of relevant meaning in terms of metacognitive knowledge as measured by the cognitive strength profiles of emergent production systems in the collective learning culture of the foreign language classroom.

From a game-theoretical perspective, there is some similarity between the present research and the use of game theory for the semantic analysis of assessment dialogues among learners of mathematics (Barrier, 2008). This relationship is related to the inner functional structure of the semantic evolution of these assessment dialogues among learners of mathematics and their similarity to the modelling of conversational games as a product of the implementation of the SBI programme of this research. The focus of these assessment dialogues in mathematics is on the acquisition of metacognitive knowledge in line with the purpose of the present research. From the experiential point of view, this study is also innovative in the sense that a broader systematic dialogical framework for instruction in learning strategies has been created. The bulk of the research on SBI focuses on the instruction of specific strategies without taking into consideration the overall metacognitive perspective of the current research and its relationship with the collective structural metacognitive nature of learner knowledge as represented through production systems.

1.3   Outline of the dissertation

In Chapter 2, the theoretical framework of the dissertation in terms of the development of metacognitive knowledge in second language learners will be presented. In Section 2.1, the overall definition of metacognitive knowledge in language learning processes will be explained. The concept of metacognitive knowledge will furthermore be related to the development of learner beliefs in language learning processes and its consequence for the construction of self-awareness in second language learners. This relationship between metacognitive knowledge and self-awareness of the second language learners is connected to the development of declarative and procedural knowledge in

the language learning process. In Section 2.2, the rationale behind the development of declarative and procedural knowledge in language learning processes will therefore be outlined. This epistemological dichotomy will be related to the ACT* theory and production systems in Section 2.3. During the instructional process in the three classrooms involved in this project, the learners have created a meaningful output. In Chapter 4, this output will be organised in terms of the learner beliefs produced in relation to metacognitive aspects of the language learning process. The learner beliefs will be categorised according to the main analytical categories of *Creating motivation*, *Seeking practice opportunities*, and *Acquisition of grammar*, *pronunciation* and *vocabulary*. These categories will be presented in Section 2.4 as a meaningful basis for the establishment of production systems according to the ACT* theory and based on the metacognitive learner beliefs produced during the interactional processes in the three foreign language classrooms.

In Chapter 3, the methodological procedures are described. The initial focus is on the creation of meaning in interactional processes in Section 3.1, which forms the basis for the game-theoretical approach to the analysis of classroom interactions in Sections 3.1.1-3.1.2. In Section 3.1.3, a definition will be provided of the game-theoretical identification of maximisation of relevance in interactional processes through the principle of backwards induction outlined in Section 3.1.4 and the establishment of the Nash equilibrium defined in Section 3.1.5. In Sections 3.1.6-3.1.7, the role of the interactants, i.e. the INSTRUCTORS and the LEARNERS, will be defined for the interactional process. A thorough description of the data elicitation procedures will be provided in Section 3.2, both in terms of the selection of the school, teachers and learners for this research project. In Sections 3.3.1-3.3.7, the development of the Strategy Based Instruction programme used in order to instigate an interactional process will be further explained both in terms of the overall structure of the SBI programme and its pedagogical content on the basis of the teaching of language learning strategies. In Section 3.3.8, the characteristics of the data will be presented and in Section 3.4 important validity and reliability considerations will be discussed. In Section 3.5, the emphasis is on ethical considerations pertaining to a research project which includes the use of human beings in an intervention. In Sections 3.6-3.7, the procedures pertaining to the analysis of

the data will be defined. Finally, the description of the analytical structure behind the patterns of production systems will be provided in 3.8.

In Chapter 4, the results are organised into a formal definition of the conversational games which have been played in the three foreign language classrooms in Section 4.1. In Section 4.2, the metacognitive learner beliefs which can be identified in the data material will be presented in corresponding matrices. These metacognitive learner beliefs will be categorised into patterns of emergent production systems in Section 4.3 according to the five metacognitive categories of Creating motivation, Seeking practice opportunities and the Acquisition of grammar, pronunciation and vocabulary in Sections 4.3.1-4.3.5. In Sections 4.4.1. and 4.4.2. a sequential analysis of the three cases will be provided. In Chapter 5, the results presented in Chapter 4 will be discussed in an overall perspective with a focus on the three research questions in Sections 5.1.-5.3. In Section 5.4. some statements about possible further research will be presented. The final conclusion of the research will be provided in Chapter 6.

2 Theoretical framework

The overall objective of the present research is a quest to understand how metacognitive instruction can be taught purposefully in the foreign language classroom. This overall objective is to be achieved through the identification of a set of metacognitive learner beliefs brought about by the implementation of a separate Strategy Based Instruction programme in three foreign language classrooms (German, French and Spanish) according to research question 1. A basic assumption in this research is that metacognitive knowledge needs to develop in a context where factual knowledge pertaining to the acquisition of grammar, pronunciation and vocabulary is constructed. Creating motivation and the active seeking of practice opportunities produce these contextual conditions in which the factual knowledge is developed. The collective metacognitive structure of learner beliefs in relation to the two categories of contextual metacognitive knowledge and the three categories of factual metacognitive knowledge will be analysed in terms of the information they provide about the relevance of the SBI programme in accordance with research question 2. Research question 3 seeks to clarify the pedagogical implications of research questions 1 and 2 for metacognitive instruction in the foreign language classroom as stated in the *CEFR* and the *LK06*.

The first part of this chapter describes the foundation of this research in the concept of metacognitive knowledge and its relationship to learner beliefs about the language learning process. This relationship will be aligned with the development of self-awareness as language learners in Section 2.1. In Section 2.2, the dichotomy between declarative and procedural knowledge is described. This dichotomy is vital for the understanding of how metacognitive knowledge is constructed and applied in the language learning process. There is an emphasis on the main characteristics of declarative knowledge, since the learner beliefs which form a central aspect of this project according to research question 1 are considered to be a linguistic reflection of this declarative knowledge about the language learning process. These learner beliefs are organised into emergent production systems in order to illustrate their collective metacognitive structure according to the ACT* theory at an aggregate level and as a consequence of the meaning which has been created during the

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interactional process. The core features of the ACT* theory and its relationship to production systems is therefore outlined in Section 2.3. The five meaningful metacognitive categories established for the analysis of the emergent production systems will be described according to their characteristics as metacognitive contextual factors for the language learning process in Section 2.4, i.e. Creating motivation (2.4.1) and Seeking practice opportunities (2.4.2). In addition, the characteristics of the metacognitive factual knowledge in the language learning process are presented in the last three parts of Section 2.4, i.e. the Acquisition of grammar (2.4.3), the Acquisition of pronunciation (2.4.4) and the Acquisition of vocabulary (2.4.5). These five meaningful metacognitive categories thus form the background to both the categorisation of learner beliefs produced by the intervention and the discussion of the pedagogical implications of the results of this research in Chapter 5 in terms of the relevance of metacognitive instruction in the foreign language classroom in accordance with the overall objective of this research project.

2.1 Metacognitive knowledge

Metacognitive knowledge is partly made up by the beliefs the learners construct during the learning process (Dunlosky & Metcalfe, 2009: 3). Metacognitive knowledge is thus the set of belief systems reflected in attitudes and expectations towards learning which make up the learners' predispositions in the learning process and which enable them to be in control of their own learning process. In the *CEFR* there is an action-oriented approach to language learning processes, such as described in Section 1.1, and the actions people take in order to fulfil their goals are guided by their insight into the learning process (Barton, Hamilton, & Ivanic, 2000: 14). Cognitive orientations view learner beliefs as "an internal autonomous property of the mind" (Gabillon, 2005: 234). From a psychological and sociocultural perspective, beliefs are formed as a consequence of the influence of external factors on the learning process, and they are (co)constructed, appropriated and mediated in the teacher-learner interaction (Gabillon, 2005: 234; Oxford, 2011: 71). The learner's cognition about his/her learning process is thus reflected in his/her beliefs (Flavell, 1979).

Metacognitive knowledge covers both knowledge about how learning operates and knowledge about how to improve learning. Metacognitive knowledge about the language learning process implies that the learner is provided with knowledge related to the planning, implementation and assessment of the language learning process through focused attention on the task to be solved. Focused attention is important for L2 development in terms of the acquisition of morphology, syntax, lexical learning and pragmatic development (Robinson, 2007: 6-8). The language learning strategies support the learner in this process. In this way, the learners may be stimulated in their language learning process through Strategy Based Instruction, during which the learners' beliefs about metacognitive aspects of the language learning process are influenced.

In an overall perspective, this process may also be seen in light of the development of autonomous learners who are able to control their own learning process with the knowledge they have acquired about the learning process as such. Self-awareness is an important feature in this respect (Hacker et al., 2009: 1). Learner beliefs will therefore constitute the foundation for the construction of knowledge which again creates self-awareness, since beliefs very often are associated with self (Gabillon, 2005: 240). Awareness may be reflected in language, and language use is an important feature of metacognitive self-awareness in the sense that language creates meaning and awareness, which again empowers those experiencing this awareness-raising. The theoretical frame of this project is thereby based on the fact that language is not only related to thinking, but also to the affective life of man (Stern, 1983: 292) in terms of language being the vehicle through which the learner's psychological approach to learning is expressed through his/her belief system. The learners are thereby able to "examine our ongoing development, to reveal the subjective positions from which we make sense of the world and act in it" (Darder, Baltodano, & Torres, 2009: 282).

This awareness-raising feature of education is closely related to Paolo Freire's approach to awareness-raising as an important aspect of educational purposes and personal autonomy. In the case of Freire's pedagogy, the aim was to provide the less fortunate with a basis for the personal development towards an equal distribution of power in the Brazilian society and other third world societies (Freire & Macedo, 1987: 1-27). In a school system such as the

Norwegian one, this aspect of the concept *liberation* is maybe not as explicit within the egalitarian Norwegian social structures as in other societies. Nevertheless, the power structures in the classroom are altered when the learner takes more responsibility for his/her own destiny as a learner and this situation enables the language learner to co-construct his/her own learning context. This ability to co-construct the learning context provides the learner with more leeway and freedom towards an autonomous consciousness for learning (Freire, 1970, 1993, 1974, 1998; Freire & Macedo, 1987). This approach thus aligns the educational process with Dewey's view on the role of education in democratisation processes in society. Education provides humans with an ability to perceive and act on meaning within one's society (Dewey, 2008).

This self-knowledge, or metacognitive beliefs about the language learning process, ought to be developed through experience so that the learner can construct his/her own epistemological reality and awareness as a learner. The language classroom may be such a place where the learner can grow and expand towards learner autonomy in interaction with the teacher and the stimuli the teacher provides the learner with as a consequence of the teacher-learner interaction. It is therefore important to shed light on "the lived experience of instruction […] for children and teachers in actual classroom events and how they interactionally and linguistically construct what [the instructional factors] are" (Bloome et al., 2008: 131). In addition, guided knowledge construction implies that factors such as tasks, representational tools and talk are closely intertwined (Schwarz, Dreyfus, & Hershkowitz, 2009: 105), such as in the meaningful context which has been created as a consequence of the present intervention in the three classrooms involved. This exploration of the learner self thus pertains to a psychological development which enables the learners to discover and influence the meanings of their world as language learners. This is the point where metacognitive self-awareness may be seen as a contribution on this road towards learner autonomy.

Through the development of an inner awareness in terms of the knowledge the learner needs to possess in order to develop towards autonomy, the learner constructs a meaningful context for his/her learning process. The task of the teacher should therefore be to provide the learner with a potential for the creation of metacognitive structures which enable the learner to expand this

self-knowledge continuously in new and purposeful ways. This process provides learners with insight into how the conscious mind operates in alignment with the deeper structures of the psyche in order to produce a kind of learning behaviour which leads to the achievement of the learners' goals to approximate the ideal self of the learner (Zoltán Dörnyei, 2009: 217). From a self-awareness point of view, this focus on the development of deeper structures in the psyche is also a fundamental issue in Jungian personality models and depth psychology (Cambray & Carter, 2004; Jacobi, 1971; Jung, Franz, Henderson, Jacobi, & Jaffé, 1968), in the sense that the conscious mind needs to be in alignment with a structure of self-awareness with which it can communicate on a regular basis.

Self-awareness is a developmental process taking place in stages during which the person striving towards it needs to develop structures in the psyche which can help this person towards the desired goal in terms of awareness-raising and expansion (Edinger, 1972). The development of metacognitive self-awareness in the language learning process may therefore be seen in light of Dörnyei's (2009: 217) approximation towards the ideal self of the learner. In a much wider sense, it can also be related to the universal patterns of self-development, such as the archetypical patterns of human evolution. These patterns are aligned with psychological individuation of consciousness described as a means of achieving greater autonomy and freedom of action (Campbell, 2008; Stevens, 1993). Psychological individuation of consciousness implies that the human being has an inherent potential for reaching the highest possible state of awareness of one's self, and thus reaching a state of being an individual in the world in alignment with one's full human potential. This liberated state of mind brings with itself the afore-mentioned autonomy and freedom of action. The development of metacognitive self-awareness may therefore be considered to equal the development of the learner's potential for freedom of action as a learner, creating an awareness of the full structure of the learner self, understood as the approximation towards the ideal self of the language learner (Zoltán Dörnyei, 2009: 217).

2.2 Declarative and procedural knowledge

The rationale behind this research is that the concept of metacognitive knowledge construction in the foreign language classroom can be divided into the dichotomy of declarative and procedural knowledge which is reflected in the learner beliefs about the language learning process. Declarative knowledge is any kind of knowledge which can be stored in the brain as a system of meaning, such as facts, rules and images (Anderson, 1996; Dunlosky & Metcalfe, 2009: 2; J. Michael O'Malley & Chamot, 1990). In terms of language learning processes, declarative knowledge is knowledge represented through, for example, verbal paradigms, syntax rules and vocabulary. This knowledge is basically the same as theoretical knowledge about a given language. Procedural knowledge is in contrast declarative knowledge transformed into practical skills. In the case of language learning processes, procedural knowledge is the actual use of verbal paradigms in real utterances, such as the correct use of a word in a sentence or the ability to pronounce a given vowel based upon theoretical knowledge about the phonological system of the language. The learners should be aware of the gap between declarative and procedural knowledge, which needs to be closed in order to assess to what extent it actually has been closed (J. Michael O'Malley & Chamot, 1990). Such self-awareness requires an alignment of the learner self with the deeper structures of the learner psyche in order to reach its full potential according to the core principles of depth psychology outlined in Section 2.1.

Declarative knowledge about learning strategies must be transformed into procedural knowledge in the same vein as purely linguistic declarative knowledge is treated in the learner's working memory, i.e. there must be some kind of procedural output related to specific learning behaviour. The learner should therefore possess some kind of knowledge about how he/she may transform the declarative knowledge about the learning process into the procedural steps which have to be undertaken in order to achieve the learning objectives. Learning strategies can be a relevant tool in this process. Learning strategies are represented in cognitive theory in the same way as linguistic knowledge and skills as such (J. Michael O'Malley & Chamot, 1990: 216) in the sense that the dichotomy between declarative and procedural knowledge applies to the construction of metacognitive knowledge as well. The learners

are to develop declarative skills about the language learning process in addition to the fact that this declarative knowledge must be transformed into procedural skills which enable the learners to actually perform in the language learning process. The study of learning strategies is thus linked to the theory of *cognition* (Macaro, 2001: 22), namely cognitive systems (Gray, 2007) which foster emotional traits of autonomous learners[21] (Berofsky, 2007: 43).

The declarative knowledge the language learner possesses about the steps to take towards acquisition should be of such a kind that it may be accessed in order to proceduralise this knowledge, i.e. transform the declarative knowledge into meaningful practical actions. The dichotomy between declarative and procedural knowledge is therefore fundamental to any language learning principles (Zoltán Dörnyei, 2009; J. Michael O'Malley & Chamot, 1990) and thereby to the development of metacognitive knowledge. Metacognitive self-awareness in the learner therefore implies that the learner possesses declarative and procedural knowledge in such a way that the process of aligning the conscious mind with the deeper layers of the psyche produces an independent procedural behaviour in the learner. The declarative knowledge required in order to express this declarative awareness should therefore be of such a kind that the procedural knowledge required in order to transform the declarative knowledge into purposeful learning behaviour is reflected in purposeful linguistic structures. These purposeful linguistic structures contribute to the making of the belief system of the foreign language learner.

This kind of knowledge in relation to declarative and procedural knowledge requires relevant and purposeful cognitive and affective insight based on a deep approach to learning and a more integrated conception of language learning, where insight into the learning process is a valuable asset (Absalom, 2000). As this process evolves, the gap between declarative and procedural knowledge is closed, and the learning strategies support this process (Cohen, 1998; Macaro, 2001; J. Michael O'Malley & Chamot, 1990; Oxford, 2011). This process of closing the gap between declarative and procedural knowledge is therefore

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[21] The focus on learning strategies during the implementation of the SBI programme will be further explored in Section 3.3.

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intrinsically related to the concepts of learning and acquisition and how these skills are represented in language. When this kind of knowledge is taught in a classroom setting in order to influence the learners' belief system, the mode of tuition can be in the form of Strategy Based Instruction (SBI) programmes. SBI programmes aim at the development of the knowledge of the language learners from the perspective of language learning strategies as a way to achieve metacognitive knowledge, and thereby competence in closing the gap between declarative and procedural knowledge in the language learning process. In this research, and in accordance with O'Malley and Chamot's focus on the importance of production systems in the process of acquiring metacognitive knowledge (1990: 52), the ACT* theory and its relationship with the establishment of production systems for the assessment of SBI programmes will be a core feature of the analytical process. Production systems may reflect the cognitive structure of metacognitive knowledge as expressed in its specific representation of declarative and procedural knowledge.

2.3 Production systems and the metacognitive structure of learner beliefs

The development of metacognitive knowledge in the foreign language classroom has been related to the functional scope of the learners' self-awareness about the way to close the gap between declarative and procedural knowledge in the language learning process. The focus of the present research is on the declarative knowledge as reflected in the collective learner beliefs which have been created during the interactional process in the three groups of learners involved in the implementation of the separate SBI programme developed for the purpose of this research. The implementation of the SBI programme is assessed according to the ACT* theory and its focus on production systems for the proceduralisation of declarative knowledge in learning processes. The ACT* theory encompasses models of human understanding and knowledge representation. The importance attached to the processing of information through semantic networks of associations which influence human behaviour is a core feature in this research. The

proceduralisation of declarative knowledge is closely attached to production systems according to the ACT* theory.

The cognitive theory of production systems is thus based on an understanding of how tasks are performed as a consequence of their connection to theoretical knowledge in long term memory (Anderson, 1996). Production systems contribute towards the proceduralisation of skills, i.e. the transformation of declarative knowledge into practical skills. In this way, production systems have a direct influence on the learner's behaviour. The content of knowledge in long-term memory is the aggregate of conceptual associative networks which can be retrieved from long-term memory in order to implement a certain task. This perspective implies that autonomous language learners are in possession of certain personal systems which enable them to act autonomously. The goal is for their regular use to develop into integrated parts of the learners' internalised automatic learning behaviour (Byram, 2004: 579). The different steps which have to be taken for the transformation of declarative knowledge into procedural knowledge are called *productions* according to the cognitive theory of production systems, i.e. the ACT* theory. These productions must be executed in sequence, and the sequence of actions which has to be carried out for the productions to apply are called *production systems* (Anderson, 1996).

In accordance with the above-mentioned ACT* theory, the first step towards acquiring a skill is represented in the interpretive stage. In this stage, declarative representations of a given skill are used in the development of behaviour relevant in order to develop that particular skill. This later development of the skill is the stage where skill-specific productions are compiled. In the last stage the learner develops autonomous behavioural patterns (Anderson, 1996). In the first stage the learner acquires some kind of rudimentary knowledge which can be used in order to generate an initial attempt at developing a certain behavioural pattern. Verbal mediation is an important feature of this stage, i.e. the learner is able to give an account of the skill to be acquired. The different action sequences expressed as action clauses illustrate the sequence of actions necessary to finish the procedure. The efficiency of an instruction model is therefore related to how the learners actually take up the information they are provided with and the content of the meaning they attach to this information.

2.3.1 The structure of production systems

According to Anderson's (1996) ACT* model, the relationship between declarative and procedural knowledge may be described declaratively as production systems with IF-clauses which describe a condition as a function of the intended goal for the activity. Within the same production there are also THEN-clauses, which describe the necessary consequence of the IF-clause, i.e. what has to be carried out in order to fulfil the condition stated in the IF-clause (Anderson, 1996). In doing so, the significance of the IF-clause for the relationship between conditions and actions is made clear. The production must be carried out in temporal sequences departing from the activation in long-term memory towards the actual implementation of the action. From a metacognitive point of view, the ability to state this complete process is also considered to be declarative knowledge.

The following simplified initial production system for the identification of the correct case in German (Table 1) will be used to illustrate how these basic assumptions about production systems are applied in the present research.

Table 1: A production system (P) for the identification of the correct case in German (ACT*)

P1	IF the goal is to use the correct case THEN identify the subject and the objects of the sentence
P2	IF the goal is to identify the subject and the objects of the sentence THEN identify the verb of the sentence
P3	IF the goal is to identify the verb of the sentence THEN find the word which denotes the action taking place
P4	IF the goal is to identify the subject and the objects of the sentence and the verb of the sentence has been found and the sub-goal is to first identify the subject of the sentence THEN ask the question "Who performs [the verb]?"
P […][22]	The following sets of condition-action pairs to be undertaken for the complete implementation of the procedure of identifying the full range of the case system

This means that there is a temporal string going from P1-P4 in the production system in Table 1, as well as an inner temporal continuity between the IF and the THEN-clauses of each and every production. The content of the IF clause must be fulfilled for the production in the THEN-clause to apply (Anderson, 1996: 11). The activity of identifying the correct cases in German can be broken down into these pairs of conditions-actions in order to describe the system according to which this activity is produced, hence the concept of production systems.

The declarative knowledge required for the process described in Table 1 is related to the meaning of the words *case*, *object* and *sentence* as well as the activity described by the verbs *identify, find* and *ask*. The procedural knowledge related to Table 1 is the skills required to actually implement P1-P[…], ending up with the result of having identified the correct cases of the sentence. A separate production system for the insertion of elements such as the morphologically correct definite and indefinite articles, as well as the correct

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[22] This production cluster indicates the whole range of productions which have to be undertaken in order to complete the procedure of identifying the correct case in German.

suffixes of conjugated nouns, will require a separate production system based on the production system presented in Table 1. The declarative component for the correct use of the case system in German thus encompasses this complete system of both identifying the cases as well as choosing the correct morphological elements for these cases.

There is a set of basic assumptions about production systems pertaining to the ACT* theory which have to be fulfilled (Anderson, 1996: 22)[23]. Time is continuous in the sense that from a technical point of view, the cognitive development of the sequences in the production system is a continuous process not occurring in discrete intervals. Learning in accordance with Table 1 will develop in a gradual process which requires the constant practising of the skills which are being developed as a consequence of the production system P1-P […]. In the case of metacognitive production systems, learners must thus be provided with an opportunity to practise the implementation of the necessary metacognitive skills. This is how declarative metacognitive knowledge is proceduralised.

Inherent in this system is thus the dichotomy between declarative and procedural knowledge. This means that at the core of the system the declarative knowledge component operates on the procedural performance of the task. In the case of P1 in Table 1 this principle implies that being able to state that "IF the goal is to use the correct case THEN identify the objects of the sentence" is a piece of declarative knowledge the language learner possesses about the steps leading up to the identification of the correct case in German. The implementation of the action expressed in the second part of the clause "… THEN identify the objects of the sentence" is dependent on the awareness reflected in the linguistic structure of the whole clause of P1. The declarative component is thus a prerequisite for the implementation of the production.

The whole production system can be represented as chunks of declarative knowledge. These chunks of declarative knowledge can be broken down into a

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[23] This definition of the main features of the production systems is based on Anderson's (1996) outline of the foundation for the ACT* theory.

set of cognitive units bound together in a tangled hierarchy which represents the interconnectedness of these cognitive units. In the ACT* theory, the maximum limit of elements which can be related to each other within each cognitive unit has been set at five (Anderson, 1996: 23), although this limitation does not define the actual capacity of the workings of the human mind (Anderson, 1996: 308). The production system P4 in Table 1 presents, for instance, a structure of four such interconnected units. In Table 1 the production system represented in P1-P4 covers only a limited set of actions which could be imagined for the procedures pertaining to the identification of the correct case in German. There are also other possible actions related to this production system in the sense that the different oblique cases[24] must be identified and the definite and the indefinite set of articles which have to be conjugated must take the correct morphological form. In addition, specific production systems related to the cognitive units could be created, such as the right method for identifying grammatical objects when consisting of more than one word in the case of the relevant equivalence in German of the syntactical similarity between *boy* and *the nice boy*. Both elements can fulfil different syntactic functions, such as subject, direct object and indirect object in a syntactic structure. In ACT*, these cognitive units have the overall property of being activated and stored as whole cognitive units which cannot be disentangled into more primitive units.

2.3.2 Nonnegative levels of activation

This declarative and procedural metacognitive meaning is stored in memory as *propositional networks*, i.e. networks of interrelated meaningful units, such as the ones expressed in Table 1. The nodes of this system are similar to *ideas*, and the links between the nodes are similar to *associations*. The hierarchies which constitute these networks are essential in understanding how the individuals respond to the proposition (Anderson, 1996; J. Michael O'Malley & Chamot, 1990). The proceduralisation of metacognitive skills thus implies the functional implementation of a sequence of actions stored in long-term

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[24] Oblique cases are the cases which require the conjugation of a noun or pronoun in syntactic elements apart from the nominative case.

memory as metacognitive production systems where the associations between the nodes respond to the learner's contextual needs in the language learning process. In ACT*, activation of declarative memory, i.e. the retrieval of a production from long-term memory and the potential establishment of cognitive links between the nodes of the system, implies at the same time that another meaning may be attached to the activated piece of declarative knowledge. The piece of declarative knowledge which has been activated is expressed as $a_i(t)$. The nonnegative level (a) of the cognitive unit or element (i) is thus the meaning which has been chosen at any time the production applies (t). At the same time, there are other possible implicit meanings attached to the activated cognitive unit which correspond to the negative levels of activation. The number of such implicit meanings depends logically on the amount of knowledge the person actually possesses about the topic at hand[25].

In the case of Table 1 this means that P1 "IF the goal is to use the correct case THEN identify the objects of the sentence" involves several layers of meaning attached to the individual propositions, such as *use*, *correct*, *case* and *sentence*. At the time of activation of P1 (t), the person chooses, for instance, a specific understanding of the meaning of the word *use*, and the chosen meaning belongs to the nonnegative level of activation of this cognitive unit: $a_i(t)$. The person must decide whether the verb *use* in this case means [utter] or [write in capital letters] or even [type]. The activation of a specific kind of meaning leading up to the actual implementation of the production is determined by contextual factors, such as conjugation patterns available at the time of requiring the sentence and the actual ability to pronounce the words to be used. At the time of implementing the production, this decision has been made in accordance with the circumstances. All other possible meanings are present implicitly at a negative level even if only one meaning has been activated.

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[25] The definitions of the relevant parts of the ACT* theory in Sections 2.3.2., 2.3.3., 2.3.4. and 2.3.5. are based on Anderson (1996), and adapted to the context of the present research.

2.3.3 Spread of activation

For a production to apply as efficiently as possible, the system requires that the input at a certain node, such as the word *use* in the above, ensures the best activation possible along the activation path through the system. Both time and quantity of activation are continuous processes. There are two basic factors which determine the momentary change in activation and consequently the spread of activation at each node; the input to the node is connected to the spontaneous rate of decay at the same node. The strength of a source node determines the activation flow through the system. In Table 1 this means that the identification of an object of a sentence, such as expressed in P1, is an action whose strength will influence the actions in P2-P […] according to the value it acquires during the process of proceduralisation. The learner must be provided with input to the node expressed by the meaning of the concept *object of a sentence*, in order to reduce the rate of decay at the same node and thereby stabilise the risk for momentary change in activation.

In the declarative network, activation spreads out from various source nodes. Each source node is connected to a pattern of activation. Each and every source node is the centre of an individual activation pattern, and the sum of all the activation patterns in the system makes up the total activation pattern. The central role in the activation network of each and every source node influences the strength of the pattern of activation in the sense that when a node changes its status as central or peripheral, the overall strength of its pattern of activation also changes; it decays quickly. The rate of rehearsal is therefore important for the development of a steady maintenance of activation in the network. The opportunity to practise this cognitive network is therefore of uttermost importance. It must consequently be possible to practise the proceduralisation of the production system in the classroom, or at least in adequate circumstances for the learner if proceduralisation of the intended skills is to occur.

2.3.4 Strength of production systems

The function of the frequency of use of a cognitive unit or element (*i*) equals the strength of each node in declarative memory. In the case of Table 1, this means that a cognitive unit (*i*) such as in P1 "THEN identify the subject and the objects of the sentence" includes a node such as *identify* [a syntactical structure]. The learner must be able to practise the skill of identification and attach a network of declarative meaningful structures to this node in such a way that the learner can perform this act in new ways as his/her competence grows. The more the learner can make use of this production, the stronger the node *identify* becomes in the declarative memory of the learner and the better skilled the language learner becomes in terms of the identification of syntactical elements in the sentence. The relative strength of association between the nodes (*r*$_{ij}$) is defined as the node strength. In the case of Table 1 this means that a node such as in P1 *use the correct case* is dependent on the strength of the declarative knowledge attached to *identify* [a syntactical structure]. The relative strength between these nodes expressed as (*r*$_{ij}$) becomes stronger the more the learner rehearses the link between these two nodes. The symbols (*$_{ij}$*) thus express the sequence of nodes related to each other in the system. The strength of each cognitive unit or element, i.e. each memory node, is defined as *s*$_i$, such as the strength of the node *identify* [a syntactical structure] in P1 in Table 1. The relative strength between the nodes *i* and *j* is thus expressed as $r_{ij} = s_j / \sum_k {}^s_k$. This means that the relative strength (*r*) between the particular nodes (*$_{ij}$*) equals the sum ($\sum$) of the strength of each cognitive unit (*s*$_j$) across the system.

In the case of Table 1, this means that in P1 the ability to use the correct case in a German sentence requires the practice of the declarative understanding of the case system in German together with a constant practice of syntactical identification in real sentences. The more this practice is rehearsed, the stronger the link becomes between the nodes in declarative memory. The summation across all the nodes includes all those connected to *i*, including *j*. This means that a given node *i* will stand in a constant relationship to other nodes in the system, or network, expressed as *j*. The relative strength of these associations is important for the analysis of the spread of activation of the production systems according to the definition of spread of activation provided in Section 2.3.3. In the case of Table 1 this means that in a production such as P4 the link

between the IF-clause and the THEN-clause passes through two other specific cognitive units which have to be considered for the production to apply. The strength of P4 depends on the learner's total understanding of the semantic structure behind the words which denote the skills which have to be performed for the production to apply.

There are other possible meanings to be expressed along this path from the IF-clause to the THEN-clause, but in the case of P4, a given activation has produced this particular production. An analysis of the alternative paths across this spectrum of activation may yield information in terms of the relative strength in declarative memory of the combination of cognitive units. The more often a node is used, the stronger it becomes, thus adding to the overall relative strength of the production system. In Table 1 this means that all the nodes in P1-P […] will have to be rehearsed repeatedly in order to accrue their strength. The combination of cognitive units across the production systems thus requires that its declarative strength is assured in long-term memory alongside an efficient proceduralisation of the cognitive units. First and foremost, it requires that the cognitive units are produced in the right sequences. The fulfilment of production systems in the right sequences does not imply that the sequences must always be performed in the sequences established in the above. The ACT* theory is dynamic in the sense that spread of activation, maintenance and decay of activation will be created as a consequence of the total strength profile of the system.

2.3.5 Production tuning

Another important feature of the procedural learning mechanisms is production tuning. According to this principle, existing productions may develop as a consequence of their accumulated strength. The existing productions are discriminated or generalised as a result of this process. During the process of discrimination, the avoidance of mistakes in the form of more specific productions is produced as a result of feedback about erroneous production application. In the case of P1, "IF the goal is to use the correct case THEN identify the subject and the objects of the sentence" could be rendered more specific, such as "IF the goal is to use a noun in the nominative case THEN identify the subject of the sentence", thus avoiding the identification of two

syntactical elements at the same time. This could happen if the learner feels that the more general term *the correct case* is too difficult to grasp. During the process of generalisation, pairs of more specific productions develop into more general productions, such as the case would have been if the previous process of discrimination had been reversed. In this way, procedural skills are gradually developed as a consequence of inductive learning mechanisms based on the declarative information retrieved from long term memory.

In Section 2.3, the basic features of the ACT* theory and production systems have been related to the construction of declarative and procedural knowledge in the sense that skills have to be developed as conscious actions which can be expressed linguistically. The declarative structure behind these statements about the learning process are bound together in a hierarchy in which the cognitive units of the structures need constant rehearsal in order to promote the proceduralisation of the desired skill. The strength of these units depends on the levels of activation in the active memory of the semantic structures of the nodes of the system. These cognitive units may develop according to the needs of the learner and the learning context. The ACT* theory therefore describes the structure behind these learning mechanisms. In addition, these structures need a meaningful content for the desired metacognitive knowledge to develop. The latter is the topic of Section 2.4.

2.4 Meaningful categories of metacognitive knowledge

During the implementation of the SBI programme, the learners have constructed a meaningful outcome which reflects their beliefs about the language learning process from a metacognitive point of view. These beliefs have been analysed based on the collective internal structure of these learner beliefs in accordance with the core features of the ACT* theory. These beliefs will be organised into two sets of meaningful metacognitive categories in terms of contextual knowledge about the language learning process (Sections 2.4.1-2.4.2) and factual knowledge about the language learning process (Sections 2.4.3-2.4.5). The two categories of contextual metacognitive knowledge

include Creating motivation and Seeking practice opportunites and the three categories of factual metacognitive knowledge include Acquisition of grammar, pronunciation and vocabulary. The contextual factors pertain to the surroundings in which the language learning process takes place as a consequence of the learner's effort to motivate him/herself. In addition, the learner should assure that practice opportunities are sought for improvement of the language skills. The facts about the language learning process pertain to aspects related to the acquisition of grammar, pronunciation and vocabulary. In the following, the theoretical characteristics of these five meaningful categories will be described as a foundation for organising the metacognitive learner beliefs produced during the interactional processes in the three classrooms involved in this research. The ACT* theory and its focus on production systems will be related to these five meaningful metacognitive categories in Sections 4.3.1-4.3.5. These meaningful metacognitive categories will also be used for the sequential analysis of the cases in Section 4.4. and the discussion of the pedagogical implications of the results of this research in Chapter 5.

2.4.1 Creating motivation

Creating motivation is a contextual factor for the language learning process and motivation springs out of a series of factors, conditions and motives which can influence the learning behaviour of the language learner (Zoltán Dörnyei, 2009: 209-210). Motivation is the force driving the learning process, and "the learner's enthusiasm, commitment and persistence are key determinants of success or failure" (Zoltán Dörnyei, 2001: 5). The goal of the learning process is logically to develop a cognitive and emotional system which is adapted to the individual learner's needs and personal disposition as a basis for the acquisition of factual knowledge in the language learning process in terms of the acquisition of grammar, pronunciation and vocabulary. There is a continuous, dynamic interaction between three subsystems within the brain, i.e. cognition, affect and motivation (Zoltán Dörnyei, 2009: 225). The learner's emotional predispositions and reactions related to different features of both the language learning process and the language itself are important in this respect (Stern, 1983: 310). The three types of motivation, i.e. intrinsic motivation/enjoyment, extrinsic motivation/external cues, and achievement motivation/commitment to excel "will influence L2 development in different

degrees depending on individual dispositions and different environmental and pedagogic contexts" (Kumaravadivelu, 2006: 41).

The motivational process and the meaning related to the word motivation is thus highly complex (Zoltán Dörnyei, 2001: 6). This is basically related to why a particular action is chosen and the degree of effort expended on it in combination with the persistence related to carrying out that action (Zoltán Dörnyei, 2001: 7). From the point of view of the belief system of the learner, the goal is therefore to develop "conscious attitudes, thoughts, beliefs, and interpretation of events" (Zoltán Dörnyei, 2001: 8) which influence the behaviour of the learner in order to align the learners' values and evaluation of the learners' skills and contextual support with the learners' disposition to solve that particular task (Zoltán Dörnyei, 2001: 8).

The ultimate motivational goal would then be to achieve positive freedom and autonomy understood as the

> *set of personal traits which are essential or highly useful to the satisfaction of a wide range of activities and decisions, both short- and long-term. It encompasses relevant knowledge, including self-knowledge, and a variety of intellectual and physical competences (Berofsky, 2007: 16).*

The learner ought to discover the possible scope of personal skills he/she possesses in order to blossom according to his/her potential. In this way, the motivational development of the learner aims at the discovery of the array of possible selves, which also relate themselves to the learner's hopes, wishes, and fantasies, a motivational development which drives the learner forward towards the future (Zoltán Dörnyei, 2009: 213). Growth and synthesis of the self occurs during a course of action which leads to a dynamic relationship between the innermost beliefs and values of the self and the environment (Zoltán Dörnyei & Ushioda, 2009: 296). In addition, the possible selves of the learner require a strong link to the learner's emotional system in order to function properly in terms of motivational potency (Zoltán Dörnyei & Ushioda, 2009: 47).

The goal-setting component is an important feature of metacognitive knowledge, and the goal of an activity is the consequence of the purpose behind

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it. The above-mentioned development of possible selves will be important as a guiding principle along this road, indicating to the learner how the goals may be achieved. When the learner takes the initiative and discovers the pleasure of achieving his/her goals, this process creates an ever-widening circle of self-regulated learning. Motivational awareness thus includes both factors in the environment and in the learning material which the learner can identify in order to create this stimulus, and the "acquisition of skills […] requires more than passive compliance with prior directions; it also involves personal initiative, resourcefulness, and persistence […]" (Hacker et al., 2009: 299). The motivational approach outlined in the above implies that the body constitutes an essential interface between the learners' cognitive system and the learning context as opposed to

> *a traditionally functionalist perspective (that determines the input-output functions required for a task, regardless of their concrete implementation) to an analysis of how humans achieve a task, given their particular perceptual and motor resources (Gray, 2007: 279-280).*

The disposition of the learner and his/her knowledge related to the potential of self-development are therefore important features of the motivational evolution of the learner.

2.4.2 Seeking practice opportunities

Exposure to the language is another important contextual factor during the language learning process, since there is a positive correlation between practice with a given task and reaction time and error rate in skill acquisition processes (DeKeyser, 2009: 2). Practice is important in order to transform declarative/explicit knowledge into procedural/implicit knowledge. In Chomskyan terms, this implicit knowledge is the equivalent of linguistic competence (DeKeyser, 2009: 7), i.e. the fully developed linguistic system present in people with complete mastery of the language. In language learning processes, practice is understood as "specific activities in the second language engaged in systematically, deliberately, with the goal of developing knowledge of and skills in the second language" (DeKeyser, 2009: 8). In the language

learning classroom, it is possible to provide learners with general linguistic knowledge, but the goal should be to let learners explore the language more productively (Hunston & Oakey, 2010: 11). This necessity is partly due to the complexity and extensiveness of the language system, something which requires teachers to provide learners with ample exposure to language in order to help them develop towards a fuller understanding of the linguistic system (Hunston & Oakey, 2010: 11).

The independent quest for practice opportunities requires both affective, social and cognitive skills. Seeking practice opportunities is linked to the socialisation process in the language, at least in terms of approaching people. Language is both the means and a vital goal of socialisation and provides the learner with skills in interaction, as well as sociocultural knowledge in different contexts (Kasper & Rose, 2002: 42). Nevertheless, practice opportunities can also be understood as the use of authentic texts and audiovisual material for practical exposure to the language, in which case the aspects pertaining to socialisation are less preponderant. The use of the language thereby provides the learner with learning opportunities, since "All learning is mediated by semiotic tools. An important mediational tool is language" (Mackey, 2007: 145). Practical outcomes in the real world, apart from the achieved learning outcomes in the classroom, are the goals of the language teaching and learning process (Hunston & Oakey, 2010: 6). The learners are thus provided with practice opportunities both in natural and educational settings (Ellis, 2008: 288), but foreign language learners in the Norwegian education system are most likely to encounter practice opportunities in classroom situations directed by the teacher and not so much in real life situations. This is why competence in the field of seeking practice opportunities in real life situations is all the more important for this kind of language learner. The interactional activities are thus a key factor in L2 learning processes (Kasper & Rose, 2002: 57). However, practice and interpersonal activity in the classroom are also important steps in the language learning process, since the learners in the L2 class are provided with opportunities to use the language in order to establish sustainable social interactional patterns (Kumaravadivelu, 2006: 152).

Practice resulting in linguistic input can take different forms, both as a non-interactive alternative, such as reading and listening to texts, and as explicit

interactional activity in the form of conversations (Ellis, 2008: 205). From a sociocultural point of view, this means that the learning process develops "in the dialogic interactions between learners and learners, learners and themselves, and learners and the artifacts available in their world, for example books, computers, etc." (Mackey, 2007: 145). This principle applies to both classroom contexts and real life situations. During conversations, learners may receive beneficial feedback upon the production of incorrect utterances. This feedback can provide learners with relevant information in relation to modifications to make to their output (Mackey, 2007: 229), i.e. corrective feedback in the form of specific linguistic features embedded in statements, questions and instructions and the negotiation of meaning (Ellis, 2008: 205; Saville-Troike, 2006: 176). This corrective feedback will help learners incorporate this knowledge into their developing linguistic system (Gass & Selinker, 2008: 330), something which can be a source of learning in terms of correcting the "qualitative and […] quantitative mismatch between the language output produced by L2 learners and the language input they are exposed to" (Kumaravadivelu, 2006: 25). In addition, the most beneficial situations for learning are learning opportunities where learners are provided with "feedback from culturally sensitive native speakers, since the cues cannot be described abstractly and are elusive targets for formal interaction" (Saville-Troike, 2006: 168).

From a social point of view, participation in communicative events is therefore beneficial for second language acquisition (Saville-Troike, 2006: 176), and research indicates that "interaction is highly effective in facilitating L2 acquisition and, moreover, that the effect is not just short term but durable" (Ellis, 2008: 268). This means that acquisition as a sub-conscious process in contrast to learning as a conscious process occurs naturally "as a result of exposure to the language used in a meaningful context" (Hunston & Oakey, 2010: 63). This meaningful approach to the acquisition of a second language and the role of practice therein covers the whole scope of acquisition from "linguistic knowledge to the ability to use that knowledge in speech and the ability to process language in real time" (Gass & Selinker, 2008: 81).

The metacognitive approach to practice opportunities thus implies learner awareness of the linguistic structures the learners master and the vocabulary

which has to be acquired prior to the learning activity. The planning of these opportunities requires insight into the learning potential of the situation at hand and a cognitive awareness in terms of the holes which have to be filled for the successful implementation of the task. Awareness of the skills related to the nature of the practice opportunity is also necessary; for example, watching a TV programme requires another kind of focus than talking to strangers in a public park. Upon completion of a practice situation, learners should be able to use the experience gathered from that situation in order to enhance motivational skills, particularly based on the ability to assess the evolution of that practice situation and what elements to change or improve prior to the next practice situation.

2.4.3 Acquisition of grammar

Factual knowledge related to the acquisition of grammar includes the development of functional cognitive systems for how to acquire declarative knowledge and procedural skills pertaining to the acquisition of syntax, morphology, semantics and pragmatics. In this respect, transfer issues are important for knowledge about how the L1 and L2 are influenced by each other (Odlin, 1997). From a metalinguistic point of view, this means that the learner has to be aware of how the target language differs from the learner´s mother tongue if the learner is to identify efficient methods for the acquisition of these particular skills. This is due to the fact that "fundamental to the understanding of the nature of SLA is an understanding of what it is that needs to be learned" (Gass & Selinker, 2008: 8). Language use is systematic in the sense that the knowledge people have about the possible structural combinations of a language is important in order to understand the meaning of sentences and texts (Saville-Troike, 2006: 32). Principles from complex systems theory (Larsen-Freeman & Cameron, 2008) thus explain how an awareness of the complexity of the grammatical system and its influence on the acquisition of grammar is important.

Learners should consequently develop their procedural skills in the process of acquiring grammar as a product of a systematic declarative insight into how the particular syntactical, morphological, semantic and pragmatic nature of the language they are studying relate to their individual experiences as language

learners. This declarative insight, and hopefully subsequent procedural skills, will depend on the particular features of the language learners are studying. The acquisition of German grammar, for example, will require a specific set of declarative insights into aspects such as the case system, a feature which is less dominant in the case of French and Spanish. Morphological insight into the verb conjugation patterns is far more important in the case of Spanish than in the case of German and French since the Spanish verbal endings are different in all persons, tenses and modalities, and because Spanish does not necessarily use personal pronouns. The highly developed insight into the meaning of these endings is therefore required in the case of the acquisition of Spanish. This difficulty for learners of Spanish is not the case for learners of German and not so much for French since the meaning of the verbs in terms of person, tense and modality emerges in combination with the expressed subject of the verb.

2.4.4 Acquisition of pronunciation

Factual knowledge related to the acquisition of pronunciation is important for communicative competence in the L2, but the production of L2 phonological forms is experienced as difficult by learners in the early stages of their language learning process. In addition, they seldom develop a near-native phonological perfection, even after several years of study and practice (Ellis, 2008: 103). This means that the influence of the learners' L1 tends to be strong during the acquisition of their L2. From a metacognitive point of view, the acquisition of skills pertaining to pronunciation thus requires insight into how the phonological system of the mother tongue affects the phonological system of the target language. The acquisition of pronunciation depends both on the effort to consciously seek practice opportunities for the practice of phonological skills, and the active effort to use the language in such a way that the phonological structures are rehearsed on a regular basis. A metacognitive system for the acquisition of skills related to pronunciation which can be instructed in the foreign classroom should therefore provide the learners with knowledge about these systematic steps required in order to identify resources which can be used for the acquisition of phonological skills. In addition, learners ought to be provided with knowledge in terms of how to seek practice opportunities which are adequate for the proper practice of those phonological skills. This social aspect of the language learning process is closely related to

emotions and their significance for learner effort (Usó-Juan & Ruiz-Madrid, 2008: 140-163). Learner anxiety has to be overcome if the efficient practice of oral skills is to be achieved.

2.4.5 Acquisition of vocabulary

Factual metalinguistic knowledge pertaining to the acquisition of vocabulary implies that learners are able to explore their own mother tongue in order to identify similarities and differences between the two languages at hand. These skills thus require semantic knowledge in terms of how the meaning of words differ, the identification of transparent words[26] for increased learning outcome, and reading strategies for the acquisition of new words. The meaning of a word in the L1 of the learner may completely or partially cover an equivalent word in the L2, such as the Norwegian word *byrå* [bureau], which is derived from French. In French the word 'bureau' covers more semantic levels, stretching from [desk] to [office] to [company][27]. The learner must be aware of such differences during the learning process. Transparent words are words which can be easily understood by the learners, such as the international words *Organisation* (GE) / *Organisation* (FR) / *Organización* (SP), *Interesse* (GE) / *intérêt* (FR) / *interés* (SP) and *Radio* (GE) / *radio* (FR) / *radio* (SP). These words can be used by the learner for the rapid acquisition of new words. The ability to analyse one's own vocabulary prior to a learning activity may help the learner towards purposeful engagement with the task. If the learner approaches a text or a conversation with knowledge about words which may be expected to occur, or what kind of words the learner already recognises, the learner may find the activity more useful and beneficial. Vocabulary learning is the most important part of the language learning process (Saville-Troike, 2006: 138), and learners should therefore be provided with opportunities to

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[26] Transparent words are words which the learner can easily understand in the L2 based on knowledge about for instance the L1 of the learner or knowledge about any other language. International words such as *television* and *satellite* are examples of transparent words.

[27] These words are put in brackets to illustrate that they represent the semantic system behind the word 'bureau' in French.

explore their vocabulary learning insight and develop well-functioning procedural skills in the use of the vocabulary they have acquired.

2.5 Summary

In this chapter, the theoretical framework of the epistemological foundation of the present research has been outlined. The aims of the Norwegian curriculum for foreign languages were established in Chapter 1 as the basis for the implementation of the SBI programme in the three groups of learners of this research. In this chapter, these perspectives on metacognitive instruction were also linked to Dewey's perspectives on the role of education in society and how metacognitive knowledge can contribute towards learner autonomy and the development of self-awareness as foreign language learners. The main objective of metacognitive knowledge has been defined as the ability to understand the difference between declarative and procedural knowledge and how the gap between these two aspects of the learning process can be closed as a consequence of the effort of the learners in terms of proceduralising declarative knowledge in the learning process. The cognitive systems theory of Adaptive Control of Thought (ACT*) will be used in order to assess the meaningful output of the implementation of the SBI programme. Metacognitive self-awareness has been defined as the ability to monitor the language learning process, and five categories of metacognitive knowledge have been identified for the purpose of this study; i.e. Creating motivation, Seeking practice opportunities, Acquisition of grammar, Acquisition of pronunciation and Acquisition of vocabulary. In this way, the first two categories of metacognitive knowledge reflect the contextual background in which the factual metacognitive knowledge is acquired, such as reflected in the last three categories of metacognitive knowledge.

3 Methodological framework

This research aims to identify learner beliefs pertaining to five meaningful categories of metacognitive knowledge brought about by the implementation of a separate SBI programme in three groups of foreign language learners, according to research question 1. These beliefs will be used in order to assess the implementation of the SBI programme, according to research question 2. The results of research questions 1 and 2 will finally be used to discuss their possible pedagogical implications for the interpretation of the objectives of the *CEFR* and the *LK06*. In this chapter, aspects pertaining to the creation of meaning in interactional processes and the game-theoretical approach taken towards the pragmatic study of classroom conversations will be described in Section 3.1. The data collection procedures will be described in Section 3.2. In Section 3.3, the development and characteristics of the SBI programme which forms the backbone of this research will be outlined. Validity and reliability considerations pertaining to the implementation of the research are outlined in Section 3.4, in addition to a similar discussion pertaining to ethical considerations in Section 3.5. In Section 3.6, the analytical procedures will be described. In Section 3.7, an account is provided of how the implementation of the SBI programme acquires its formal foundation for further analysis. In Section 3.8, the conceptual framework behind the establishment of patterns of metacognitive production systems will be defined as a consequence of the five meaningful metacognitive categories presented in Sections 2.4.1-2.4.5.

This research project is a qualitative intervention study in which the researcher participated actively in the evolution of the classroom events in terms of taking part in the implementation of the SBI programme used to instigate three classroom interactions. The intervention in the three groups of learners has produced three cases, which together form the foundation for further exploratory analysis. In this way, the intervention in the three groups of learners has produced a multiple longitudinal exploratory case study, in which phenomena were studied over a period of time with a view to understanding the development of these phenomena. The qualitative case design is a viable research design when large amounts of rich data are explored (Duff, 2008: 21-33), and the focus of a case could be classrooms (Simons, 2009: 4). These cases

have not been compared for any reason; they have amalgamated into a larger whole of metacognitive meaning, as reflected in the aggregate set of learner beliefs constructed as a consequence of the maximisation of relevance[28] that occurred in the three groups of learners. The meaningful output in the three cases could have been compared on an individual case basis. However, the use of the whole set of data produces the collective meaning at an aggregate level needed for the archetypical representation of the foreign language learner, which has been the focus of this research. There were no control groups, since no matters of causality were studied. The object of study has been the construction of metacognitive meaning *per se* within the boundaries of the multiple case study. Validity considerations pertaining to this research design will be further discussed in Section 3.4.

The overall design of this multiple longitudinal exploratory case study bears the following structure:

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[28] Maximisation of relevance implies that the participants in an interaction create the most relevant outcome for their interaction as a result of their shared expectations, personal dispositions, and other contextual factors. This concept will be further defined in Section 3.1.3.

GAME-THEORETICAL APPROACH		
SBI GERMAN CASE (GE)	SBI FRENCH CASE (FR)	SBI SPANSISH CASE (SP)

LEARNER BELIEFS	
Contextual factors for the language learning process	Factual factors for the language learning process

COLLECTIVE PRODUCTION SYSTEMS	
Contextual factors for the language learning process	Factual factors for the language learning process

SEQUENTIAL ANALYSIS OF GE, FR AND SP	
Contextual factors for the language learning process	Factual factors for the language learning process

Figure 1: The overall design of the research project

Figure 1 reflects the process of establishing a formal background for the communication process in the three classrooms involved in the project during the implementation of the SBI programme in the three groups of learners. The game-theoretical approach provides the three cases with a formal foundation for the creation of meaning, which has occurred as a consequence of the strategies the players have deployed in order to maximise relevance during the playing of the conversational games. An ordinary transcription procedure could also have been used as a basis for subsequent discourse analysis of the content of the classroom interactions. However, the principle of maximisation of relevance is considered to be of vital importance for the definition of the output of the instructional process. A formal definition of the maximisation of relevance which has occurred, requires an equilibrium play of the conversational games to be established, resulting in the choice of the game-theoretical approach. The rationale behind this aspect of the research design will be further enlightened in Section 3.1. The learner beliefs which have been constructed in the interplay of cognition induced by the maximisation of relevance in the three cases have been organised into two contextual factors for

the language learning process, i.e. creating motivation and seeking practice opportunities, and three factual factors for the language learning process, i.e. the acquisition of grammar, pronunciation and vocabulary. These categories reflect the substantial content of the meaning that has been created in accordance with the description of these categories in Section 2.4. The same main categories will be used as a basis for the abstraction of an underlying collective set of production systems that will form the background for the sequential analysis of the three cases. The analysis of the production systems and the sequential analysis will eventually form the background for the discussion of possible pedagogical implications in line with the *CEFR* and the *LK06* in the final part of the dissertation. In this way, the overall design of the project reflects the intervention which has taken place in three foreign language classrooms, producing three cases during which metacognitive meaning has been constructed during the interactions taking place in a whole school year. This metacognitive meaning has been used at an aggregate level to shed light on the lived experiences of the learners during the project period. The methodological approach, and procedures on which the intervention has been based, will be explored in the following.

3.1 Creation of meaning in interactional processes

The implementation of the SBI programme takes place in an interactional process during which metacognitive knowledge is constructed between the interactants in the three classrooms involved in the project. These interactants are the teachers and the learners in addition to the researcher who was present during the implementation of the SBI programme. Knowledge is thereby constructed as a consequence of the evolution of the interactional process itself. In this way, the implementation of the SBI programme bears some resemblance to literacy events in classroom settings. A literacy event is an instructional activity in the classroom during which some aspects related to the topic at hand are rehearsed and discussed as a consequence of the teacher-learner interaction as a specific learning activity (Bloome et al., 2008; Bloome, Carter, Christian, Otto, & Shuart-Faris, 2005). The implementation of the present SBI programme develops over several instructional sessions, and is therefore not a literacy event

per se. Nevertheless, literacy events belong to the realm of social events in the sense that the social context is an important feature because of the situated nature of literacy (Barton et al., 2000: 8). A social event is an occurrence involving people acting and reacting to each other (Bloome et al., 2005: 5-8), and the implementation of the present SBI programme implies people acting and reacting to each other in a social context. The creation of meaning takes place as a consequence of people acting on the literacy practices and the literacy practices acting on the people in such a way that the structures of these practices are influenced and possibly changed over time (Bloome et al., 2008: 13). The implementation of the SBI programme takes place in a social context in which the interactants engage in at least one literacy practice, and "any study of literacy practices must […] situate reading and writing activities in […] broader contexts and motivations for use" (Barton et al., 2000: 12). What a teacher says and how he/she acts in front of a classroom is an important factor in the creation of meaning, but what the teacher says and how he/she acts is also determined by the very nature of the classroom context (Gee, 2011: 85).

The classroom context is the starting point of the interaction, or the social event. From the moment the SBI programme is implemented in the classroom, the interactants start developing a shared understanding of the purpose and content of the programme. This shared understanding of the goal of the interactional process creates the driving force behind the interaction in terms of the participants' heuristics. Within the context of this research, the heuristics of the participants define their ability and willingness to reach a practical solution for their interaction based on an efficient mutual decision-making process. The heuristics of the interaction drive the process forward and create the context (Pietarinen, 2007: 119-133). The participants bring forward their past experiences and present expectancies in a mutual interactional dynamic, which again contributes to the creation of the context they are operating within (Bloome et al., 2008: 58-59; Brown & Yule, 1983: 233-234). This analytical approach reflects the fact that the whole group contributes to the creation of meaning, which takes place as the classroom interaction evolves, even the learners who remain silent during the whole process (Bloome et al., 2008: 60). The meaningful linguistic structures which arise from the implementation of the SBI programme in the German, French and Spanish classrooms represent

the contribution of all the learners, even the less vociferous and the silent ones since

> *literacy becomes a community resource, realised in social relationships rather than a property of individuals. This is true at various levels; at the detailed micro level it can refer to the fact that […] there are often several participants taking on different roles and creating something more than their individual practices (Barton et al., 2000: 13).*

The aggregate contribution of all the learners thus forms the basis for the creation of meaning which occurs. Each and every individual contribution is intertwined with the complexity of social relationships which constitute the social context of the language learning classroom as they move through time and space. The whole interactional history[29] is therefore reflected in the meaningful language which has been produced, and this language is inherent in the semiotic system of the social event (Bloome et al., 2008: 10-11). The creation of a semiotic universe is dependent on purposeful question-answer structures for meaningful logical inferences in terms of elicitation of tacit knowledge in heuristic processes (Eco & Sebeok, 1988: 154-169). The interaction itself is thereby the vehicle through which meaning is created as a consequence of the language the interactants use during the evolution of the interaction (Filliettaz, 2002).

This systemic view on the construction of knowledge is due to the fact that the basic analytical unit is

> *not an individual, but a group of people. […] Second, people act and react. People react to actions immediately*

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[29] *Interactional history* is a concept coined for this research, and covers the aggregate set of communicative events which have occurred since the moment the interaction commenced. The interactional history thus includes the past, present and future communicative events which unfold in a meaningful manner during the evolution of the event. The concept is closely affiliated to group dynamical principles of shared group history and group legend (Zoltán Dörnyei & Murphey, 2008: 67).

previous, to actions that occurred sometime earlier, and to sets, groups, and patterns of action. People also react to future actions. […] Meaning and significance are located in the actions and reactions people take to each other, not in abstracted or psychological states. Inasmuch as there is no separation of people from events, there can be no separation between meaning, significance, and action (Bloome et al., 2008: 8).

This focus on the principles of human action is also found in Max Weber's interpretative sociology, with its focus on the discourse and the language where the agents meet and obtain a common understanding (Roth & Wittich, 1978) and the fact that utterances may be perceived as "*signs of authority*, intended to be believed and obeyed" (Jaworski & Coupland, 1999, 2006: 480).

In this way, the background assumptions of the context are constantly being altered as a consequence of the utterances made during the interactional process (Levinson, 1983: 276). If a speaker asserts p[30], the speaker adds to the context that he/she is committed to p; the illocutionary force[31] of the INSTRUCTORS' input is thus influenced by the communicative principle of relevance[32] operating on the teaching practice of the INSTRUCTORS. The speaker (S) must feel committed to the state of affairs expressed by p, and the hearer (H) must feel required to assume responsibility for the execution of p as required by the

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[30] The symbolic designations pertaining to these contextual definitions are taken from Levinson (1983: 226-283). In this representation, p means any utterance made by the speaker (S) in interaction with a hearer (H).

[31] The illocutionary force denotes the pragmatic value of the speech acts used in order to drive the conversation forward. This concept and its specific application in the present research will be further explained in Section 3.7.

[32] The communicative principle of relevance implies that the speaker in a communicative event will convey the message according to his/her own attitude towards the utterance (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012). The communicative principle of relevane will be further explored in Section 3.1.3.

context itself[33] (Levinson, 1983: 226-283). The context is thus being constructed as a consequence of this sequence of speech acts building upon each other in a kaleidoscopic manner. The interactional dynamics between (S) and (H) constantly adds p to the context (Brown & Yule, 1983:238). The hearer's general knowledge about the world determines his/her interpretation of the discourse, which is dependent on the principle of analogy with our past experiences. Activation should only occur according to the relevance of the situation, and the influence of the world-knowledge on the interpretation of the discourse must be considered in relation to the literal interpretation of the discourse (Brown & Yule, 1983: 233-234). The question-answer processes for the elicitation of the tacit knowledge the learners have about their language learning find their natural place in this pedagogical context.

Conversation, or face-to-face interaction, is "the single most important dynamic context of language use" (Levinson, 1983: 43). "Meaning" in this research is closely related to the evolution of the classroom interactions, i.e. "the sustained production of chains of mutually-dependent acts, constructed by two or more agents each monitoring and building on the actions of the other" (Levinson, 1983: 44). This systematic interweaving of actions and their meaningful expression are in the realm of Goffman's (1976) system-constraints, which label "the ingredients essential to sustaining any kind of systematic interweaving of actions by more than one party" (Levinson, 1983: 44). Therefore, the meaning which has been constructed during the evolution of the conversational games is closely related to symbolic interactionism in the sense that

> *society, reality, and self are constructed through*
> *interaction and thus rely on language and communication.*

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[33] The commitment on the part of the teachers varied in the three different classrooms, and the researcher had to implement the SBI programme accordingly. Nevertheless, this research does not envisage to measure the degree of commitment of the interactants, but builds its rationale on the fact that every utterance made implies a certain commitment on the part of the speaker understood as the teachers and the researcher. This commitment on the part of the speaker to actually engage in the conversation is considered adequate for the creation of the context.

> *This perspective assumes that interaction is inherently dynamic and interpretive and addresses how people create, enact, and change meanings and actions. […] Symbolic interactionism assumes that people can and do think about their lives and actions rather than respond mechanically to stimuli (Charmaz, 2014: 9).*

Meaning for the purpose of this research is thus the result of the pragmatic interplay between the semantic content of the utterances and the contextual factors of the interaction (Vidal, 1996: 7-8). This approach to meaning thus encompasses the role of semiotics in the sense that communication is "*production and exchange of meaning*, and thus […] how messages or texts interact with people in order to produce meaning" (Drønen, 2009: 10). However, meaning "whether deep or on the surface, is an elusive and complicated matter. It is difficult to be clear about exactly what is going on in even the most direct, literal acts of communication" (Benz et al., 2006: 83). Notwithstanding this elusive nature of the concept of meaning, the assumption harboured within the boundaries of this study is that the meaning which arises from the interactions conveys a message about the metacognitive knowledge which the learners have constructed during the interaction. In this way, meaning may be considered to reflect deeper structures of knowledge (Mathers, 2001), and is

> *that form of interactive processes that gives rise to the sum total of all actions, possible or actual, that arise, or may, will or would arise, as a consequence of playing the game across different contexts and in varying environments (Pietarinen, 2007: 232).*

This meaning is reflected in the language the learners use in order to describe their learning experiences in their L1, which is Norwegian. Oxford (2011: 183) recommends the use of the L1 of the learners when exposed to metacognitive instruction and when all the learners share the same L1. This implies that the meaning the learners construct during the interaction consists of two parts; i.e. the linguistic manifestation of the knowledge they construct and the deeper layers of meaning representing some kind of cognitive declarative value

attached to these linguistic representations[34]. This fundamental dichotomy of meaning into overt linguistic manifestations as opposed to deeper layers of meaningful structures is mirrored in the distinction between *langue* and *parole* made by Ferdinand de Saussure (Koerner, 1982). The *parole* side of this metacognitive knowledge of the learners is the physical manifestation of the language represented in learner beliefs about the language learning process. The *langue* side represents the underlying semantic structure of the production systems which represent the cognitive value of these beliefs. This broader discourse analytical perspective allows more interpretative flexibility than a narrower approach based on conversation analytical models focusing only on specific conversational activities or their sequential contexts (Woofitt, 2005: 44).

The concepts of meaning and discourse are thus understood in a wider context of communication (Jaworski & Coupland, 1999, 2006: 6; Schiffrin, Tannen, & Hamilton, 2001, 2003). From a Bakhtinian perspective, all discourses will contain the echo of different voices represented in the different words and utterances, which again will be "derived from the historical and cultural and genetic heritage of a community and from the ways these words and utterances have been previously interpreted" (Jaworski & Coupland, 1999, 2006: 7). The different voices present in the text contribute to the making of the discourses, and thereby meaning, on their own merits (Morson & Emerson, 1990). This polyphony of meaning which is created during the evolution of the interaction thus represents the assumptions of the learners in the context they find themselves in, both as individual learners, but also as representatives in the eternal interdiscursive chain of social events. The teacher thus has to develop the learners' logical understanding of the language learning process, and create a semiotic system which facilitates this understanding. The learners are to activate tacit knowledge pertaining to their language learning process and attach some kind of logical meaning to this universe in which the individual

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[34] The characteristics of declarative knowledge construction have been further detailed in Section 2.3.

learner as a language user should find his/her integrated subjective place from a Bakhtinian point of view (Dessingué, 2012: 39).

3.1.1 A game-theoretical approach to pragmatics

The social events which reflect the implementation of the SBI programme in the three groups of learners are conceived of as situations of human communication which can be defined through the use of a game-theoretical approach to pragmatics. Game theory is originally rooted in economics. In its original form, a game is usually played when two or more agents engage in the unfolding of a decision-making process which leads to an outcome which is necessarily the result of the interaction which has evolved between the interactants, or players, of the game (Dixit & Nalebuff, 1997; Holler & Illing, 2006; Holler & Klose-Ullmann, 2007; Osborne & Rubinstein, 1994). Games are thus models of situations (Benz et al., 2006:115). An important feature of classical games is the analysis of the different alternative actions the players may choose as they play the game. These alternatives are often represented as nodes in a game tree, with the alternative paths illustrated in the web-like structure of this tree, as shown in Figure 2:
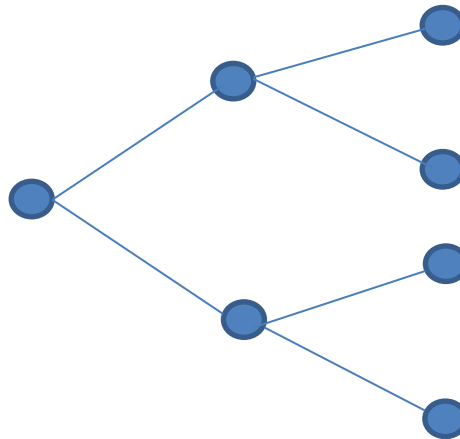
Figure 2: A classical game tree

The game tree consists of nodes which present the alternatives the players can choose during the playing of the game. The different possible paths end at the terminal nodes, where the payoffs for the players are identified, i.e. the consequence of the choices made by each player during the playing of the game. A game-theoretical analysis may be used to understand how interactants should behave in an interaction, or game, but also how interactants actually behave without necessarily analysing how optimal results are produced (Benz et al., 2006: 1). In this research, the game-theoretical approach aims at establishing how the players have behaved in the different conversational games during the implementation of the SBI programme from a descriptive point of view.

In a classical game, this chain of mutually-dependent acts leads towards the maximisation of *payoff* for the players. The claim made in this research is that the players maximise *relevance*[35] as they move through the conversational game in the classroom. This shared interest of the players makes it possible to consider situations of human communication as co-ordination games with alignment of the players' payoff patterns (Benz et al., 2006: 124). The object of study in this research is *language*, and in terms of investigating language from the point of view of meaning, game theory is an adequate methodological approach (Clark, 2012: 67). Pietarinen (2007: 119-133) suggests the use of game theory in order to analyse conversations with a view to establishing how conversations develop an inner equilibrium. In this research, such an inner equilibrium play of the conversational games is aligned with the principle of maximisation of relevance as a methodological extension of Pietarinen's game-theoretical approach to the study of conversations. This extension of Pietarinen's approach is partly inspired by the inclusion of relevance theory in studies of communication through the use of game theory (Benz et al., 2006: 123-152). In addition, this methodological approach is new to the field of classroom interactions both in terms of general pedagogy and foreign language didactics.

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[35] The concept of maximisation of relevance will be further explained in Section 3.1.3.

The players' moves will be determined by the respective expectations about the outcome of the game, defined as the game's payoff function, or utility function (Osborne & Rubinstein, 1994: 13). This means that rationality is an important feature of game-theoretical approaches to human behaviour in situations of human communication. Sometimes the players' attitudes and abilities are restricted by contextual factors in situations which do not provide them with a full rational scope. This circumstance has led to the principle of "bounded rationality" (Osborne & Rubinstein, 1994: 6), i.e. that the players are driven by forces which do not reflect a complete rational behavior during the decision-making process. In such a case, the forces behind the decision-making process are rather characterised by other kinds of psychological factors, such as pressure or an interest in achieving a solution without necessarily being aware of the full range of payoff patterns this solution implies for the players. In a situation of bounded rationality, the players will more often than not make their choices based on their heuristics. Their choices will be determined as a function of their willingness to reach a solution without knowing exactly why they have this attitude (Pietarinen, 2007: 129). This situation is due to the fact that the player "can see just the part of the game tree within the horizon. She or he presumes the relationship between a horizontal node and the terminal node by heuristics" (Pietarinen, 2007: 128). In addition,

> *people in interaction with each other need to create and make visible a working consensus about what it is they are doing and how what they are doing is contextualized if they are to communicate effectively and accomplish their interactional goals (Bloome et al., 2008: 9).*

In this way, the interactants of this research are driven towards a solution of the game because of the contextual factor of classroom dynamics. The teachers were bound to provide the learners with instruction in the classroom setting, and the learners did not withdraw from the research process, i.e. they had at least an interest in taking part in the interaction. However, it is not possible to establish the nature of this interest to any further extent than that leaving the classroom would imply missing out on important aspects of the language learning programme. The teachers may have felt committed to finishing the programme according to the instruction provided by the school and the

researcher wanted to make sure that the SBI programme was implemented completely because of his responsibility for the project. This is a situation of bounded rationality where the players do not know exactly the reasons for their actions during the playing of the game and illustrates the question of bounded rationality in the classrooms involved in this research.

3.1.2 Conversational games

The relationship between game theory and conversational games is the same as the relationship between the arrangement of chess on the chessboard and the subsequent play of the game, starting with the initial position in a communicative game and the sequences of actions as operations on given positions. The nodes of the game tree, i.e. the points at which decisions are made, are equivalent to the positions in the game (Pietarinen, 2007: 130). The speaker(s) and the hearer(s) are the players, in the case of this research the teachers/the researcher and the learners as they interact, and the actions are represented by the speech acts[36] and related physical acts the players use during the playing of the game. Their conversational turn-taking represents the game tree (Pietarinen, 2007: 122). This game-theoretical approach to conversations is in line with the communicative view that the combination of speech acts and language is a game which is governed by a set of possibly subconscious rules (Searle, 1969), i.e. that language is used as the tool through which the speaker uses communicative devices in order to make the hearer react in a certain way.

The choices made by the players during the playing of the game are closely related to the nature of their interaction, e.g. a bargaining process with BUYERS and SELLERS will be determined by the players' interest in the outcome of the bargaining process in terms of price levels, quality assurance, quality-price ratio or any other factor of interest to the players. However, in conversational games, the players play against the world with its history. This means that at each node the players may choose from an infinity of possible ways to play the game; it is

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[36] These speech acts form the texture of the conversation in line with the definition of the nature of speech acts (Urmson & Sbisà, 1962, 1975) and the semantic logic of conversations (Grice, 1975) outlined in Section 1.2.

therefore virtually impossible to predict any solution of the game as a consequence of the players' payoff patterns (Pietarinen, 2007:122). Even if the conversation is related to a specific topic, the players may choose utterances taken from a completely different topic, although such an action would disturb the communication process between the interactants if the utterance is completely irrelevant to the topic being discussed.

A game tree representing a conversation may present the following structure[37]:
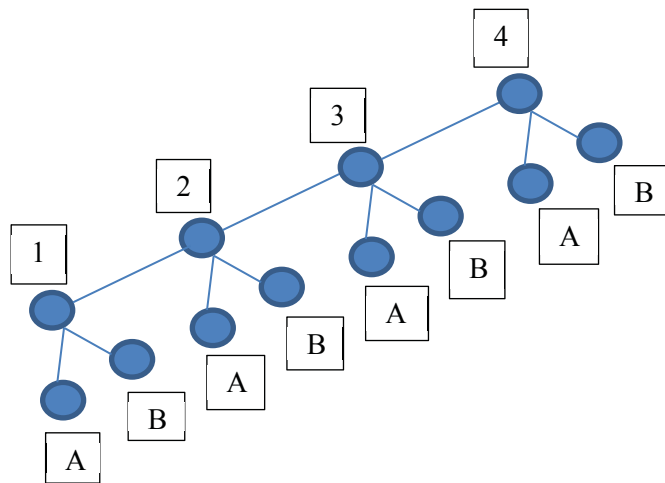
Figure 3: A conversational game tree

The first move of the conversation is the circle at the bottom left of the model (1). At this point, or node, the conversation may take indefinite forms, illustrated by the two circles connected with the circle representing the first move of the conversational game (A, B). At the end of the conversation, i.e. the terminal node at the upper right circle (4), it is possible to look back and determine the actual course of the conversation. The two circles which are

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[37] This model has been adapted from the model suggested by Pietarinen (2007: 121).

connected to the circles along the line of the conversation are all theoretical possibilities for the further course of the conversation, each representing infinite possibilities for further paths.

In an everyday situation, such as in the following conversation which illustrates the principle of Figure 3, at each node the players could have chosen any other theoretical path. This change in the conversational structure would have led to a completely different solution of the game:

1. **A**: *Could you pass me the milk, please?*

2. **B**: *Of course.*

3. **A**: *Thank you.*

4. **B**: *You are welcome, dear.*

The nodes of this game tree structure are 1 to 4. From a theoretical point of view, at each node the players have an infinity of options to choose from. At [2], **B** could have said simply "*No.*" or made a far-fetched comment such as "*Why is milk important in a world where Barack Obama is the president of the United States?*". These replies, the former a more likely alternative than the latter, would have brought about quite another reaction on the part of **A** in [3]. This nature of conversational games in terms of the players playing against the world with its history makes it virtually impossible to describe and analyse all the different possible courses of actions the players have, since basically all possible conceivable topics can be expressed in a syntactically and semantically endless structure at each and every point of the game tree.

This game-theoretical approach to classroom conversations is in line with Bloome's discourse-related view on classroom interaction:

> *[…] the teacher through her interactions with her students, including her reactions to their initiations, created*

opportunities for her students to direct, or co-direct, the flow of conversation. The learning opportunities embedded in this instructional conversation – and similarly so in all instructional conversations – depend on the flow of the conversation and on how the teacher and students react to each other, the nature of their uptake. What learning opportunities exist cannot be identified simply based on the predetermined instructional task nor on the initial conversational framing of the task. Whatever learning opportunities are established at the beginning of an instructional conversation continue to evolve and get reframed and refracted by subsequent instructional conversation (Bloome et al., 2008: 92).

The conversational games which have been played in the classroom contexts of this research are played by two players each, **A** and **B**, without any focus being attached to the creation of alliances within these two groups of players. This solution considers the INSTRUCTOR as player **A,** who represents the characteristics of a person who transfers knowledge to the learners in a social constructivist perspective[38] (Cole et al., 1978; Daniels et al., 2007; Kozulin et al., 2007), or stimulates towards self-reflection[39] (Zoltán Dörnyei & Ushioda, 2009; Freire, 1974; Freire & Macedo, 1987). The player **B**, the LEARNERS, embodies the whole group of learners with the shared feature of being present in the classroom as the receiver of the transmission of metacognitive knowledge in a social constructivist perspective and the constructor of self-awareness. The bipolar structure of the instructor-learner relationship constitutes the basic element of this interaction and contributes to the understanding of how knowledge is constructed socially. If we understand the dynamics of

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[38] This social constructivist perspective on the transmission of knowledge is in line with the Vygotskyan approach to learning defined in Section 1.1.

[39] The concept of self-reflection as a way to attain metacognitive self-awareness has been further explored in Section 2.1.

constructing knowledge socially […], we are better able to be intentional in building learning communities" (Rex & Schiller, 2009: 52).

In addition, the expected payoff pattern of a given conversational game is furthermore relevant for the strategies the players choose in order to reach the expected goal set for the interaction. The nature of these strategies will determine the choices the players make at each and every node of the game. In a game of commercial interaction, for example, the players' strategies would be expected to be the methods the players use in order to attain the price they would decide for a purchase, or the terms of a contract which the parties would consider relevant in a negotiation process. Again, in a conversational game these strategies reflect the decision-making process of the players in order to produce a payoff pattern for the interaction. Within the scope of this research, the payoff pattern of the players is the one which maximises relevance as a combination of the players' heuristics and the communicative and cognitive principles of relevance. These principles will be further dealt with in Section 3.1.3.

The conversational games of this research are thus co-operative games. In co-operative games, knowledge about the interactants' goals must be shared and these goals must be aligned in some way; both parties must know that the opposite party knows that they both know ad infinitum (Levinson, 1983: 44-45). The whole SBI programme was described at the outset of the programme. The progress was carefully described as the implementation of the SBI programme evolved; a participant in a conversation or communication process must ensure at all times that the contribution is consistent with the purpose, meaning or direction of the process (Vidal, 1996: 78).

In this way, the participants in the interaction recognise a meaning in the communicative situation, or at least a common direction accepted by all parties in accordance with the Gricean conversational co-operation principle (Grice, 1975). The games which have been played during the implementation of the SBI programmes of this research are co-operative conversational games in the sense that the goals of the learners and the instructors are not in opposition to

each other, such as the opposing goals of the players in a zero-sum game[40]. In co-operative games with several players (multi-person co-operative games), there may be a focus on the creation of alliances within the game and its consequences for payoff patterns among the members of the group. In this research there is no interest attached to the analysis of the complexity of coalitions among the players, but on the interactional dynamics between the archetypical representation of LEARNERS and INSTRUCTORS. This is why the games have not been analysed as multi-person co-operative games, but instead as co-operative games with two players. The concept of co-operation is thus reflected in the shared goals of the interactants, leading towards the maximisation of relevance produced as a consequence of the interaction; dialogue games are co-operative activities of information exchange with alignment of players' payoff apparently in order to avoid miscommunication (Benz et al., 2006: 124; Carlson, 1985: xviii).

An important feature of the playing of games is the actions. In conversational games, the actions can be both verbal and physical. Whatever the nature of the actions, they acquire their meaning in the context in which the games are being played. The conversations are thus considered to be a combination of speech acts (Holdcroft, 1979: 125). Speech acts are in the realm of rational action, but as previously stated, the players' rationality is bounded due to the contextual restrictions of the playing of the conversational games. The sequence of actions represented through the speech acts is influenced by the purpose and the intentionality of the interaction in line with the contextual pedagogical factors, as well as the communicative principle of relevance[41]. This perspective also includes the players' beliefs about the consequences of the use of the speech acts and relevant values, and thus what the speaker means by using a certain sequence of speech acts (Benz et al., 2006: 85). This makes the use of speech

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[40] A zero-sum game is a game in which there is only one solution available for both parties. A zero-sum game will logically produce a situation where the interactants compete for the best possible payoff in line with that sole solution (Benz et al., 2006: 10-11; Osborne & Rubinstein, 1994: 21).
[41] The purpose and intentionality behind the teachers' actions are further described in the theoretical framework for the definition of Player A INSTRUCTORS in Section 3.1.6.

acts strategic, explaining the goal-driven action structures for both interactants (Pietarinen, 2007: 5). However, these strategies are influenced by the bounded rationality of the players according to which the interactants are driven forward by their heuristics.

The psychological value of the players' heuristics implies that the players will move towards a common goal which is determined by their wish to reach that goal, whatever its nature. They will consequently choose a path for their conversation which is influenced by factors such as a subconscious desire to reach some kind of solution in accordance with the context in which the game is being played. This motivational force will determine the players' conversational choices at each and every node of the game tree. Within the boundaries of this research, the line which the players have followed is the one which maximises relevance along the so-called sub-game equilibrium path expressed as the line moving along the conversational game as expressed in Figure 3. This implies that the path the interactants have actually taken is the most efficient path of the conversation in line with Pietarinen (2007: 119-133), and the one which maximises relevance in line with Benz (2006: 140-141).

3.1.3 Maximisation of relevance

The connection between game theory and the maximisation of relevance is a logical inference of an approach to conversational games where the communicative and the cognitive principles of relevance come into play during the evolution of a conversation from utterance to utterance (Benz et al., 2006: 140-141). This is the approach to studies of conversations which constitutes an extension of Pietarinen's game-theoretical account of the identification of equilibrium plays[42] of conversational games (2007: 119-133). A game-theoretical approach to conversations implies an account of how the conversation develops from one utterance to another. Relevance theory is "a

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[42] These equilibrium plays of the conversational games will be defined as the Nash equilibrium of the same in Section 3.1.5. in line with Pietarinen's game-theoretical approach to the study of conversations.

non-game-theoretic utterance-by-utterance account of communication" (Benz et al., 2006: 123), which also takes into consideration how communication develops from one utterance to another. In this research these principles have been combined based on the assumption that human interaction and communication are geared towards the maximisation of relevance as a consequence of the *cognitive principle of relevance* (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012). According to this principle, the audience in a communicative situation will tend to select potentially relevant stimuli and retrieve information in such a way that potentially relevant assumptions are activated and ensure that these assumptions are processed as efficiently as possible (Wilson & Sperber, 2012: 6)[43]. This is how an equilibrium play of the conversational games is induced and the conversation driven towards its end or pragmatic solution.

The other side to this coin of communicative situations is that the communicator's intentions behind the communicative act also play a role in the uptake of information on the part of the audience as an important contextual factor. The communicator presumes that the communicative act is as relevant as possible, and thereby heeds the wish to make the audience feel that the communicative act is optimally relevant. This is the *communicative principle of relevance* (Wilson & Sperber, 2012: 6). Relevance is thus related to the uptake of information on the part of the hearer. In this way, the hearer contributes towards the creation of a certain context as the conversation evolves (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012). This means that learners create knowledge as the classroom interaction unfolds as a reaction to the teacher's presumption that his/her input is a relevant contribution to the context.

However, the fact that human cognition is geared towards the maximisation of relevance does not imply that the production of relevance is perfect in a given situation. It simply means that the input is processed in the most relevant way

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[43] This principle is in line with the contextual prerequisites for the creation of meaning in interactional processes described in Section 3.1.

in accordance with the circumstances[44]. The solution, whatever its nature, may thus be optimal or not optimal at all, or something in between these opposites along a sliding scale of relevance (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012). This is exactly what maximisation of relevance implies; relevance is maximised, i.e. the potential for relevance is expanded as much as possible in the interaction at hand. This means that the relevance which has been maximised in the three conversational games of this research is not the same. However, no attempt has been made at measuring these different degrees of relevance. The only assumption made is that the solution of each and every game is as optimal as the circumstances permit it to be, and the three different solutions achieved convey a message about the meaning which has been created as a consequence of the interaction itself.

There are two integral factors which influence the maximisation of relevance produced during a given interaction, i.e. the *cognitive effect* and *processing effort*s. An utterance is optimally relevant if the addressee feels that the processing effort is worthwhile for him/her (Wilson & Sperber, 2012: 65). In order to produce cognitive effects new information must interact with previous assumptions related to the context if the new information strengthens an existing assumption, contradicts and eliminates an existing assumption or combines with an existing assumption to yield contextual implications (Wilson & Matsui, 1998: 16). The stance taken in this research is that the INSTRUCTOR provides the learners with cues and input during the implementation of the SBI programme which the learners integrate into their existing assumptions. This integration into existing assumptions may take the form of contradicting and eliminating existing assumptions or combining with existing assumptions to yield implications for the unfolding of the interactional history. In this way, relevant meaning is being created as a consequence of the interaction itself based on the active output of the learners in the classroom. The processing efforts of the learners is not measured in this research. Nevertheless, this

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[44] In this research the researcher and the teacher have attempted to provide the learners with the most relevant input. Logically, relevance has been influenced by this conscious approach to the creation of meaning. The meaning created is thereby not a consequence of a completely spontaneous interaction.

mechanism contributes to the creation of meaning in the interaction. At a subconscious level it drives the process forward together with the cognitive effect of the INSTRUCTOR's input during the process.

The two main factors which influence this processing effort are the form of presentation of the information and the degree to which the context is accessible (Wilson & Matsui, 1998: 16). This means that the maximisation of relevance is a consequence of the learners' abilities and preferences as well as the ever-unfolding interactional history of the SBI programme. This interactional history of the SBI programme is thus a result of the dynamic interplay of beliefs about language learning which have come to the fore during the implementation of the SBI programme. The way the learners are provided with a breeding ground for the development of beliefs is related to how the dynamic relationship between information and context is mediated by the teacher or the speaker in the interaction. When the speaker makes an utterance, there is an expectation on the part of the speaker that this utterance will be relevant to the hearer in some way, and hopefully be optimal in the context according to the communicative principle of relevance when the speaker makes an offer of information.

Nevertheless, there is a problem related to the tautology which is implicit in the concept of maximisation of relevance. This tautology is due to the fact that the optimal relevance of the product of a certain interaction, i.e. the solution of a conversational game in the case of this research, is defined according to how this solution has come to be. This means that, had the solution been of a different kind, it would have been defined as maximisation of relevance all the same. However, this is the very nature of the principle of maximisation of relevance; the context with its players and their intentions and purposes creates the best solution according to the players' heuristics. The LEARNERS and INSTRUCTORS of the conversational games are present in the same room, and all have the possibility to leave the room if one or several individuals do not wish to partake in the whole interaction. If they choose to stay in the classroom, they will all find a way to co-operate and reach a solution no matter how this solution comes to be.

This heuristic approach to the classroom interaction implies that the learners are bound to find some kind of practical implementation of the activities they are set do to, and they have to use their experience and knowledge in some unpredictable way in order to fulfil the task at hand. There is also a heuristic process going on between the learners and the teachers since the teachers have to respond to the learners' output during the classroom interaction. The interactants will have to use their experience, personal traits and knowledge in such a way that the tasks are solved in one way or another during an evolving process of finding partial solutions along the way for how the interaction is to develop.

3.1.4 Backwards induction

Upon completion of the playing of the game, it is of interest to identify the path taken by the players in order to determine the maximisation of relevance which has occurred. The path taken by the players is identified based on the principle of backwards induction (Clark, 2012; Pietarinen, 2007), since

> *only when communication terminates do we have enough evidence and reason to assess the value of the path taken by the speaker or the hearer through a multiplicity of possible conversational situations. […] Language use and understanding is reciprocal, and the responsibilities are equally and mutually distributed between the speaker and the hearer (Pietarinen, 2007: 4).*

An example of the procedure of backwards induction may be what is represented in Figure 3 and the conversation over milk at the table in Section 3.1.2. The principle of backwards induction applied to the conversation at hand means starting at node [4], which is the final node of the game tree, and moving backwards towards the first node [1], thus identifying the path the interactants have actually taken as they moved through the conversational game. In this way, when designing a systematic analysis based on backward induction, the procedure is to use the terminal node of the game tree as the starting point of a

backward analysis of the nodes of the game tree until the root of the game tree has been arrived at in the form of the first turn-taking of the conversation. The principle of backwards induction may therefore be used to identify the nature of the flow of conversation according to which the conversation gets reframed and refracted during the process (Bloome et al., 2008: 92).The interest thus lies in analysing the path the players have actually taken and using that path for whatever purpose is deemed relevant.

3.1.5 Nash equilibrium

The pathway taken by the players during the evolution of the conversational game and identified through the principle of backwards induction, equals the inducement of a Nash equilibrium in the conversations (Pietarinen, 2007: 119-133). A *Nash equilibrium* is "an action profile $a*$ with the property that no player i can do better by choosing an action different from $a*_i$, given that every other player j adheres to $a*_j$" (Osborne, 2002: 20). If the players' assumed subconscious goal in a game conversational context is to achieve maximisation of relevance, the inducement of a Nash equilibrium occurs when the interactants' goals and purposes are aligned in such a way that the particular context produces the best outcome for the players involved in the interaction. The inducement of a Nash equilibrium thus requires that all the players adhere to the action profile of the game. These actions are made up of the players' past experiences represented in the complex psychological and neuropsychological patterns developed by the shared experiences of the players as well as their rationality, individual traits and symbolic individualism (Lahire, 2001: 77-79). In the above, bounded rationality has been defined as the principle according to which the players adhere to the action profile of the conversational games due to the interactant's limited view of the ever-evolving horizon of the conversational games.

When identifying the Nash equilibrium of the conversational games, there has been an attempt to reduce the creation of meaning of the conversational games to a definite set of meaningful moves presented in Section 4.1. These

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meaningful moves represent the illocutionary force[45] of the interactions. This meaningful reduction of the playing of the conversational games solves the problem of the complexity of actional patterns in the overall structure of the games.

In a classroom context the goals and purposes of a pedagogical interaction may be difficult to fathom, but the actual evolution of the classroom conversation produces the most relevant solution possible for that particular interaction at that point in time and directs the players towards a goal which maximises relevance for the players of the game. The Nash equilibrium thus equals the most efficient path towards the solution of a given game in which there is an equilibrium of the players' interests and expectations in terms of payoff patterns. Within the boundaries of this research, this equilibrium is considered to equal a subconscious alignment of the players' heuristic interest to maximise relevance during the playing of the conversational games[46]. The analysis of the classroom conversations as conversational games outlined in the above presupposes the notion of "a *steady state* of the play of a strategic game in which each player holds the correct expectation about the other players' behaviour and acts rationally" (Osborne & Rubinstein, 1994: 14). However, during the implementation of the SBI programme in the three classrooms involved in this project, this rationality has been bounded due to the limited horizon of the players of the conversational games.

When relevance is maximised along the Nash equilibrium of the conversational games, the players have solved the game in a way which:

a) yields the best solution for producing the best cognitive effects; and

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[45] The illocutionary force is the pragmatic content of the INSTRUCTOR's attempt to drive the interaction forward towards a state of maximisation of relevance.
[46] This combination of the principle of Nash equilibria applied to conversational games (Pietarinen, 2007: 119-133) and the communicative and cognitive principles of relevance (Benz et al., 2006: 123-124, 140-141) for the maximisation of relevance (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012) has been further described in Section 3.1.3.

b) yields the best solution for producing the best processing effects for the interaction (Benz et al., 2006: 140-141; Sperber & Wilson, 1986, 1995).

The combination of these factors have thus contributed to the creation of meaning during the implementation of the SBI programme in the three classrooms involved in this project.

3.1.6 The INSTRUCTOR (player A)

Each play of the game has to be considered in isolation. When the players play a certain game, their decisions are determined by the random nature of the game they are playing. In this vein, there is no expectation of any influence of future behaviour among the players, the result of which is the creation of a typical abstraction of the nature of a certain play, such as the afore-mentioned generic and anonymous nature of BUYERS and SELLERS in commercial interaction (Osborne, 2002: 19). The afore-mentioned abstraction of commercial interaction, together with the intercontextual nature of the implementation of the SBI programme, have thus yielded the generic categories of INSTRUCTORS and LEARNERS. The INSTRUCTORS represent the four teachers[47] in the three groups of learners as well as the researcher, and the LEARNERS represent the total number of learners who participated in the intervention. The problem of the varying degree of researcher presence during the implementation of the SBI programmes has been solved in that the researcher has been subsumed under the player category INSTRUCTOR. In this way, the actual implementation of the programme was a function of the interplay between the researcher's attitudes and beliefs and the involved teachers' way of interpreting the instructions pertaining to the implementation of the SBI programme.

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[47] In the French group, the class teacher was sick around Christmas 2010, so an additional French teacher participated in the project around this time.

3.1.6.1 The teachers

The teachers' contribution is influenced by two core elements: their didactic repertoire and the actions they carry out[48]. Their didactic repertoire includes the instructions provided by the researcher during the implementation process. The teacher's repertoire is an important factor in relation to handling the challenges which may come about as a consequence of the unpredictability of the act of teaching. This unpredictability is a key factor according to the game-theoretical approach taken in this research; the players play against the world with its history and the unpredictability inherent in the act of teaching shapes the decision-making process at each node of the game tree.

The players' heuristics driving the interaction towards its maximisation of relevance is thus influenced by this complex pattern of past experiences and contexts external to the classroom situations which make up the background to the teachers' deployment of actions during the evolution of the conversational game in the classroom. The teacher constitutes an important factor in the establishment of the framework for the pedagogical activity to take place in terms of the efforts required on the part of the learners, as defined by the instruction programme and its legitimacy. The very act of teaching goes beyond the classroom setting, and this principle is in accordance with the theoretical foundation of action theory in the sense that an action at a superficial level contains other actions inherent in the action at this superficial level. In addition, the present or past cultural norms in education and society will largely determine the teacher's actions. These norms may also be represented in the discourse with the teacher as the mediator of the learning process (Cicurel, 2002: 5). Previous experience in life and with the class will determine this

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[48] The principles pertaining to the teachers' role in the interaction are based on a seminar given by Mme Francine Cicurel at Université de la Sorbonne Nouvelle Paris 3 during the spring semester of 2010. She gave a seminar on the so-called "agir professoral", i.e. the act of teaching which is essential to the understanding of the teacher's role in the teacher-student relationship. Her description of the teacher's role and position forms the conceptual background to this theoretical description of the complexity surrounding the teacher in the classroom.

evolution[49], and further chains of action will be integrated according to its evolution in a dialectic manner. In this way, the teacher contributes to creating meaning to the action being performed.

3.1.6.2 The researcher

The researcher played an active role during the implementation of the SBI programme. This role is related to his influence prior to the teaching sessions and his actual presence in the classrooms in terms of giving cues, taking notes, giving advice, and answering questions whenever necessary. His active participation varied from one group to another as a function of the teachers' willingness to take an active part in the process. In addition, he provided the teachers involved in the process with ongoing follow-up. The conventional power structure in the classroom was thus altered during the evolution of the implementation of the SBI programme as a consequence of the researcher's presence in the classroom in a tripolar constellation. Nevertheless, the participation of the researcher has contributed to the maximisation of relevance *per se*.

This research was not based on an ethnomethodological approach where the researcher is present in the classroom for the purpose of identifying patterns of conduct and pedagogical principles. The researcher took an active part in the implementation of the SBI programme, and his role and presence influenced the learners both in terms of his direct participation as an INSTRUCTOR together with the teachers, but also in terms of the psychological effect his presence may have had on the learners in the classroom setting as a scientific laboratory[50]. As in the case of the teacher's role and his/her influence on the implementation of the SBI programme described in the above, the researcher's role was also influenced by his cultural background and repertoire. The construction of the

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[49] This perspective on the group dynamics in the classroom is in line with the concept *interactional history*.

[50] The presence of the researcher in a research project may influence the participants in such a way that the result of the research is biased to some extent. This challenge in research enterprises is called the Hawthorne effect and will be further dealt with in Section 3.4.

SBI programme in the context of international and national guidelines and theory pertaining to metacognitive issues are vital factors in this respect. They pervade the whole interaction process both in terms of the instructions provided to the teachers prior to the sessions and the interpretation of the evolution of the SBI programme, a feature which has influenced the construction of the SBI programme as such.

The fact that the researcher in this case was not an observer in an ethnomethodological manner, but rather the initiator of the classroom discourse and interaction, may be considered to have been an obstacle to a natural evolution of the SBI programme. Nevertheless, this influence created by both the presence and the intervention of the researcher is a necessary way of actually creating the opportunity to implement the SBI programme which was created for the purpose of this research. In the case of the present research, the researcher even blended into the game-theoretical category of the INSTRUCTORS, and this fact makes the role of the researcher even more conspicuous in the interactions which evolved:

> *They [research enterprises] are no less historical, cultural, political, and ideological; and they no less involve power relations. While it is rarely practical for researchers to conduct an ethnographic study of the research enterprise while also conducting the research, nonetheless, researchers should be reflexively aware of the contexts of their research and take that into account with regard to how they interact with and affect people and events, what descriptions they create, and how their research is used by themselves and others (Bloome et al., 2008: 40).*

The researcher's own beliefs and convictions have thus formed a vital part of the interactional dynamics, and this contextual layer could be critical for the valid interpretation of the evolution of the conversational games[51]. Another aspect is the researcher's personal development as a consequence of the

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[51] Validity issues will be further dealt with in Section 3.4.

interaction and experience with the group, and how this cumulative experience influences the playing of the game[52]. In a project of this kind, the researcher will necessarily have an interest in avoiding communication breakdown in the group. This means that the researcher's own beliefs about the importance and relevance of the issues which provide the evolution of the games with their content, have contributed to the maximisation of relevance. His behaviour has thus been influenced by the communicative principle of relevance, according to which any communicative act will contain a presumption of its own relevance (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012). However, the possible validity problem outlined in the above has been eschewed in that the researcher's contribution to the classroom interactions has been subsumed under the player A as an INSTRUCTOR who attempts to provide the LEARNERS with a certain kind of knowledge as a consequence of the same role as the teachers have in the interaction.

This dialectic approach in terms of the researcher influencing the event in order to use this experience to contribute to the purposeful evolution of the SBI programme is in line with Bloome's observation that the way social events are defined influences the discourse analytical approach taken and that the progress of the social event influences the discourse analytical definition of the same in a cyclic pattern (Bloome et al., 2008: 7).

3.1.7 The LEARNERS *(player B)*

The foreign language classroom is a place where people come together within the framework of educational programmes. In addition, it is the setting of a complex interaction (Cicurel, 2002). This makes the classroom a place for pedagogical interaction rather than the arena for carrying out an ideal methodology (Cicurel, 2002: 3). The SBI programme was created on the grounds of a specific set of ideal principles for how an SBI programme should be designed. In this way it reflects the ideal methodology of this kind of instruction. This occurrence thus makes the foreign language classroom a place

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[52] This feature of the interaction is also in concert with the concept *interactional history*.

for pedagogical interaction in line with the approach defined by Cicurel (2002: 3). Learner experience is an important aspect of this way of looking at the foreign language classroom, and this collective learner experience forms the basis of the establishment of the LEARNER category of the conversational games:

> *L'accent n'est plus mis sur les seuls actes d'enseignement mais sur l'interaction dans sa dimension collective, sur le groupe d'apprenants et sur le déroulement de leurs échanges. L'apprenant est vu comme appartenant à un groupe social dans lequel il se fond. Cependant ce rééquilibrage ne va pas tant dans la direction d'un effort pour envisager la classe comme lieu de progression langagière, que pour l'instaurer comme lieu de parole et de socialisation (Cicurel, 2002: 4)[53].*

This collective dimension is characterised by features such as L2 learning anxiety, different degrees of self-esteem, self-efficacy and self-concept, different learner beliefs about L2 learning and, finally, different attitudes, cultural and personal beliefs (Oxford, 2011: 69-71).

This socialisation perspective is important when considering the group of learners as a place where the learners develop a collective dimension of belonging to a learning community (Borg, 2006; Cazden, 2001; Cicurel, 2002; Zoltán Dörnyei & Murphey, 2008; McKay, 2008; Seedhouse, 2004). This socialisation process will, among other aspects, be characterised by the process of educating *good language learners*. A good language learner has an interest in the form and structure of the language, as well as its communicative functions. He/she engages in active work with tasks and exercises. In addition,

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[53] The focus is not anymore on the mere pedagogical actions, but on the interaction in its collective dimension, on the group of learners and on the evolution of their exchanges. The learner is considered to belong to a social group into which he merges. However, this restructuring is not directed towards an effort to consider the classroom as a place of linguistic progression, but to establish it is a place of dialogue and socialisation (my translation).

he/she strives towards gathering insight into the learning process and flexibility in terms of sharing the attention between content and form and adapting the strategies to the task (Tornberg, 2000: 23).

3.2 Data collection

Data collection during the academic year of 2010-2011 took place at an upper secondary school in the Stavanger region for a period of approximately eight and a half months. The backbone of the research was the implementation of an SBI programme in three groups of learners in the first grade of upper secondary school during one academic year, and for this purpose a school was required with a relevant selection of learners.

3.2.1 Selection of the school

The researcher and the University of Stavanger received an invitation from the upper secondary school to conduct a research project at the school. When the researcher was admitted to the PhD programme in Literacy Studies at the University of Stavanger, this contact was part of the background for the project proposal and formed the backbone of the research project. An important aspect of this co-operation was the fact that the school had received extra funds from the county administration to focus on additional second language teaching programmes. This extra funding was partly due to the fact that the school had initiated research co-operation with the University of Stavanger. Therefore, the school was under obligation to ensure that the project was actually carried out, and teacher participation in the project was directly linked to this obligation. The project school is considered to be one of the best in the Stavanger region with very dedicated learners who tend to perform above the average levels. The contact was mainly between the researcher and one of his former colleagues who worked at the same school. This colleague was also one of the teachers who participated in the research programme.

3.2.2 Selection of teachers

In September 2009, the school organised an information meeting with the teaching staff in the language department and with the head of the language department. They were informed about the project and that the focus should be on metacognitive issues, but that the specific research design had not yet been determined. In August 2010, the researcher was invited to the school to inform the whole staff about the upcoming implementation of the SBI programme. At this meeting, the head of the language department asked if teachers of German and French in the first grade would volunteer for participation in the project in addition to the Spanish teacher, who was the contact person between the school and the University of Stavanger. This teacher was the afore-mentioned acquaintance and former colleague of the researcher's. This personal relationship may have influenced the teacher's obvious willingness to participate in the project, whereas two of the other teachers although they felt obliged to participate, displayed some reluctance from the start since they felt that their participation was a consequence of the school's obligation to co-operate. However, they volunteered after the school administration had decided that teachers from the first grade should participate in the project.

At the meeting in August 2010, the staff were thoroughly informed about the nature of the project, but problems did arise during the first part of the project period because of the reluctance to participate on the part of two of the teachers. This reluctance posed some co-operation problems between the teachers and the researcher. Around Christmas 2010, another French teacher had to take over the French group three times (sessions 5, 6 and 7) since the original French teacher was absent for health reasons.

As soon as the teacher selection process had finished, the teachers were provided with information on e-mail about the nature of the project in terms of the characteristics of the implementation of the SBI programme. They were given an introduction to language learning psychology and provided with information about the importance of learning strategies in this process. They were finally provided with information about the sessions during which specific metacognitive learning strategies were to be reviewed and practised. The link between the SBI programme and research on language learning strategies was

particularly emphasised. In addition, there was a focus on the dichotomy between integrated and separate forms of SBI and the current project's relevance to this dichotomy in terms of the separate nature of the SBI programme. This description of the SBI model was followed by a presentation of the particular parts of the model and the interactional and discourse analytical approach to the evolution of these sessions upon completion of the SBI programme. The teachers were also informed about the fact that the researcher would prepare the sessions as a consequence of the experience gathered both during each particular session and the ongoing conversations with the teachers prior to and after each session.

The schedule for the specific teaching sessions was outlined and the teachers were told that it would be possible to change individual sessions if circumstances at the school would require such changes. These documents would contain information about time, summary of the topic, and activities to take place. The teachers were told to follow the normal routines as far as possible. However, since the purpose of the SBI programme was to influence overall learner habits, they were encouraged to include principles from the 16 SBI sessions whenever relevant. The teachers were also told to distribute both the declaration of consent and the information to parents and guardians described in Section 3.5 in terms of ethical considerations related to the use of human beings in a research project of this kind. Information was also provided about the researcher's presence in the classroom and the researcher's video recording of some of the sessions. The nature of sessions 1 and 16 required a more detailed account of the content of their evolution, whereas the intermediate sessions (2-15) focused more on pedagogical activities related to the overall nature of the SBI programme. Information was given that observation notes would be taken during these sessions.

3.2.3 Selection of learners

The first meeting with the school's administration (school director, head of the language department and the teacher serving as the contact person) was held in June 2009. At the meeting, the general outline of the research project was discussed, as well as the scope of teacher participation. The conclusion was that the project should include one German group (23 learners), one French group

(15 learners) and one Spanish group (25 learners) in the first grade. They were all native speakers of Norwegian, or had a native-like mastery of the language. They were all learners at Level II, i.e. within the group of 15-16 years old learners who had also studied the language for three years in lower secondary school from the 8th to 10th grades. They were expected to have received approximately 220-230 hours of instruction in the subject during these three years.

The first year of upper secondary school consists of approximately 110-120 hours of instruction in the subject (Utdanningsdirektoratet). The learners' level of proficiency may vary, but they are expected to have acquired a basic vocabulary and a basic understanding of the verbal system and the conjugation of nouns. Their oral and written skills are rudimentary, but on the whole the learners will have acquired basic communicative skills in the foreign language[54]. The learners start studying their foreign language in the 8th grade of lower secondary school, so their proficiency in the foreign language is much lower than in English, which they start in the first grade of primary school.

In the 8th grade they may choose an additional foreign language, which is not compulsory. If they choose not to study a foreign language, an alternative option in another subject field may be available at the school. The subject availability in terms of German, French and Spanish may vary from one school to another depending on staff and internal financial resources. However, the school background of the different learners has not been explored for the purpose of this study. The only criterion for inclusion in the SBI programme was their presence in the classroom at the time of the implementation of the SBI programme during the school year 2010-2011. These three languages were the three most common languages chosen in the Norwegian upper secondary school system during the period 2003-2013 (Utdanningsdirektoratet, 2013). In 2012/2013, approximately 15,000 learners took Spanish, approximately 13,000 learners took German and approximately 5,000 learners took French. Other languages, in total 36 languages apart from Spanish, German and French, make

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[54] This general information on the expected skills of the learners is based on the researcher's several years of work experience in the field.

up a total of 0-2 % of the total number of foreign language learners in the Norwegian school system. 61 % of the learners in upper secondary school continue studying the language they started to learn in lower secondary school (Utdanningsdirektoratet, 2013).

Spanish, German and French are therefore by far the most representative foreign languages in the Norwegian school system. A combination of these three languages would therefore provide a thorough background for the implementation of the SBI programme according to the guidelines given in the Norwegian curriculum. Maximisation of relevance would then take place among learners in a representative learning context. Since the learners had studied the foreign language in lower secondary school, they had some language learning experience in addition to English which could be used as a basis for the implementation of the SBI programme. The learners could then look back on their language learning experience thus far, and use this insight for their work with the metacognitive activities during the sessions. Prior to the first session, the teachers were told to inform the learners about the fact that a researcher from the University of Stavanger was going to be present during the school year 2010-2011, and that the learners should be provided with further information about the content of the instruction programme from the onset of the project period. They were also provided with information related to the consent they should give as participants in the project in line with the ethical guidelines outlined in Section 3.5.

3.3 The Strategy Based Instruction Programme (SBI)

Strategy training is goal-oriented instruction provided alongside instruction in the foreign language itself, during which the deployment of language learning and language use strategies is presented and modelled in the group of learners (Cohen, 1998: 17-18; Macaro, 2001: 26). Important factors to take into account are language functions inside and outside the classroom, individual efforts in language learning, trade-offs between accuracy and fluency, fear of mistakes, learning versus acquisition, and the differences between language learning and

other kinds of learning (Oxford, 1990: 201). The nature and difficulty of the tasks and the level of support for strategy transfer may influence the efficiency of SBI (J. Michael O'Malley & Chamot, 1990: 224-225). Other influencing factors are the characteristics of the given learner, the given language structure(s), the given context, or the interaction of these (Cohen, 1998: 12). In addition, metacognitive and cognitive strategies should be combined during instruction (J. Michael O'Malley & Chamot, 1990: 219). The cognitive aspect of the language learning process is complex, and the support provided by the metacognitive learning strategies helps the learners organise this cognitive complexity.

Scientific taxonomies of the concept of learning strategies and its consequence for the construction of metacognitive knowledge are marked by inconsistencies and mismatches (Cohen, 1998: 11; Macaro, 2001: 23). Since the focus on language learning strategies has developed within the field of learning and teaching in recent years (Cohen & Macaro, 2007; Zoltán Dörnyei, 2001; Hurd & Lewis, 2008; Macaro, 2008; Tornberg, 2000), the fuzziness of the concept of *learning strategies* may be understood as a result of this recent scientific expansion in the area. This fuzziness relates both to the possible difference between language learning and language use strategies, and the categorisation of these strategies (Cohen, 1998: 4-5). In the current research, no clear distinction has been made between language learning and language use strategies since strategic competence and language use reflect basic assumptions in metacognition related to the language learning processes (Bachman, 1990: 98-104). Knowledge in the field of assessment, planning and execution have therefore implications for the actual use of the L2 as well.

In spite of these conceptual discrepancies, for the purpose of the present research *learning strategies* have been defined as techniques and premeditated actions the learners acquire in order to make both learning and mastery of the language easier from both a linguistic and a content-wise point of view (Byram, 2004; Ellis, 2008: 705; J. Michael O'Malley & Chamot, 1990; Oxford, 1990; Rubin, 1987). By these processes, learners will develop skills for identifying relevant learning materials, skills for organising this material for easier learning, knowledge about how to repeatedly engage oneself in contact with this material and, finally, how to commit this material to memory.

A prerequisite for the use of language to describe the use of learning strategies is the learners' ability to actually describe them. Even young children are able to describe their strategy use (Cohen, 1998: 11). Another issue is whether there is a link between what the learners describe and what they actually do:

> *We can never be certain that what learners think they are doing corresponds to underlying mental processes to which they have no introspective access. For all these reasons it is difficult to establish with certainty that strategy training is the best means of increasing learners' strategic control of the language learning process. It may be at least as effective to concentrate on helping them to engage as fully as possible in the reflective task of planning, monitoring and evaluating their own learning (Byram, 2004: 580).*

Nevertheless, the present research has been based on the assumption that the learners in the three classrooms were able to provide a description of their strategy use. In this way, they express a certain awareness of how they have understood the instruction they have been provided with, so that these aspects of their learning come to the fore in plain language. This linguistic output may be interpreted as a form of incipient awareness-raising as a function of the instruction itself. In addition, this description can be used for an assessment of the SBI programme, as reflected in the metacognitive learner beliefs about the language learning process as a consequence of the assumption that what the learners express actually represents some kind of learning.

This focus on learning strategies may be implemented as a part of the classroom instructional plan in such a way that both content and strategies are taught at the same time in an integrated way. The other way of providing the learners with strategy training is in the form of a separate model of teaching, whereby the SBI programme is implemented alongside the conventional teaching programme in the group of learners. The implementation of the SBI programme in this research was based on such a separate model of teaching the language learning strategies in order to provide the learners with a systematic focus on the presentation of relevant learning strategies.

Four sets of language learning strategies were chosen for inclusion in the SBI programme: *cognitive*, *social* and *affective* language learning strategies, in addition to the main focus on *metacognitive* learning strategies. Metacognitive knowledge also includes skills and knowledge in the use of other learning strategies, and the SBI programme was therefore based on an introduction to the fundamental cognitive, social and affective language learning strategies, as well as a supplement to the initial focus on metacognitive learning strategies. The scope of metacognition in language learning includes the planning, monitoring and assessment of language learning activities, in addition to the planning, monitoring and assessment of the deployment of metacognitive learning strategies as such.

The planning component involves decision-making processes in terms of how to make use of topic-related and linguistic knowledge. The monitoring component involves goal-setting and identification of tasks and activities. The assessment component involves the determination of needs, work activities and achievement (Cohen, 1998: 14). In this way, metacognitive learning strategies support both the learning process and the deployment of more specific learning strategies (J. Michael O'Malley & Chamot, 1990; Oxford, 1990, 2011). Cognitive, social and affective strategies are examples of such specific learning strategies.

3.3.1 Metacognitive learning strategies

Metacognitive learning strategies are those with a self-regulative function a learner makes conscious use of to organise the learning process. The ultimate goal is consequently to transform metacognitive knowledge into metacognitive regulation (Oxford, 1990: 136-140; 2011: 46), thus closing the gap between declarative and procedural knowledge in the field. This implies that the language learner must be able to retrieve theoretical knowledge from the long-term memory when confronted with tasks such as the construction of a sentence or the production of an utterance in the foreign language. The process by which the learner develops these skills is one which aims at closing the gap between declarative and procedural skills. The metacognitive learning strategies are the tools the learner has at his/her disposal in this process (J. Michael O'Malley & Chamot, 1990).

A factor closely related to metacognitive skills is metalinguistic awareness. Metalinguistic awareness is "the ability to step back from the comprehension or production of an utterance in order to consider the linguistic form and structure underlying the meaning of the utterance" (Cohen, 1998: 206). There is thus a close relationship between metacognitive knowledge and metalinguistic knowledge. If the learner is to comprehend how to approach a language learning task, it is important to know how the L2 is structured, how different transfer issues come into play between the L1 and L2, and the relevance and nature of grammar and vocabulary learning. These metalinguistic aspects are an integral part of the language learning process, for instance in terms of linguistic similarities and differences between the L1 and L2[55]. The ability to step back in order to understand the deeper semantic characteristics of the linguistic structures may thus be considered the foundation for understanding, for instance, how words can be processed and how grammatical difficulties can be overcome during the acquisition of the target language. Another instance is the fact that awareness of the phenomenon of linguistic transfer and its importance for the learner's metacognitive development constitutes a vital part of the metacognitive strategy of monitoring cognition (Oxford, 2011: 45).

3.3.2 Cognitive learning strategies

Cognitive learning strategies encompass the language learning strategies of identification, grouping, retention, and storage of language material, as well as the language use strategies of retrieval, rehearsal, and comprehension or production of words, phrases, and other elements of the second language. In short, the cognitive learning strategies are used for problem analysis, problem solving and problem processing (J. Michael O'Malley & Chamot, 1990: 44-45; Oxford, 1990: 43-47). They are all related to the process of understanding the structures of the language and to the subsequent process of transferring these cognitive structures from the short-term memory to the long-term memory.

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[55] The importance of providing learners with insight into the relevant use of previous language learning experiences, and thereby the importance of knowledge about similarities and differences between languages, is also stated in the *LK06* curriculum.

There is a considerable overlap between cognitive and metacognitive strategies (Macaro, 2001: 24), but for the purpose of the SBI programme a clear distinction was made between cognitive and metacognitive learning strategies. This was due to the fact that metacognitive knowledge implies being able to distinguish the different sub-categories of learning strategies, and the specific nature of the cognitive learning strategies is subsumed under the overall scope of the metacognitive learning strategies.

3.3.3 Social learning strategies

Social strategies are strategies the learner makes use of in order to seek practice opportunities in the language (J. Michael O'Malley & Chamot, 1990: 45-46; Oxford, 1990: 144-149), but also in order to seek help from other learners, parents and teachers. Social strategies are closely related to cultural issues pertaining to the country where the target language is spoken, since knowledge about rules of conduct when trying to make contact with people is of practical value. In this way, there is a relationship between social learning strategies and intercultural understanding. For example, in some countries people tend to meet in central places in the evening, due to factors such as the climatic conditions permitting the extensive use of outdoor areas. In other countries the case is the opposite. Knowledge about the specific possibilities for actually practising the language is thus important, in addition to specific pragmatic linguistic knowledge in terms of approaching unknown persons. The motivation to ask parents or teachers for help is also important in addition to the fact that the efficient use of social strategies is closely related to cognitive aspects of the language learning process, since a learner has to know where he/she faces specific challenges.

3.3.4 Affective learning strategies

Affective strategies are those the learners make use of in order to overcome difficulties in the learning process (J. Michael O'Malley & Chamot, 1990: 45-46; Oxford, 1990: 140-144), such as frustration and stress. The use of affective strategies also includes the ability to create opportunities for self-reward after a learning activity, such as watching a movie or going out with a friend. In this way, affective strategies are closely related to motivational issues, and are an

important part of the development of autonomous learners, since emotional insight can be considered to be a vital prerequisite of personal freedom. This situation is closely related to the development of self-awareness, described in Section 2.1. Emotional issues are also related to cognitive issues, since the identification of stress symptoms requires insight into linguistic elements which cause this stress. Examples of this kind of situation are the difficulty of understanding the difference between the *imperfecto* and the *indefinido* tenses in Spanish, or the difference between *imparfait* and *passé compose* in French. This means that cognitively understanding the causes of the stress symptoms as a part of the interlanguage process the learner is going through, creates a basis for the emotional insight required in order to cope with the affective strains imposed on the learner.

3.3.5 Piloting of the SBI programme

The SBI programme used to instigate a classroom interaction in the three groups of learners was piloted prior to the academic year 2010/2011 during which the data collection procedures were to be carried out. There was no piloting of the whole research design, but the critical point of the data collection procedures was considered to be the quality of the SBI programme used to produce meaningful interaction between teachers and learners. In the case of qualitative research, the methodology used is often a consequence of the researcher's cumulative experience as the research enterprise develops. A pilot may therefore be used when the researcher needs to gather some kind of experience with the research project which actually can be tested prior to the research enterprise itself (Gass & Mackey, 2007: 3; Mackey & Gass, 2005: 43). The actual implementation of the SBI programme was such a critical issue since the researcher had no previous experience with SBI instruction. The pilot project therefore presented a condensed version of the full-scale SBI programme to a group of learners similar to the three groups of learners exposed to the implementation of the full-scale SBI programme during the academic year 2010-2011, i.e. learners from the same proficiency level in Level II of the first year of upper secondary school education.

The pilot project consisted of four sessions in two language classes, one group of German learners and one group of Spanish learners at an upper secondary

school in the Stavanger area, but not the school where the implementation of the full-scale SBI programme took place. This school was requested by the researcher to take part in the pilot project. The school had an ongoing contact with the University of Stavanger in another pedagogical area, so this contact found a natural place in the chain of events at that point in time. There was no group of French learners involved in the pilot project. Two language teachers volunteered for the pilot project, one German teacher and one teacher who was both a Spanish and a French teacher. The implementation of the SBI programme is not sensitive to particular linguistic issues, only to overall metacognitive issues. This is why this selection of two teachers was deemed sufficient for testing the quality of the SBI programme in a naturalistic setting for the proper pre-assessment of the potential design of the SBI programme. The intention was to discover whether the questions used for instigating learner activity in the classroom had been phrased in such a way that the learners could understand the nature of these tasks. In addition, any feedback from both the teachers and learners which could help improve the pedagogical quality of the SBI programme was not considered to be dependent on language-specific issues related to the particular language the learners were studying.

The actual creation of meaning during the implementation of the pilot programme was not tested. From a game-theoretical perspective, maximisation of relevance occurs no matter what happens during the playing of the conversational games, such as described in Section 3.1.3. This means that irrespective of the quality of the SBI programme, a Nash equilibrium will be induced along the sub-game equilibrium paths of the conversational games. The purpose was thus to ensure the pedagogical quality of the SBI programme considering the fact that the researcher had no experience with a similar SBI programme from previous occasions.

The preparation for the pilot project started with a meeting with the head of the language department in the school in April 2010. During this meeting, the head of the language department was provided with information about the project and was requested to ask language teachers to take part in the pilot project. The head of the language department worked as a German teacher as well. She volunteered together with one teacher who taught both Spanish and French. The second teacher's Spanish group was chosen for the pilot project. In June 2010

a meeting was held with the Spanish teacher, at which she was provided with the same information as that given to the German teacher at an earlier stage. The pilot project was implemented over a period of four hours in August and September 2010. Due to time restraints, it was not possible to instruct the teachers to implement the pilot project in their classes. However, the researcher carried out the piloting in the groups himself with the teachers present. In this way, the researcher got an immediate experience of the teaching model, and the researcher and teacher discussed the evolution of these pilot sessions afterwards. Issues covered were the perceived purposefulness of the instruction provided and the relevance and feasibility of the tasks the learners were set to do after the instruction. The learner activity was also assessed based on the teacher's knowledge of the dynamics in the group of learners and their response as a consequence of the pedagogical activities. The relationship between the pilot programme and the main SBI programme is presented in the following table:

Table 2: Comparison of the pilot SBI programme with the main SBI programme

Pilot SBI	**Main SBI**[56]
Session 1 What does it take to learn a language? What does it take to learn the language in question?	*Session 1*
Session 2 Introduction to language learning psychology and learning strategies	*Sessions 2-4*

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[56] A thorough description of the main SBI programme will be presented in Section 3.3.6.

Session 3	Sessions 5-15
Introduction to metacognitive learning strategies	
Session 4	*Session 16*
What does it take to learn a language?	
What does it take to learn the language in question?	

The features planned for the main SBI programme were thus reduced to a four-hour introductory course on metacognitive learning strategies. The first and the last session of the piloting were similar to the corresponding sessions of the main SBI programme (Sessions 1 and 16), i.e. the learners were asked to consider what it was like to learn a language and what they thought about the learning of the particular language in question. In this way, the effect these questions would have on the learners was explored, i.e. if the questions would elicit any response in terms of judgments about language learning and linguistic and sociolinguistic codes (J. Michael O'Malley & Chamot, 1990: 101-102). The first session of the pilot programme therefore served the same function as the first session of the main SBI programme in that it prepared the ground for the following discussion, in the case of the pilot programme in the form of a condensed two-hour SBI programme between the first and the last session.

During Session 2, the topic was the difference between declarative and procedural knowledge and how this principle applies to language learning specifically. Session 2 also dealt with cognitive, social and affective language learning strategies and their place in the language learning process as declarative knowledge about the language learning process which has to be proceduralised into behavioural skills. These sessions were mainly based on a one-way communication principle whereby the researcher introduced the topic to the learners. However, towards the end of the session, the learners were told to discuss briefly if they had ever made use of similar strategies and, if so, how they had used them. The main purpose of Session 2 was to elicit information

about the learners' attitudes towards language learning strategies and if they were actually capable of understanding and applying the main principles of these theories.

During Session 3, the focus was on the nature and importance of metacognitive learning strategies in the language learning process. These were linked to the principles behind the use of cognitive, social and affective learning strategies reviewed during Session 2. The learners were first introduced to the metacognitive learning principles of planning, implementing and assessing a language learning activity. Thereafter, they were told to prepare an imagined family trip to Germany or Spain, depending on the language they were studying. They were told to define the following procedure:

1. Decide where to go.
2. Determine one or two language learning opportunities they would seek.
3. Decide how to prepare for such a situation in terms of the use of dictionaries and Internet resources.
4. Decide how they would make sure that they actually experienced that situation.
5. Decide how they would assess their achievement after the trip was over.

Point 5 would lead to an assessment of how the learners could improve their performance next time. The learners carried out this activity in small groups, followed by a plenary discussion towards the end of the session during which the results of the group discussions were presented. In this way, the learners were provided with initial training in basic principles pertaining to the planning, implementation and assessment of language learning activities, an issue which is at the core of the main SBI programme.

Although this small-scale pilot project was not intended to provide learners with any thorough instruction in metacognitive learning strategies, it nevertheless provided the researcher with the opportunity to gain an impression of the SBI programme in a real-life setting. The focus was particularly to see whether the wording of the activities was such that the learners were able to

work with the activities they were set to do. The pilot project did not result in any particular changes in the main SBI programme since the learners were able to work with the activities they were given without any overt difficulties. In the classroom discussion upon completion of the learning activities, the learners were able to give a systematic account of the learning activities based on an adequate understanding of the theoretical principles pertaining to the classification of the language learning strategies. The pilot SBI programme was therefore not used to test any analytical procedures or to identify any cognitive values, since this is the focus of the main SBI. This is why the pilot SBI was only tested in terms of the nature of its design.

3.3.6 Design of the main SBI programme

Intensive teacher development is usually a prerequisite for purposeful SBI aiming at providing learners with strategy training (Cohen, 1998: 17-18). Teachers must be trained in the delivery of SBI, especially with a view to integrating SBI smoothly into the course at the same time as the explicit and overt nature of the strategy training is preserved (Cohen, 1998: 151). This may be done in the form of long-term strategy training based on hands-on activities to illustrate the characteristics of learning strategies with a focus on the use of particular strategies and self-evaluation in the process of deploying these strategies (Oxford, 1990: 202-203).

In this research, the teachers involved in the main SBI programme were provided with necessary instruction during preparatory meetings, explicit information two weeks prior to the 16 sessions[57], informal email-correspondence and tutoring immediately prior to and after each of the 16 sessions. A meeting was held in the middle of August 2010, immediately prior to the beginning of the project period. During this meeting the teachers were informed about the SBI programme which constituted the backbone of the project. In addition, they were given a written introduction to research on language learning strategies. The first part of the information was a general

[57] The comprehensive information pertaining to the 16 sessions is included in Appendix 1.

introduction to the complexities of the language learning process. There was a focus on the different factors which may come into play in this process, with a special emphasis on the cognitive, affective, social and metacognitive factors which interact with personal elements in the language learner. In addition, there was a special focus on the relationship between the current research and the principles outlined in the *CEFR* and the *LK06* curriculum in terms of metacognitive issues.

3.3.7 Structure of the main SBI programme

The implementation of the main SBI programme was based on a systematic introduction to language learning strategies, followed by a series of specific metacognitive language learning strategies. Table 3 presents the structure of the main SBI programme.

Table 3: Structure of the main SBI programme

Focus	Session	Overall approach	Particular issues related to the overall approach
Initial classroom conversation about the nature of language learning[58][59]	1	a. Implications of language learning b. Language-specific issues	Learners make judgments about general challenges in language learning processes as well as the linguistic and sociolinguistic

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[58] Partly inspired by the analysis of O'Malley & Chamot (1990: 101-102) related to Wenden's (1983) study of self-directed learning among adult foreign language learners and relevant questions which may be asked in self-directed language activities.

[59] With the intrusion of the researcher as a member of the group, the group had no previous history of collective interaction. This initial conversation contributed to the creation of a platform for the group dynamical process which followed in terms of the construction of a working consensus about the evolution of the event and how significance and meaning arise as a function of the actions undertaken (Bloome et al., 2008: 9-10; Charmaz, 2014: 9). This initial classroom conversation also marked the

			dimensions related to their target language.
Introduction to learning psychology, language learning psychology and language learning strategies with a focus on cognitive, social and affective learning strategies	2-5	c. Learning vs. acquisition d. Declarative vs. procedural knowledge e. Cognitive learning strategies f. Social learning strategies g. Affective learning strategies	Learners make judgments about how learning takes place from a psychological point of view, and relates this insight to particular features of the dichotomy between declarative and procedural knowledge in their particular target language. Learners relate language learning psychology to the deployment of specific language learning strategies in order to close the gap between declarative and procedural knowledge. Learners develop an understanding of the importance of the upcoming metacognitive learning strategies.
Metacognitive learning strategies[60][61]	6-15	h. Centering of the learning process i. Arranging and planning of the learning process j. Evaluation of the learning process	Learners practise particular metacognitive learning strategies in order to provide the strategies with situated meaning.

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first sequence of the conversational game, thus creating the foundation for the interactional history of the classroom interaction to evolve.

[60] These sessions were all based on Oxford's (1990: 138-140) 11 metacognitive language learning strategies for the foreign language classroom.

[61] Each of the 11 metacognitive learning strategies corresponded to one session, apart from the strategies *Planning for a Language Task* and *Seeking Practice Opportunities*, which were both presented during Session 13 because of the limited potential of extensive discussion on these matters.

Final classroom conversation[62]	16	k. Implications of language learning l. Language-specific issues	Learners make judgments about general challenges in language learning processes as well as the linguistic and sociolinguistic dimensions related to their target language.

These sessions were structured around a theoretical introduction provided by the INSTRUCTOR, followed by a classroom activity during which the learners engaged in specific activities related to the theoretical topic or the modelling of the learning strategy chosen for the session. Each session was closed with a classroom discussion based on the experiences throughout that particular session. In this way, there was an intrinsic connection between the inner structure of the sessions and the overall structure of the SBI programme.

The first session was an introduction to the activities to take place throughout the academic year followed by specific hands-on activities and wrapped up with a final classroom discussion to close the implementation of the SBI programme. The language used by the INSTRUCTOR was Norwegian in line with Oxford's (2011: 183) recommendations, since the provision of strategy training in the L2 could have been too difficult for the learners. Their language proficiency had not reached a level where comprehensive language structures are easily understood when the goal is to transmit extensive knowledge in a particular field.

The following is an overview of each session.

Session 1[63]

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[62] The conceptual framing of the last session was the same as for the first session.

[63] Each session corresponded basically to a 45-minute lesson and all the sessions were framed for such a time-span. However, if the learners finished their learning tasks

Goal	Produce a classroom conversation related to general language learning and the L2. The classroom conversation marks the initial point of the interactional history of the SBI model.
Programme	a. What is necessary to learn a language? (Approx. 20 minutes) b. What is necessary to learn Spanish/German/French? (Approx. 20 minutes)

During Session 1, the learners explored their beliefs about language learning processes, especially in relation to the language they were studying. This session was particularly relevant to the meaningful category *Motivation* in terms of raising learner awareness about why they engaged in the learning process at hand.

Session 2

Goal	Discussion of the basic characteristics of learning in terms of the difference between *learning* and *acquisition* as well as the dichotomy between *declarative* and *procedural knowledge*. This insight provides the basis for Session 3.
Programme	a. The difference between learning and acquisition. (Approx. 20 minutes) b. The dichotomy between declarative and procedural knowledge. (Approx. 20 minutes)

During Session 2, the learners explored their beliefs about the cognitive structures of the language learning process so as to provide the meaningful

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earlier, or if the INSTRUCTOR found that the topic had been fully explored, the session was finished before the official 45-minute time-frame had ended.

categories of the *Acquisition of grammar*, *pronunciation* and *vocabulary* with a relevant background.

Session 3

Goal	Applying the dichotomy between *declarative* and *procedural knowledge* to specific aspects of the L2. Develop an understanding of the position of language learning within the broader scope of learning in general.
Programme	a. Review of the psychological concepts of *learning* and *acquisition*/*declarative* and *procedural knowledge* (theory and practice) from Session 2[64]. b. The dichotomy between declarative and procedural knowledge.

During Session 3, the learners explored their beliefs about the transition from declarative to procedural knowledge in order to develop their insight into the process of acquisition related to the cognitive meaningful categories of the *Acquisition of* g*rammar*, *pronunciation* and *vocabulary*. In addition, the meaningful category of *Seeking practice opportunities* was relevant during this session as a method of closing the gap between declarative and procedural knowledge.

Session 4

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[64] The three teachers were provided with a summary of the content of the previous sessions in the three groups involved. They were told to include these elements in Session 3 to the extent possible, i.e. that the learners have discussed to what extent all learning requires the training of declarative and procedural knowledge, or whether some forms of knowledge can exist as either the one or the other. They have also talked about cooking as an example of how declarative and procedural knowledge may be integrated in terms of transforming the recipe into procedural action, i.e. the actual cooking.

Goal	Develop an understanding of the nature of language learning strategies. Distinguish between cognitive, social and affective language learning strategies.
Programme	a. Activity with self-explanatory worksheets (Approx. 30 min.) Plenary discussion of the results from the group activity (Approx. 15 min.)

During Session 4, the learners were provided with systematic knowledge related to three specific categories of learning strategies. This knowledge was particularly relevant for all the five meaningful categories. Cognitive issues were relevant for the *Acquisition of grammar*, *pronunciation* and *vocabulary*. Knowledge pertaining to social learning strategies were important for *Seeking practice opportunities* and knowledge pertaining to affective learning strategies were important for *Motivation*.

Session 5

Goal	Develop a basic understanding of the concept *metacognition*.
Programme	a. Introduction (Approx. 10 min.) b. Individual planning (Approx. 10 min.) c. Group/pair discussion (Approx. 10 min.) d. Plenary discussion (Approx. 15 min.)

During Session 5, the learners were provided with basic knowledge related to the concept of metacognition. Once again, this knowledge was relevant to all the five meaningful categories.

Session 6

Goal	Develop a basic understanding of the metacognitive language learning strategy: **A1.** *Overviewing and Linking with Already Known Material.* Overviewing comprehensively a key concept, principle, or set of materials in an upcoming language activity and associating it with what is already known. This strategy can be accomplished in many different ways, but it is often helpful to follow three steps: learning why the activity is being done, building the needed vocabulary, and making the associations[65].
Programme	a. Introduction (Approx. 10 min.) b. Group/pair discussion (Approx. 20 min.) c. Plenary discussion (Approx. 10 min.)

During Session 6, the learners were provided with basic tools related to preparatory work prior to specific work with a task. The content of this session was particularly relevant for the meaningful categories of *Motivation* and *Acquisition of grammar*, *pronunciation* and *vocabulary*.

Session 7

Goal	Develop a basic understanding of the metacognitive language learning strategy: **A2.** *Paying Attention.* *Deciding in advance to pay attention in general* to a language learning task and to ignore distractors (by *directed attention*),

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[65] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 138).

	and/or *to pay attention to specific aspects* of the language or to situational details (by *selective attention*)[66].
Programme	a. Introduction (Approx. 10 min.) b. Group/pair discussion (Approx. 20 min.) c. Plenary discussion (Approx. 10 min.)

During Session 7, the learners were provided with knowledge related to concentration prior to a language learning task. The content of this session was particularly relevant for the meaningful category of *Motivation*.

Session 8

Goal	Develop a basic understanding of the metacognitive language learning strategy: **A3.** *Delaying Speech Production to Focus on Listening.* *Deciding in advance to delay speech production* in the new language either totally or partially, until listening comprehension skills are better developed. Some language theorists encourage a "silent period" of delayed speech as part of the curriculum, but there is debate as to whether all students require this[67].
Programme	a. Introduction (Approx. 10 min.) b. Group/pair discussion (Approx. 20 min.) c. Plenary discussion (Approx. 10 min.)

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[66] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 138).
[67] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 138).

During Session 8, the learners were provided with knowledge related to the focus on a particular part of the language learning process for enhanced focus on specific skills. The content of this session was particularly relevant for the meaningful category of *Motivation*.

Session 9

Goal	Develop a basic understanding of the metacognitive language learning strategy: **B1.** *Finding Out About Language Learning.* *Making efforts to find out how language learning works* by reading books and talking with other people, and then using this information to help improve one's own language learning[68].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 20 min.) c. Plenary discussion (Approx. 10 min.)

During Session 9, the learners were provided with knowledge related to important metacognitive issues in relation to understanding the language learning process in a global perspective. This session was particularly related to the meaningful categories of *Acquisition of grammar*, *pronunciation* and *vocabulary*.

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[68] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 139).

Session 10

Goal	Develop a basic understanding of the metacognitive language learning strategy: **B2.** *Organising.* *Understanding and using conditions related to optimal learning* of the new language; organising one's schedule, physical environment (e.g., space, temperature, sound, lighting), and language learning notebook[69].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 20 min.) c. Plenary discussion (Approx. 10 min.)

During Session 10, the learners were provided with knowledge related to creating a well suited environment for the language learning process. This session was particularly related to the meaningful category of *Motivation.*

Session 11

Goal	Develop a basic understanding of the metacognitive language learning strategy: **B3.** *Setting Goals and Objectives.* *Setting aims for language learning*, including long-term goals (such as being able to use the language for informal

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[69] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 139).

	conversation by the end of the year) or short-term objectives (such as finishing reading a short story by Friday)[70].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 20 min.) c. Plenary discussion (Approx. 10 min.)

During Session 11, the learners were provided with knowledge related to the planning and organisation of the language learning process. This session was particularly related to the meaningful category of *Motivation*.

Session 12

Goal	Develop a basic understanding of the metacognitive language learning strategy: **B4.** *Identifying the Purpose of a Language Task.* *Deciding the purpose* of a particular language task involving listening, reading, speaking, or writing. For example, listening to the radio to get the latest news on the stock exchange, reading a play for enjoyment, speaking to the cashier to buy a train ticket, writing a letter to persuade a friend not to do something rash. (This is sometimes known as *Purposeful Listening/Speaking/Reading/Writing*)[71].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 15 min.) c. Plenary discussion (Approx. 15 min.)

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[70] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 139).

[71] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 139).

During Session 12, the learners were provided with knowledge related to the focus prior to a language learning task. This session was particularly related to the meaningful category of *Motivation*.

Session 13

Goal	Develop a basic understanding of the metacognitive language learning strategy: **B5.** *Planning for a Language Task.* *Planning for the language elements and functions necessary* for an anticipated language task or situation. This strategy includes four steps: describing the task or situation, determining its requirements, checking one's own linguistic resources, and determining additional language elements or functions necessary for the task or situation[72]. **B6.** *Seeking Practice Opportunities.* *Seeking out or creating opportunities to practise* the new language in naturalistic situations, such as going to a second/foreign language cinema, attending a party where the language will be spoken, or joining an international social club. Consciously thinking in the new language also provides practice opportunities[73].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 15 min.) c. Plenary discussion (Approx. 15 min.)

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[72] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 139).

[73] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 139).

	d. Reminder about strategy B6. (Approx. 10 min.)

During Session 13, the learners were provided with knowledge related to seeking practice opportunities. This session was particularly related to the meaningful category of *Seeking practice opportunities*.

Session 14

Goal	Develop a basic understanding of the metacognitive language learning strategy: **C1.** *Self-Monitoring.* *Identifying errors in understanding or producing the new language*, determining which ones are important (those that cause serious confusion or offense), tracking the source of important errors, and trying to eliminate such errors[74].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 15 min.) c. Plenary discussion (Approx. 15 min.)

During Session 14, the learners were provided with knowledge related to self-assessment after a language learning activity. This session was particularly related to the meaningful cognitive categories of *Acquisition of grammar, pronunciation and vocabulary.*

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[74] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 140).

Session 15

Goal	Develop a basic understanding of the metacognitive language learning strategy: **C2.** *Self-Evaluating.* *Evaluating one's own progress* in the new language, for instance by checking to see whether one is reading faster and understanding more than 1 month or 6 months ago, or whether one is understanding a greater percentage of each conversation[75].
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 15 min.) c. Plenary discussion (Approx. 15 min.)

During Session 15, the learners were provided with knowledge related to self-evaluating after a certain time has passed. This session was particularly related to the meaningful category of *Motivation* and to a lesser extent to the meaningful categories of *Acquisition of grammar*, *pronunciation* and *vocabulary*.

Session 16

Goal	Produce a classroom conversation related to general language learning and the L2. The classroom conversation marks the final point of the interactional history of the SBI model.
Programme	a. Introduction (Approx. 5 min.) b. Group/pair discussion (Approx. 15 min.) c. Plenary discussion (Approx. 25 min.)

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[75] The definition of this metacognitive strategy is a direct quote of the corresponding definition provided by Oxford (1990: 140).

During Session 16, the learners were to assess the whole process back to Session 1. This session was particularly related to the meaningful category of *Motivation*.

3.3.8 Data

The game-theoretical design of the three cases was based on the data material presented in this section. The German case is labeled GE, the French case is labeled FR and the Spanish case is labeled SP. Each case is the equivalent of the implementation of the SBI programme in each group of learners. Table 4 details the organisation of the data material.

Table 4: Organisation of the data material

Video recordings	GE Session 1
	GE Session 16
	FR Session 1
	FR Session 16
	SP Session 1
	SP Session 16
Observation notes	GE Sessions 2-15
	FR Sessions 2-15
	SP Sessions 2-15

The first and last sessions (Sessions 1 and 16) have been completely transcribed since these sessions introduced and concluded the whole SBI programme in the

form of plenary discussions in the three classrooms. These sessions are reflected in Appendices 2A, 3A and 4A as the part of the backward induction process which corresponds to Session 1 and Session 16 in the three cases. The treatment of these video recordings will be further described in Section 3.6.1. They reflect the complete evolution of the Sessions 1 and 16. Sessions 2-15 have not been completely transcribed since their content was divided into both plenary discussions and group activities. They are reflected in Appendices 2A, 3A and 4A as the part of the backward induction process which corresponds to Sessions 2-15 in the three cases. The treatment of these observation notes will be further described in Section 3.6.2. The focus of these observation notes was on the information exchange between the INSTRUCTORS and the LEARNERS, both in the form of verbal information exchange and written information exchange, for instance when the INSTRUCTOR wrote remarks on the blackboard. This means that organising remarks and instructional comments on the part of the INSTRUCTORS pertaining to the content of the learning activities have not been included in the observation notes.

Tables 5, 6 and 7 contain information about the date of implementation of each session, the time frame of each session and how many learners were present during each session. The time frame for each session was originally 45 minutes, the duration of an ordinary school session, but the sessions were finished at an earlier stage if the plenary discussion in the classroom had come to an end before the 45 minutes had passed. The number of learners varies from one session to another. However, in the analytical procedures, there is no focus on individual learner participation. The analytical focus is on the aggregate contribution of all the learners and the meaning this aggregate contribution has produced along the sub-game equilibrium paths of the conversational games, i.e. the three classroom conversations. The varying number of learners present in each session has therefore no particular significance for the analysis of the creation of meaning during the implementation of the SBI programme.

The initial plan was to video-record all the sessions for a full transcription of these sessions. However, as the research enterprise developed, it was discovered that only the first session yielded relevant information in terms of the production of meaning pertaining to the construction of metacognitive knowledge throughout the whole session. Around session 5/6 (depending on

the case) in all three cases this method was changed, and observation notes were deemed relevant for grasping the ensuing production of meaning pertaining to metacognitive knowledge. As of approximately Sessions 5 & 6 these observation notes were taken *in situ*. The video-recordings which had been produced during the first part of the implementation of the SBI programme after Session 1 yielded notes taken directly from the recordings in a word document. Session 16 was fully recorded and transcribed in accordance with the original plan. This shift in methodology was due to the fact that some of the activities in the classrooms between Sessions 1 & 16 consisted of the learners working in groups or discussing in pairs aspects pertaining to the topics presented as a part of the SBI programme itself. The only part of the sessions which was interesting for further analysis was the conversations between the learners and the teacher/researcher which took place prior to and after these classroom activities. This means that the observation notes taken in the classrooms focused solely on these relevant aspects of the classroom interactions. The video-recordings up to session 5/6 which included the whole sessions were filtered in the sense that only the classroom conversations prior to and after the classroom activities were focused upon and given an account of in Word format. However, this circumstance has led to the fact that the observation notes from Sessions 2-15 may vary in size and quality in terms of the amount of text on each page and how they have been produced. Some of them are hand written and some are written in Word format. A hand-written page contains less information than a page written in Word format. This difference has no particular bearing on the transformation of the data into the turn-taking system which is the object of further analysis and is not highlighted in Tables 5, 6 and 7 to any further extent than this initial methodological remark.

The transcriptions of Sessions 1 and 16 contain more information than the notes taken during Sessions 2-15 since the complete recording of the Sessions 1 and 16 in the three cases resulted in more detailed data description procedures. The only exception are the observation notes from Session 2 in the French case, which contain 12 pages. The French teacher had a tendency to spend more time talking to the learners than the German and Spanish teachers. This may have caused some of the data material in the French case to contain more information than the German and the French cases. These differences are not considered to have had any particular bearing on the creation of meaning which has taken

place. The creation of meaning which has taken place is a result of the development of the conversational game during the players' maximisation of relevance. The result, or solution, of the playing of these games has been defined as a consequence of the players' heuristics, and the solution of the conversational games are defined according to how this solution has come to be in spite of the tautological problem inherent in this approach according to the discussion of this problem in Section 3.1.3.

Table 5: The German Case (GE)

Session	Date	Time	Learners present	Pages of transcriptions/observation notes
1	20/9/10	10.50-11.35	22	11,5
2	27/9/10	10.50-11.35	22	3,5
3	08/10/10	11.55-12.40	22	3,5
4	01/11/10	10.50-11.35	22	3,5
5	22/11/10	10.50-11.35	19	3
6	06/12/10	10.50-11.35	23	2,5
7	10/01/11	10.50-11.35	23	1
8	17/01/11	10.50-11.35	21	2,5
9	31/01/11	10.50-11.25	20	2,5
10	14/02/11	10.50-11.20	21	3,5
11	21/02/11	10.50-11.35	23	2

12	28/03/11	10.50-11.35	23	4,5
13[76]	02/05/11 03/05/11	10.50-11.35 12.30-12.45	21 21	2
14	16/05/11	10.50-11.35	22	2
15	23/05/11	10.50-11.35	17	1,5
16	06/06/11	10.50-11.35	21	11

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[76] Due to a misunderstanding, the teacher had given the learners the task for Session 13 alone on the 02/05/11. The researcher was present on the 03/05/11 when the classroom discussion took place after the reasons for the misunderstanding between the teacher and the researcher had been clarified on email after the session with only the teacher and the learners present on the 02/05/11. The solution to this problem was thus the implementation of an extra session on the 03/05/11 to review the issues discussed on the 02/05/11. The data material is based on the classroom discussion which took place on the 03/05/11.

Table 6: The French Case (FR)

Session	Date	Time	Learners present	Pages of transcriptions/observation notes
1	23/9/10	14.10-14.55	14	17
2	30/9/10	14.10-14.55	15	12
3	26/10/10	09.05-09.50	15	5
4	02/11/10	09.05-09.50	15	3
5	30/11/10	09.05-09.50	13	4
6	07/12/10	09.05-09.50	14	5
7	11/01/11	09.05-09.50	14	2,5
8	25/01/11	09.05-09.30	15	2,5
9	01/02/11	09.05-09.35	13	2
10	08/02/11	09.05-09.50	14	6
11	15/03/11	09.05-09.50	15	4,5

12	29/03/11	09.05-09.50	15	4,5
13	05/04/11	09.05-09.50	14	4,5
14	07/04/11	14.30-15.00	13	7
15	10/05/11	09.05-09.50	14	1,5
16	07/06/11	09.05-09.50	15	11

Table 7: The Spanish Case (SP)

Session	Date	Time	Learners present	Pages of transcriptions/observation notes
1	20/9/10	10.05-10.50	25	15,5
2	27/9/10	10.05-10.50	25	3
3	18/10/10	10.05-10.50	24	4,5
4	01/11/10	10.05-10.50	25	3
5	22/11/10	10.05-10.50	25	4,5
6	06/12/10	10.05-10.50	24	0,5
7	10/01/11	10.05-10.50	24	2
8	17/01/11	10.05-10.35	25	3
9	31/01/11	10.05-10.25	24	4
10	14/02/11	10.05-10.45	22	4
11	14/03/11	10.05-10.40	24	4,5

12	28/03/11	10.05-10.40	23	4
13	30/03/11	09.05-09.50	24	4
14	16/05/11	10.05-10.50	22	6
15	23/05/11	10.05-10.50	23	2
16	06/06/11	10.05-10.50	25	14

3.4 Validity and reliability considerations

This research is an exploratory case study not concerned with causal situations, something which requires less attention to strict criteria of validity and reliability (Thomas, 2011: 62-66). On the other hand, validity and reliability issues related to generalisability and the overall case design in a wider perspective beyond the strict criteria of causality will be discussed in this section following some initial considerations on causality issues. From the strict point of view of causality in relation to internal and external validity (Yin, 2009: 42-44), no attempt has been made at defining the causal relationship between two or more events, a key feature of internal validity issues. Neither is there any need to establish the internal value of inferences relating to the results of the research; no inferences about any factors pertaining to the relationship between cause and effect have been made. The only assumption made is that relevance was maximised during the playing of the conversational games and that it is possible to determine certain traits of metacognitive knowledge in the data in order to assess this relevance. The pedagogical discussions are related to this possible emergence of aspects of metacognitive knowledge, which is not

anchored in any causal background. No claims have been made about occurrences beyond the actual context of the research which may be related to the emergence of particular events in the case (Yin, 2009: 43).

External validity pertains to the generalisability of the results of the research. This research is not a survey, something which would have required attention to statistical generalisation (Yin, 2009: 43). There is no positivist claim that the emergence of patterns of metacognitive knowledge can be established as a generalisable model of fostering metacognitive production systems in the long term memory of the learners. The only claim made is that the implementation of the SBI programme may have produced some kind of awareness-raising during the unfolding of the classroom interactions. Further research may shed light on the validity of these patterns, both in terms of internal validity and causal relationship between instruction models and learner outcomes and their external relationship to similar results in future studies.

From the point of view of generalisablity, one issue does emerge as a possible critical issue. The school at which the implementation of the main SBI programme took place, is considered to be a school with a large number of high-proficiency learners. The learners are known to be diligent and willing to follow up on an independent basis cues and instructions provided by the teacher. This means that the implementation of the SBI programme would most probably evolve without any particular hindrances, and in classrooms where the learners would be expected to do their best when working with the issues of the programme. The results achieved would consequently be different from a similar implementation of the SBI programme in foreign language classrooms with low-proficency learners. This perspective could make the results applicable to a rather narrow population of foreign language learners, but maximisation of relevance has occurred all the same in the circumstances at hand.

The results presented are based on these particular cases, with a claim that the results may have certain repercussions for the interpretation of current European and Norwegian curricula for foreign language education. As will be shown in the presentation of the results in Chapter 4, the stance taken in this research is that the implementation of the SBI programme in the three groups

of learners has not yielded an overwhelmingly positive pedagogical effect at the collective level of learner output. These results will be discussed in light of the content of the *CEFR* and the *LK06* and the achievement of the objectives stated therein for the foreign language classroom. As previously stated, the proficiency level of the learners at the school involved in the project is considered to be higher than the average level of learners at the schools in the Stavanger area. This means that a similar implementation of the SBI programme in other groups of less proficient learners could be expected to yield weaker results than the ones presented in this research. This assumption does at least point to the fact that validity issues pertaining to the generalisablity of the results are not a considerable obstacle to the results of this case study in terms of overall pedagogical considerations, rather on the contrary. Further research can be used to corroborate the possible generalisability of the results of this study and their consequences for the interpretation of the *CEFR* and the *LK06*.

One important validity issue is related to the Hawthorne effect in observational studies. This principle defines the problem of validity of research results when the participants' contribution in a project may be influenced by the fact that they act or behave according to certain expectations as a consequence of the research project itself (Adair, 1984). In the context of the present research, this perspective applies to the presence of the researcher in the classroom and his instructions to both teachers and learners during the process. The influence on the learners could be that they work more diligently than they would have done in ordinary circumstances since they feel particularly motivated or inspired to do so when the researcher is present. They may also express themselves in a way which is supposed to cater for the researcher's expectations in some way. The question which arises will then be to what extent the results of such research processes will be valid enough to constitute the basis for good research.

In SLA research, the Hawthorne effect could constitute a problem, for instance in observational studies where the purpose is to observe how learners interact to solve a specific problem or how interactional patterns develop when rehearsing specific linguistic paradigms or vocabulary. In such circumstances, the purpose is to observe and analyse ways of organising work with the tasks

and the learning effect this may have in the group. In the presence of the researcher, the learners may want to show that they are able to carry out the task they are set do to because of the nature of the research, according to which a certain degree of effort is expected. During an ordinary academic year, the learners could feel tired or annoyed for some reason and therefore act counterproductively, as learners at one point or another may do during a normal academic year. In the presence of the researcher the Hawthorne effect could lead to the fact that the learners behave outstandingly since they do not want to present a negative behavior in front of the researcher.

There is a possibility that the researcher's presence in the classroom influenced the learners' behaviour in line with the above-mentioned criteria. However, there was no focus on learner outcomes which could have been due to some altered behaviour on the part of the learners because of the researcher's presence in the classroom. The principle of maximisation of relevance does not imply any kind of measurement of learner outcomes. In addition, during the implementation of an awareness-raising programme, a necessary factor is the pedagogical interaction between teachers and learners. The researcher assumed the role of the teachers during some parts of the implementation of the programme and, in doing so, the researcher blended into the INSTRUCTOR's role alongside the ordinary teacher. The goal was to make the learners participate actively in their own construction of metacognitive knowledge. The learners' behaviour is therefore intended to be as active as possible.

Validity issues may also come into play when using the learner beliefs which were constructed during the interacional process for whatever purposes were deemed necessary. These beliefs were not transmitted from the INSTRUCTORS to the LEARNERS *per se*. They were constructed in the unpredictable area of maximisation of relevance which has been induced during the equilibrium plays of the conversational games. These learner beliefs reflect the metacognitive meaning which was produced as a consequence of the set of attitudes, expectations and other contextual factors that were present in the three classrooms at the time of the intervention. In this research, there is a focus on two important contextual factors for the language learning process, i.e. creating motivation and seeking practice opportunities, and three factual factors for the language learning process, i.e. the acquisition of grammar, pronunciation and

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vocabulary. The SBI programme revolves around the same core pillars of foreign language acquisition, so these five categories are considered to be representative of the metacognitive meaning which has actually been constructed. A critical validity issue is whether the establishment of a collective set of production systems based on the identification of learner beliefs is a valid approach to the analysis of the construction of meaning which has taken place. No claim has been made that these production systems represent any kind of learner outcome. They have been established as an attempt to define the nature of the classroom culture which has evolved. They are closely related to the learner beliefs which have been identified at a collective level as a disputable interpretation of the occurrences in the classroom context. Further research in other settings may shed more light on the substance of this innovative approach to the study of classroom interaction.

Reliability may be a challenge in case studies in terms of documentation procedures (Yin, 2009: 45). This problem is catered for through the presentation of the background material distributed to the teachers prior to each teaching session in Appendix 1. This makes the implementation of the SBI programme replicable, even if the game-theoretical approach to the cases would imply that the next playing of the conversational game differs from the present game. The maximisation of relevance produced during this playing of the game would logically be different from the maximisation of relevance in another context with other players playing the same conversational game. However, no positivist claim has been made in terms of the SBI programme being of such a kind that it would produce the same output in other circumstances. The exploratory multiple case design provides an image of the evolution of the events in this particular context. Further research will shed more light on the issues raised, such as expressed in the suggestions for further research in Section 5.4.

A critical issue is the reseracher's role in the interpretation of the meaning which has been constructed. The raw data material has been transformed into a model of the communication which has taken place through backwards induction. In this way, a certain interpretative bias may influence the validity of these data. On the other hand, a careful scrutiny of the original transcripts and observation notes has been the base of the establishment of this formal

establishment of the three conversational games. In Section 3.6, the analysis of the data will be described. The way the raw data has been transformed into formal models of classroom communication, and thereby into a basis for the identification of the learner beliefs which are the meaningful metacognitive output of the conversational games has therefore been made transparent. This transparency is an attempt to increase the validity of the data which has been used for further analysis.

The analysis of the data is dependent on the researcher's interpretation of the learner beliefs which have come to the fore during the playing of the conversational games and their transferability to the cognitive structures of production systems. This role of the influence of the researcher's interpretation of the metacognitive structure of the meaningful output of the instructional process could be a critical issue. However, the procedures undertaken in order to show how meaning has been created as a consequence of three conversational games have been carefully described. In addition, a description is provided in terms of how this meaning can be broken down into categories of metacognitive learner beliefs with a cognitive structure which at least provides a rationale for how this interpretation of the data has been constructed. This approach adds to the reliability of the analytical procedures.

The categories which were established for the analysis of the emergence of metacognitive production systems in the data are large enough to be meaningful. They encompass five important metacognitive features of the language learning process covering the whole process of creating motivation, seeking practice opportunities and the acquisition of grammar, pronunciation and vocabulary[77]. This scope adds to their validity (Krippendorff, 2013: 102). They are also as small as possible since the reduction of these categories into smaller units of meaning would imply dividing motivation and seeking practice opportunities into smaller psychological units. The reduction of the units of acquisition of grammar, pronunciation and vocabulary would imply dividing these categories into smaller linguistic units, which would be meaningless for

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[77] The inner logic behind these five meaningful categories has been established in Section 2.4.

the learners at this stage of the language learning process. In this way, the five meaningful categories are feasible, thus adding to their reliability (Krippendorff, 2013: 102).

3.5 Ethical considerations

This project does not impinge on any basic moral values such as stated in the guidelines developed by the National Committees for Research Ethics in Norway ("National Comittes for Research Ethics in Norway, Guidelines for research ethics in the social sciences, law and the humanities. *Chapter B. Respect for individuals, pp. 11-21*", 2006). The first two guidelines deal with the researcher's obligation to respect human dignity, integrity, freedom, self-determination, self-respect and right to participate. To respect these guidelines, all learners signed a declaration of consent by means of which they stated that they were aware of the time frame and the scope of the project. They also stated that they were aware of the fact that:

a. some sessions would be video recorded;
b. these recordings would be deleted upon completion of the project;
c. individual learners' efforts during these sessions would not influence their grades in the subject;
d. all materials would be treated anonymously;
e. it would be impossible to recognise individual learners' efforts in any way.

By informing the participants, learners and teachers alike, about the purpose and goal of the SBI programme, ethical principles pertaining to the obligation to inform participants in a research project are safeguarded as well as the learners' focus on the task. There is no reason to believe that the participants lacked competence to grant consent of any kind in terms of being children, mentally ill, mentally handicapped, intoxicated or suffering from dementia as stated in Section 9 of the research guidelines in question. The participants were informed of the fact that no confidential or sensitive information would be elicited as a consequence of the research project. Nevertheless, the participants,

teachers and students alike, were given the possibility to ask for written and oral information about the progress of the work at all times. The video recordings were stored solely for the purpose of analysing the data. Upon completion of the project, these recordings were deleted to ensure confidentiality and to prevent the identification of the participants at a later stage.

The learners' parents and guardians were also provided with information about the project in terms of purpose and time frame. All the learners were given the possibility to withdraw from the project. There was a focus on the importance of the project in terms of developing knowledge about how to promote learner autonomy in the foreign language classroom and the cross-disciplinary value of the acquired skills. Information was provided about relevant approvals on the part of the University of Stavanger, as well as the fact that the Norwegian Data Inspectorate had been informed about the project and that, consequently, the researcher had to follow the Data Inspectorate's procedures of privacy[78]. The video recording of some of the sessions was also explained; the researcher would record the learner activity, but it would not be possible to recognise any individual efforts in the later use of this material. In addition, assurance was given that these recordings would be deleted in accordance with the Data Inspectorate's guidelines upon completion of the project. Parents and guardians were also assured that all data would be dealt with anonymously, both in the dissertation and in future articles, and that these data would only be treated at an aggregate level with material taken from three groups of learners. The impossibility of recognising individual learners' efforts during the sessions in later use of the results was emphasised, as well as the fact that individual learners' efforts would not be taken into account during the grading procedures in the subject. All the participants were given the free option of withdrawing

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[78] This information to the Data Inspectorate expired after three years. In October 2014 the Norwegian Social Science Data Services (NSD) were informed about the project in terms of consent procedures and time frame. This body approved the procedures undertaken and prolonged the approval until completion of the project in March 2015. At this point a renewal of the afore-mentioned approval was required since the project period was extended until June 2015, and thereafter to August 2015. The recordings were deleted on the 31 of August 2015.

from participation in the project at any point of time and specific information about the procedures to undertake in that respect was provided.

Deontological perspectives on ethics judge actions based on their inherent value of some kind. These inherent values are dependent on, for example, moral standards, generally accepted norms of conduct, and officially stated rights. From this perspective, the use of human beings for the purpose of research could be deemed wrong if it implied the infliction of physical and mental pain on the individuals. No physical or mental experiments have been carried out as a consequence of this project apart from the fact that the learners were exposed to a teaching programme in SBI. Within the field of classroom research, the presence of the researcher in the classroom and his/her interaction with the learners and the way they organise their work is a common research method (Gass & Mackey, 2007; Macaro, 2001; J. Michael O'Malley & Chamot, 1990). Common methods are, for example, observation of classroom activities, the analysis of verbal reports, questionnaires and the analysis of written and oral tasks.

3.6 Analysis of the data

The three classroom interactions, which reflect the three instances of the implementation of the SBI programme, have been defined as three cases. The cases have been analysed in the following order: The German case (GE), the French case (FR) and the Spanish case (SP). The background to the analysis were the video-recordings of the first and last session (1 and 16) of each classroom interaction as well as the field notes of the intermediary sessions (2-15)[79]. The first and last sessions were completely transcribed, whereas the gist of the intermediary sessions was described from the point of view of the meaningful content of the same. This difference in terms of how the sessions

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[79] The internal characteristics of these field-notes have been described in relation to the presentation of Tables 5, 6 and 7 in Section 3.3.8.

were processed is due to the fact that the first and the last sessions contained a thorough discussion of the learning of a foreign language, whereas the relevant content of the intermediary sessions was only the discussions which took place after the working with different language learning tasks.

In Appendices 2A, 3A and 4A, the turn-taking system established as a result of backwards induction of each case is presented. This principle implies that the last turn of each case is the first turn of the case presentation. The first turn of the Spanish case is thus labeled SP1. It is the equivalent of the last turn in the whole case, i.e. turn 477, the one which occurred towards the end of the very last session of the lessons in the Spanish classroom:

SP1. *Turn 477.*

```
A emphasises the importance of metacognitive awareness and the active use
of language learning strategies for the development of learner autonomy
in the language learning process and its usefulness for other subjects as
well.
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The next turn, SP2, equals the second last turn of the last session and is the equivalent of turn 476:

SP2. *Turn 476.*

```
B claims that previous attempts to work with language learning strategies
and this year's programme have contributed towards B's deeper
understanding of relevant learning methods, especially in terms of
observation of teacher behaviour in class and autonomy in relation to
teacher instructions. B also claims that the programme has helped B to
develop a focus on finding efficient, interesting and motivating ways to
learn Spanish, including possible opportunities for studying abroad in a
Spanish-speaking country.
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This analysis of the turn-taking system is an adaption of the model for a game-theoretical analysis of conversational games (Pietarinen, 2007: 119-133)[80]. In the original model, the nodes of the game tree are deduced from each and every contribution of the players. This is shown in Section 3.1.2 in the example with the two people having a conversation over the passing of the milk at the table. Such a detailed structure of the turn-taking system would have produced an inadequate amount of nodes in a game-theoretical structure, and would have been virtually impossible to analyse. In order to solve this problem, the nodes of the game tree which form the basis of this research have been established as a function of the aggregate contribution of either INSTRUCTORS or LEARNERS. This system implies that one turn representing the contribution of the LEARNERS may contain the contribution of one individual learner or the contribution of several learners if several learners have spoken in a row without the interruption on the part of the INSTRUCTOR. The turn-taking system in Appendices 2A, 3A and 4A does not take into account the specific contribution of individual learners since the aim is to establish the turn-taking system of INSTRUCTORS and LEARNERS at an aggregate level in line with the principles outlined in Sections 3.1.6 and 3.1.7.

Dummy moves have also been removed from the original transcripts and observation notes. Dummy moves are moves in the game which do not contribute to the creation of specific meaning in terms of metacognitive issues, such as the teachers' organising remarks, learners' questions about the organisation of the implementation of the SBI programme or the researcher's explanation of the nature of case studies. This means that the semantic categorisation of the cases does not include any information which is not directly relevant to the interpretation of metacognitive issues.

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[80] This model constitutes the backbone of the definition provided. The wording is taken from the same source as well as the definitions of functions and the symbolic language employed (Pietarinen, 2007: 123-126).

3.6.1 Sessions 1 and 16

The video recordings of GE/FR/SP 1 and GE/FR/SP 16 reflect the complete evolution of the sessions with the turn-taking system of the conversations. GE/FR/SP 1 and GE/FR/SP 16 have been transcribed completely since these sessions include classroom discussions about language learning covering the whole metacognitive approach of the SBI programme. In Appendices 2A, 3A and 4A these turn-taking systems reflecting the game-theoretical analysis of the cases have been reduced to a system where the turn-taking system incorporates several meaningful utterances. In this way, dummy moves have thus been excluded from the original transcription, and clusters of meaning have been transformed into meaningful, clearly defined moves. This principle will be illustrated with the last two sequences of the Spanish case (SP1-SP2):

SP1. *Turn 477.*

```
A emphasises the importance of metacognitive awareness and the active use
of language learning strategies for the development of learner autonomy
in the language learning process and its usefulness for other subjects as
well.
```

SP1 is based on the following sequences from the transcribed material:

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[1] R81: Mmm. So there is a certain transfer value, you think, to other
kinds of subjects, basically.

[2] L82: Mmm.

[3] R: Mmm.

[4] T83: So it is interesting what you are saying in terms of what suits
me the best, OK? That one does not think that the situation is that
everybody is the same, but that one chooses it oneself consciously
saying that this strategy suits me very well.
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[81] Researcher.
[82] Learner.
[83] Teacher.

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[5] R: But then the point is that in order to be able to choose what suits
you the best, and in order to be able to define what suits you the best,
then you need a little overview over the options you have, OK, so that
you avoid inventing the wheel again yourself, you may know that OK I can
do it this way, I choose this and that because of this and that, OK. And
then one gets to know one's own learning style better, that is for sure.

[6] T: Mmm.

[7] R: OK, no but then

[8] T: Then this was la última vez⁸⁴

[9] R: Yes.

[10] T: with Hans Erik, but we'll meet him again in one and a half years
when he will

[11] R: have his defense

[12] T: when we will go up there to inquire thoroughly.

[13] R: Yes.

[14] T: Ex catedra, that is what it is called, isn't it?

[15] R: Ex catedra, yes.
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In [2], the learner simply emits a humming sound to acknowledge the teacher's remark in [1] in terms of transfer value to other subjects. Such an utterance is a dummy move which does not contribute to the meaning expressed by B in this particular sequence. Similar utterances are found in [1], [3] and [6] as well, and are not included in SP1. *Turn 477.* for the same reason. Lines [7] to [15] serve the purpose of closing the session with units which refer to the defense of the dissertation, in addition to stating that the implementation of the SBI programme is finished. These comments do not add any meaning to the overall scheme of metacognitive issues, and are therefore excluded from SP1. *Turn 477.* The researcher and the Spanish teacher are subsumed under the player category A (INSTRUCTOR), so [1] and [3] … [6] merge into A (INSTRUCTOR) in

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⁸⁴ *La última vez* means *the last time* in Spanish.

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SP1. *Turn 477.* The illocutionary force of this section[85] is therefore analysed as manifesting A's intention to make a summary of the whole SBI programme. A emphasises the importance of metacognitive awareness [5] and the active use of language learning strategies [4] for the development of learner autonomy in the language learning process and its usefulness for other subjects as well [1]. SP1. *Turn 477.* thus marks a complete meaningful unit in the turn-taking system of backwards induction of the conversational game of SP.

SP2. *Turn 476.* conveys the meaning of the learners' contribution leading up to SP1. *Turn 477.* outlined in the above:

SP2. *Turn 476.*

B claims that previous attempts to work with language learning strategies and this year's programme have contributed towards B's deeper understanding of relevant learning methods, especially in terms of observation of teacher behaviour in class and autonomy in relation to teacher instructions. B also claims that the programme has helped B to develop a focus on finding efficient, interesting and motivating ways to learn Spanish, including possible opportunities for studying abroad in a Spanish-speaking country.

SP2. *Turn 476.* is based on the following sequences from the transcribed material:

[1] **L:** I have become more aware in terms of thinking why I learn Spanish, since before, yes, I have to learn Spanish, but now in a way, yes perhaps I want to study abroad in a Spanish speaking country or, I thought more about why I'm doing this.

[2] **R:** Mmm. Yes, great. Other comments? Yes?

[3] **L:** I thought simply like that, how, because previously then I have done what the teacher has told me to do and then just started in a way …, why not, but if one thinks things more over, yes, some will listen a lot

[85] A specific example of the illocutionary force of a turn will be provided towards the end of this section.

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to music in a way, if you enjoy music, so then why not listen to Spanish
music, because one has several ways to learn it. Think how do I like to
learn Spanish in a way.
```

[4] **R:** That you look for what suits you the best and then you seek ways
to

[5] **L:** Yes.

[6] **R:** Learn it.

[7] **L:** … Not only do all what your teacher does, in a way.

[8] **R:** Mmm. Yes. Other comments. Yes?

[9] **L:** In addition I think a little bit that I have become more aware in
a way which different learning strategies we use in class, for instance
when I stand in front of the blackboard and get a sheet with a situation
and then we are to talk spontaneously to this and that person, then we
know, OK, it is a social learning strategy, and we use it in order to
dare a bit more. So then, perhaps I can analyse what the teacher does
more than I could before. And that I think helps a bit in any case,
because then I know that that learning strategy does not work for me, but
it does.

[10] **R:** Mmm. Yes. Other things?

[11] **L:** I have also … the other subjects as well. And then I have in a
way tests and things like that, then I have tested different learning
strategies, or different methods, and I have then found out which one
suits me. So it has helped quite a lot.

In [2], [4], [6], [8] and [10] the researcher comments on the learners'
contributions to move the dialogue forward. It could have been interesting to
establish the function of the dynamic of this turn-taking system, since a
conversation analytical (CA) perspective can be applied to the analysis of off-
task classroom talk in second language instruction (Richards & Seedhouse,
2008: 197-213). However, within the scope of this research, the interest lies in
determining the underlying meaning of the sequence, and expressing this
meaning in plain language as a meaningful turn created by the players involved.
B claims that previous attempts to work with language learning strategies [1],
[3] and this year's programme [9] have contributed towards B's deeper
understanding of relevant learning methods [3], especially in terms of

observation of teacher behaviour in class and autonomy in relation to teacher instructions [7], [9]. B also claims that the programme has helped B to develop a focus on finding efficient, interesting and motivating ways to learn Spanish, including possible opportunities for studying abroad in a Spanish speaking country [3].

The first step of the analytical process applied to the transcriptions of GE/FR/SP 1 and GE/FR/SP 16 thus organises the detailed turn-taking system based on backward induction of the transcribed session into units of a meaningful turn-taking system illustrating the deeper meaning of the interactional process. This deeper meaning of each unit is defined according to its illocutionary force in Section 4.1.

3.6.2 Sessions 2-15

The observation notes which form the basis of GE/FR/SP 2-15 are not as detailed as the transcription of GE/FR/SP 1 and GE/FR/SP 16[86]. These intermediary sessions include different tasks aimed at raising the learners' awareness of the language learning process without delving into the overall perspective of GE/FR/SP 1 and GE/FR/SP 16. This means that during the observations, only the issues from the discussions which reflect metacognitive issues have been focused upon. During the observation of these sessions, dummy moves and comments aimed at moving the conversation forward have been filtered away, such as described in the first part of this section during the description of the analysis of GE/FR/SP 1 and GE/FR/SP 16.

The first part of the observation notes from SP Session 12 looks as follows:

```
[1] T introduces the scheme. Uses the movie as an example. When you get
a scheme. You have got used to asking questions about how. There was a
purpose behind the movie. We had four areas within language learning.
```

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[86] The internal characteristics of these field-notes have been described in relation to the presentation of Tables 5, 6 and 7 in Section 3.3.8.

```
Writes on the blackboard: Speech Listening Reading Writing

Think about the project.

Writes Purpose. Goals. Knowledge. Skills. Social.

[2] L: Knowledge = conjugate verbs

[3] T: Procedural knowledge – declarative knowledge. Social target: have
fun. We have almost finished the movie. What do you think the purpose is?

[4] R: Clarifies what purpose means.

[5] L: Two-three discuss together.

[6] The Head of Department explains his presence.

[7] L: Decides how active we want to be.

[8] T: Organised on an individual basis. Have you noticed something in
relation to the blackboard?
```

In the meaningful turn-taking system of backwards induction in Appendix 4A, these observation notes have been transformed into the following structure:

Line [8] has yielded:

```
SP135. Turn 343.

A says that it was organised on an individual basis, and A wonders if B
has noticed anything in terms of what was written on the blackboard.
```

Lines [5] and [7] have yielded:

```
SP136. Turn 342.

B discusses and states that B decides how active B wants to be.
```

Line [6] is only included in a footnote, since the interruption of the Head of Department did not serve any direct purpose in terms of metacognitive meaning production. Line [5] represents the discussion which took place as a part of the learning activity, and is also included in the meaningful turn-taking system since actions in the classroom may have a meaningful content (Bloome et al., 2008; Schutz, 1967: 15-20).

Lines [3] and [4] are subsumed under the category A (INSTRUCTORS) in the following way:

SP137. *Turn 341.*

A answers that knowledge, in this sense, may be understood as procedural and declarative knowledge. The social goal would be to have a good time. A says that they had almost finished the film, and A asks if they had thought about the purpose. A asks if they understand the concept "purpose", and A relates this to having a goal.

Line [2] has been transformed in the following way:

SP138. *Turn 340.*

B says that knowledge implies being able to conjugate verbs.

Line [1] has been transformed in the following way:

SP139. *Turn 339.*

A introduces the topic in terms of the importance of being aware of the purpose of one's actions. A says that B was going to use the film as an example, and A says that B had got used to asking questions about why, when doing something. A says that B has had a purpose with the film, which is based on the four areas within language learning. A writes the four areas on the blackboard: Speech, listening, reading and writing. A asks them to think about the project. A writes *purpose*, *goals*, *knowledge*, *skills* and *social aspects*.

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The turn-taking system described in the above has formed the basis for the establishment of the meaningful units of the conversation leading up to the identification of the illocutionary force and the declarative sentence representing each unit in Section 4.1. These meaningful categories thus form the basis of the abstraction of the speech acts and declarative sentences which create the Nash equilibrium of the conversations during the playing of the games.

3.7 The establishment of the pragmatic Nash equilibrium

The last three turns of the game tree of SP after the establishment of the turn taking structure described in the above, are as follows:

SP Session 16

SP1. *Turn 477.*

A emphasises the importance of metacognitive awareness and the active use of language learning strategies for the development of learner autonomy in the language learning process and its usefulness for other subjects as well.

SP2. *Turn 476.*

B claims that previous attempts to work with language learning strategies and this year's programme have contributed towards B's deeper understanding of relevant learning methods, especially in terms of observation of teacher behaviour in class and autonomy in relation to teacher instructions. B also claims that the programme has helped B to develop a focus on finding efficient, interesting and motivating ways to learn Spanish, including possible opportunities for studying abroad in a Spanish-speaking country.

SP3. *Turn 475.*

A asks whether there are any particular experiences to be drawn from this year's SBI programme.

SP4. *Turn 474.*

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B answers that B had become very surprised upon learning that it is
possible to learn simply by listening to the spoken language.
```

These three turns have been considered to form a coherent unit in terms of closing the Spanish Case (SP), i.e. the implementation of the SBI programme in the Spanish classroom.

The first analytical step consists of identifying the overall meaning of this unit in the conversational structure. In this way, the first analytical step resembles core analytical principles of grounded theory, whereby the researcher interprets how meaningful categories emerge from qualitative data during the coding process (Bryant & Charmaz, 2007; Charmaz, 2014; Urquhart, 2013). In the case of SP1-SP4, this overall meaning has been defined as *Perceived learning outcome*. The next step consists of deciphering A's contribution within this unit, and thereafter the nature of B's uptake of information:

Table 8: The design of context units

1. Perceived learning outcome (SP1-SP4)	*A* asks whether there are any experiences to be drawn from this year's focus on metacognitive issues in the language learning process. *A* refers to the importance of metacognitive issues for the development of learner autonomy in the language learning process, as well as their transfer value to other subjects. *B* expresses surprise in terms of focused listening being a method to learn a foreign language. *B* emphasises their acquisition of a deeper understanding of the nature of language learning methods and specific ways to cope with challenges that may occur. *B* states that *B* has become more aware of the teacher's behaviour in the classroom, as well as enhanced autonomy in relation to the teacher's instructions. *B* also claims that the programme has helped *B* to develop a focus on finding efficient, interesting and motivating ways to learn Spanish, including possible opportunities for studying abroad in a Spanish- speaking country. A (prompting, "B reflects on the value of the SBI programme")

The last sentence in Table 8 is the semantic reduction of the whole meaningful unit into one sentence which grasps the overall meaning of the unit in terms of the underlying communicative act which the INSTRUCTOR has come to use in order to provide the LEARNERS with metacognitive knowledge. As stated in Section 3.1., it is questionable if it is possible to determine even the most overt

acts of communication. However, the coding and semantic analysis of these units of the conversational games is an attempt at understanding how metacognitive knowledge has been transferred from the INSTRUCTORS to the LEARNERS when these players have maximised relevance along the sub-game equilibrium paths of the conversational games. These semantic reductions form the basis for the establishment of the pragmatic Nash equilibria in Section 4.1. They thus represent the speech act performed by the INSTRUCTOR (prompting) and the declarative sentence which can be deduced from this speech act in terms of the action the LEARNERS ought to engage in as a consequence of the INSTRUCTORS' input and the illocutionary force behind it ("B reflects on the value of the SBI programme"). The first part of the abstracted speech acts consists of a verb[87] in the gerund expressing the underlying illocutionary force of the meaningful unit of the conversation:

(SP1-SP4) A (prompting, "B reflects on the value of the SBI programme")

These illocutionary forces will necessarily be in the realm of intentional actions, since the INSTRUCTOR attempts to influence the thought pattern of the LEARNERS, in the above case in terms of the teacher asking relevant questions in order to make the learners reflect on the value of the SBI programme. Previously, the importance of the interactional dynamics between teachers and learners has been defined as essential to the creation of a semiotic universe (Eco & Sebeok, 1988: 154-169) and thereby meaning in the classroom. The illocutionary force of an utterance in its pure form signifies the semantic content of the intended action, such as *prompting*, *asking* and *instructing* with the purpose of using this action to produce a response on the part of the interlocutor, i.e. "playing games with words" (Harris, 1988). The deeper semantic value of the illocutionary force, or the intended meaning of the performative speech act (Urmson & Sbisà, 1962, 1975: 102, 145-146), determines the maximisation of relevance along the sub-game equilibrium path of the conversational games. The illocutionary force of each unit is thus a reduction of the content of the INSTRUCTOR's overall contribution into a meaningful verb which conveys the

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[87] The use of verbs is an essential part of conversational dynamics (Bloome et al., 2008: 58-61).

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underlying message contained in the INSTRUCTOR's pedagogical input declared as the propositional content which defines the speech acts the players use to solve the game (Pietarinen, 2007:120-122). However, these speech acts are not stated explicitly, but are brought to the fore as a consequence of the pragmatic analysis of the units which make up the whole conversation, such as illustrated in Table 8.

The illocutionary force of the abstracted speech act thus expresses the value of the teacher's intention and the intended cognitive result expressed through the indicated LEARNER output. These declarative sentences represent therefore an interpretation of the intended underlying meaningful content of the LEARNER contribution during a particular unit:

(SP1-SP4) A (prompting, "B reflects on the value of the SBI programme")

Within each unit, the order of A's and B's contributions is chronological, i.e. backwards induction inverted for matters of logical clarity. This implies that **SP3.** Turn 475. appears at the beginning of the presentation of A's input, and **SP1.** Turn 477. appears at the end of the same. The same principle applies to B's input.

The meaningful units established as a consequence of the categorisation of the conversational games reflect the aspects of metacognitive meaning outlined in Section 2.1. They are considered to be *context units*, i.e. units which do not need to be independent from each other and which may overlap. Their size is not restricted by any criteria, and may be as large as deemed necessary for the analytical process (Krippendorff, 2013: 102). The thematic content of the units reflect the nature of the construction of knowledge taking place in the unit as well as the nature of the illocutionary force and the declarative sentence which represents each unit. The purpose of this part of the content analytical procedure is therefore to establish meaningful units based on the natural flow of the conversations, and not to identify any pre-determined categories in the data material. This implies that the meaning which has been created as a consequence of the playing of the conversational games is heavily influenced by the way the SBI programme was structured, thereby having an impact on the conceptual categories produced during the analytical procedures.

The maximisation of relevance during the playing of the games has been defined in terms of the utility function (U) of the players in Section 4.1. This

utility function represents the players' heuristics in terms of bringing the conversation to a close under the prerequisite of their wish to take part in the conversation until its final move. The identification of the Nash equilibrium of the conversational games (C), i.e. GE, FR and SP, is based on the following formal game-theoretical definitions leading up to the utility function of the conversational games, and thereby their pragmatic Nash equilibrium:

Table 9: Symbolic description of the interactional process

The set of players	N={1,2}	INSTRUCTOR VS. LEARNERS
The set of actions	A= F x S	Each action of the conversational games includes the description of the illocutionary force of the action (F) and a declarative sentence (S) which is the logical semantic reduction of the content of the move.
The set of illocutionary forces	F={1…x}	The illocutionary forces are expressed as gerunds which refer to the speech acts which provide the utterance with its actional meaning[88]: A(prompting,"Breflects on the value of the SBI programme")[89] A = the instructor

[88] This meaning is a result of the interpretation of the semantic content of the unit under scrutiny.
[89] Example taken from 1. *Perceived learning outcome* (SP1-SP4), i.e. the last move of the Spanish conversational game. This is the move which is illustrated in Table 8 as an example of how the units of the three conversational games are categorised.

		Prompting = the gerund of the verb "prompt" representing a speech act which in this case aims at motivating Bto engage in a certain metacognitive action.
		B = the learners
		The illocutionary forces cover the set of moves (*M*) of the conversational games from the first move of Session 1 up to the last move of Session 16. (*M*) has been reduced to a set of meaningful units based on the turn-taking system established through backwards induction.
		The sequence of these illocutionary forces also defines the Nash equilibrium of the conversational games as the combination of strategies which maximise relevance for the learners during the playing of the game.
The set of declarative sentences	S=f1…xg	The set of declarative sentences expresses for each move the propositional intended content of B's action as
		expressed through natural language as a consequence of the speech act expressed in F. S contains a finite set of sentences. S does not distinguish between true and false declarative sentences, i.e. there is no distinction between trustworthy information and lies.
The set of moves	$m = x$ $M = x$	The set of moves indicates the number of moves established through the analytical procedure of backwards induction. Each move may contain utterances of both the teacher and the researcher (A) or
		several learners (B). The set of moves describes thus the
		turn-taking system according to which the interactional pattern changes from A to B during the play of the game.
		m refers to the set of moves emerging from the Appendices 2A, 3A and 4 A, and *M* refers to the set of moves emerging form the reduction of moves for the establishment of the Nash equilibria in Appendices 2B, 3B and 4B.
Formal representation of the players	*i, j*	(*i*) and (*j*) symbolise the players A and B generically,
		i.e. no specific reference is made to either of the players denoting thus their opposite nature in the playing of the game.

The set of strategies	$A_i = A^m$	Each set of actions (A) belonging to i equals i's moves in the game (m), i.e. the total of i's moves in the conversational game conveys information about i's strategies when playing the game: $8i\,2\,N$. The strategy chosen by i at each move, thus creating a strategy structure for the whole game, is the one which maximises relevance as a consequence of the degree of relevance provided by (A)'s presumption of the relevance of the utterance and (B)'s reaction in terms of choosing the most relevant way of responding to (A)'s input[90].
Utility functions	$U_i{:}AxA_j$ $\rightarrow R(i,j2N, i \neq j)$	The utility functions (U) reflect the maximisation of relevance which occurs during the playing of the game as a function of the combination of each of the players' set of strategies (A) leading to ($\mathbb{R}$) when the two players i and j belong to (N) with a clear distinction between the two players since they are not identical ($i \neq j$).

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[90] The presumption of relevance of an utterance and the relevant input provided as a response to this utterance are in the realm of the communicative and cognitive principles of relevance such as described in Section 3.1.3.

3.8 Patterns of production systems

Upon determination of the Nash equilibrium of the games in Section 4.1 and the semantic categorisation of the context units, learner beliefs pertaining to the meaningful categories presented in Section 2.4 are extracted from the cases. These five meaningful categories cover *Creating motivation*, *Seeking practice opportunities*, *Acquisition of grammar*, *Acquisition of pronunciation* and *Acquisition of vocabulary*. Table 10 presents the matrix established for this purpose.

Table 10: Meaningful analytical categories

Metacognitive category	Learner beliefs about general language learning	Learner beliefs about the acquisition of X[91] for Norwegian learners
Creating motivation		
Seeking practice opportunities		
Acquisition of grammar		
Acquisition of pronunciation		
Acquisition of vocabulary		

The categorisation of these beliefs related to language learning processes forms the basis of the establishment of production systems emerging from the material

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[91] X symbolises the language in question.

in Section 4.3. The emergent patterns of production systems of each case are analysed in the same order. The first step in the analysis of the emergent patterns of production systems consists of transforming the learner beliefs which have been extracted from the material into a meaningful matrix of productions as a consequence of the aggregate contribution of all the learners in the three foreign language classrooms. The cognitive value of the aggregate set of learner beliefs will thus form the basis of a discussion of the pedagogical implications of the relevance of the SBI programme.

3.9 Summary

In this chapter, creation of meaning in interactional processes was defined at the outset. Thereafter, a game-theoretical approach to the analysis of classroom conversations was outlined. In addition, the data collection procedures were described in terms of the background for choosing the project school and the selection of both teachers and learners for the project. The ethical guidelines followed in terms of information and consent related to the participants were also presented. The structure of the SBI programme was also described, including the pilot project during which the purposefulness of the main SBI programme was tested. This project is not concerned with any causal explanations of the interrelatedness of events. The analytical procedures aim at establishing criteria for the discussion of the pedagogical potential for the development of metacognitive knowledge inherent in the foreign language classroom. Nevertheless, important validity and reliability considerations pertaining to the research project were discussed, with a special focus on the role of the researcher and the representativeness of the learners in the assessment of the validity of the data.

In the final part of this chapter, the analytical procedures pertaining to the organisation of the data were described. This description of the data material covered both the fully transcribed sessions 1 and 16 and the field notes taken during sessions 2-15. The relationship between the original data material and the establishment of the turn-taking system based on the principle of backwards

induction was given particular attention. The relevant game-theoretical symbolism and the structure of the analytical matrix were also outlined.

4 Results

The overall objective of this research is the quest to increase the understanding of how metacognitive knowledge can be taught in the foreign language classroom. In order to clarify the content of research question 1, the first part of the analytical procedure consists of the presentation of the pragmatic solution of the conversational games based on the principle of backwards induction in Section 4.1. In Section 4.2, the pragmatic solution of the conversational games will be transformed into five categories of learner beliefs expressed during the playing of the conversational games according to the two contextual and three factual categories of metacognitive knowledge defined in Section 2.4, i.e. Creating motivation, Seeking practice opportunities, Acquisition of grammar, Acquisition of pronunciation and Acquisition of vocabulary. According to research question 2, the relevance of the SBI programme will be discussed in light of the metacognitive structure of these learner beliefs in Sections 4.3. and 4.4. The ACT* theory (Anderson, 1996; J. Michael O'Malley & Chamot, 1990) and its focus on production systems as models of metacognitive structure will be used for this purpose in combination with core aspects of the cognitive principle of relevance (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012). In Section 4.3., this analytical step consists of the establishment of five corresponding emergent production systems reflecting the collective metacognitive structure of the aggregate set of learner beliefs which has been extracted from the data material in an attempt to create a visual image of the underlying structure of these beliefs.

This formal clarification of the structural content of the SBI programme will be analysed in terms of its pedagogical implications according to research question 3 in the sequential analysis of Section 4.4. In this sequential analysis, excerpts from the three cases will be used to illustrate selected aspects of how the interactional process has created meaningful conversational exchange in line with the two contextual and three factual factors for the language learning process reflected in the five metacognitive categories used to present both the belief system and the emergent production systems in Sections 4.2. and 4.3. This analysis will illustrate how maximisation of relevance has occurred during the process of creating metacognitive meaning in the turn-taking system

between teachers and learners presented in Appendices 2A, 3A and 4A. In this way, the principles pertaining to metacognitive knowledge construction, and the structure of metacognitive awareness according to the ACT* theory outlined in Chapter 2, will be related to selected interactional sequences as a basis for the discussion of the pedagogical implications of the SBI programme in its present form. These have been selected on a purely random basis in order to provide an illustration of specific details pertaining to the actual evolution of the classroom interactions from the perspective of the construction of metacognitive knowledge. This sequential analysis of excerpts from the three cases will establish a conceptual basis for the discussion of the role of separate conversational SBI programmes in the construction of metacognitive knowledge in the foreign language classroom, with a focus on the objectives of the *CEFR* and the *LK06* curriculum in Chapter 5.

The three classroom interactions [GE, FR, SP] are presented as three conversational games. Each particular conversational game, **C'**, belongs to a family of games, **C**, i.e. the theoretical number of possible conversational games which can be played (**C** = Σ **C'**)[92]. In **C'**, the total number of players in each game has been set at two players, i.e. $N = \{1, 2\}$. These two players

represent the generic nature of INSTRUCTORS vs. LEARNERS. The game-theoretical analysis of the moves of the games, i.e. the aggregate turn-taking system[93] in Appendices 2A, 3A and 4A, has been based on the principle of backwards induction. This means that the establishment of the turn-taking system begins with the last node of the conversational structure, ending with the establishment of the first node of the conversational structure. There are two kinds of moves in each particular conversational game. In Appendices 2A, 3A

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[92] This means that the theoretical number of existing conversational games, C, is the same, =, as the sum, Σ, of all the individual conversational games which can be played, C'.

[93] The turn-taking system does not consist of an utterance by utterance account of the evolution of the conversational games. It organises the evolution of the conversational games as a consequence of the archetypical construction of INSTRUCTORS and LEARNERS and their pragmatic sequential contribution to the development of the conversational meaning.

and 4A, the turn-taking system illustrates the detailed contribution of INSTRUCTORS and LEARNERS throughout the whole classroom conversation (*m*). This overall conversational structure has been reduced to the moves (*M*) which make up the illocutionary force of the INSTRUCTOR-LEARNER construction of knowledge in Appendices 2B, 3B and 4B. These moves, which make up the illocutionary force of the interactions, thus illustrate the core pragmatic features of the inducement of the Nash equilibria of the conversational games[94]. These core pragmatic features of the inducement of the Nash equilibria extracted from Appendices 2B, 3B and 4B are identified in Section 4.1. The pragmatic structure of the Nash equilibria thus illustrates how the creation of meaning during the playing of the games has produced a basis for how the players' heuristics have driven the conversational games towards their end. In this way, the players have produced a set of moves[95] indicative of the illocutionary force operating on the maximisation of relevance of the interactions (*M*). This illocutionary force represents the semantic value of the INSTRUCTOR's conversational input throughout the classroom conversation and the way this input has produced a purpose for the conversational interaction. In this way, the result of the players' heuristics is made clear and provides an indication of the pragmatic nature of the creation of meaning which has taken place.

The moves of the turn-taking system have been quantified as $m = 414$ (GE), 724 (FR) and 477 (SP). This means that the German case includes 414 moves,

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[94] In Pietarinen (2007: 119-133), the principle behind a game-theoretical approach to conversations is suggested. This approach implies that each turn is considered to be a separate move in the conversational game. However, in this research it would be counterproductive to take into account the total set of individual moves in the conversational games when identifying the inducement of the Nash equilibria of the conversational games. This methodological problem has been solved in that the original conversational games in Appendices 2A, 3A and 4A have been reduced to a set of pragmatic moves based on Appendices 2B, 3B and 4B, as expressed in Section 5.1. This methodological solution is therefore a contribution to the application of game theory to the analysis of conversations as a consequence of this research.
[95] The establishment of a second set of moves based on the pragmatic evolution of the conversational games is the original contribution of this research to the application of game theory to conversations such as described in the previous note.

the French case 724 moves, and the Spanish case 477 moves in the complete establishment of the evolution of the cases. The French case contains far more moves than the German and the Spanish cases, but this difference is merely due to the fact that the French teacher spent more time lecturing in the classroom. This aspect of the French case consequently implied that the learners were provided with more opportunity for conversational feedback. These enhanced conversational dynamics thus created a larger bulk of moves. However, this difference between the cases has not been considered to be of any substantial importance for the maximisation of relevance which took place during the evolution of the classroom interactions. The content of each case is considered in isolation without any focus on quantitative issues across the cases.

In each game, each player employs a set of strategies in order to maximise relevance as a consequence of the players' heuristics through the conversational moves used to drive the conversation towards its end. $A_i = A^m$ are the sets of strategies aiming at this maximisation of relevance in each conversational game. This means that all the actions (A) of one player (i) equal the set of strategies employed by (i) in order to produce all the moves of the game (^{m}). 8 i 2 N, where (8i) are all the moves of (i), and these moves belong (2) to the aggregate number of moves in the game (N). The utility functions are $\cup_i$: A_i x $A_j \rightarrow \mathbb{R}$ (i, j 2 N, $i \neq j$). This means that the combination of the actions of both players (A_i x A_j) leads to the solution of the game ($\mathbb{R}$) in the form of maximisation of relevance as the utility function (U) when the game is played by two players (i, j 2 N) who are not identical ($i \neq j$).

The sets of pragmatic actions[96] in the meaningful systems representing the Nash equilibria in 4.1. is $A = F \times S$. This means that the illocutionary force expressed as the gerund of a verb (F) in combination with a declarative sentence (S) expressing the semantic content of the illocutionary force makes up the total of pragmatic actions in the conversational game (A), i.e. the meaningful sum of Σ S^{97}, i.e. the sum, Σ, of all the declarative sentences, **S**, in the pragmatic structure. This implies that the process of teacher input during the evolution of the conversational games is presented as a consequence of the pragmatic meaning each context unit is imbued with.

4.1 The pragmatic Nash equilibria of the German, French and Spanish conversational games

The Nash equilibria which have been induced along the sub-game equilibrium paths of the three conversational games are presented in Tables 11, 12 and 13. The set of illocutionary forces are:

GE $F = \{1..38\}$, FR $F = \{1...64\}$ and SP $F = \{1..71\}$. This means that the

meaningful uptake of information on the part of the learners is defined as a consequence of the purpose behind the input of the INSTRUCTOR throughout the evolution of the classroom interaction. S are the sets of declarative sentences as expressed at each node of the game tree in its pragmatically reduced version in order to bring forward the nature of the Nash equilibrium. The coding GE1-

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[96] These sets of pragmatic actions are explained in further detail in Chapter 3 in relation to the definition of the context unit *Perceived learning outcome* in Table 8 in Section 3.7.

[97] This presentation of the pragmatic actions which create the illocutionary force of **S** has been directly inspired by Pietarinen's game-theoretical approach to the analysis of the pragmatic structure of conversations (2007: 125).

GE26, […], GE399-GE414 of Table 11 reflects the meaningful categorisation of the evolution of the German conversational game outlined in Appendix 2A, the coding FR1-FR25, […], FR706-FR724 of Table 12 reflects the meaningful categorisation of the evolution of the French conversational game outlined in Appendix 3A and the coding SP1-SP4, […], SP473-SP477 of Table 13 reflects the meaningful categorisation of the evolution of the Spanish conversational game outlined in Appendix 4A.

Table 11: The pragmatic Nash equilibrium of the German case

	Pragmatic categorisation of the context units	**The illocutionary force of the corresponding context unit**
1.	GE1-GE26 *Reasons for language choice*	A (instigating, "B reflects on the reasons for B´s language choice")
2.	GE27-GE30 *Identification of the usefulness of learning activities*	A (asking, "B reflects on efficient practice for learning")
3.	GE31-GE34 *Identification of cognitive learning strategies*	A (asking, "B identifies cognitive learning strategies")
4.	GE35-GE50 *Relevance of previous experience*	A (explaining, "B reflects on B´s linguistic background as a source for learning German")
5.	GE51-GE78 *Reasons for language choice*	A (asking, "B reflects on the reasons for B´s language choice")
6.	GE79-GE84 *Practice opportunities*	A (asking, "B reflects on practice opportunities")
7.	GE85-GE88 *Self assessment*	A (explaining, "B reflects on self-assessment activities")
8.	GE89-GE90 *The role of mistakes*	A (prompting, "B reflects on the role of mistakes")
9.	GE91-GE100 *Preparation of a learning activity*	A (prompting, "B reflects on the preparation of a learning activity")
10.	GE101-GE108 *Purpose of a learning activity*	A (prompting, "B defines the usefulness of the genitive case")

11.	GE109-GE120 *Goals for the learning process*	A (explaining, "B reflects on the goals for the learning process")
12.	GE121-GE138 *Organisation of a learning activity*	A (prompting, "B reflects on the organisation of a learning activity")
13.	GE139-GE148 *Assessment of the SBI programme*	A (prompting, "B reflects on the usefulness of the SBI programme")
14.	GE149-GE158 *Proceduralisation of oral skills*	A (prompting, "B reflects on the proceduralisation of oral skills")
15.	GE158/159-GE160 *Preparation of a learning activity*	A (defining, "B reflects on preparatory issues prior to a learning activity")
16.	GE160/161-GE168 *Definition of a learning activity*	A (explaining, "B reflects on the characteristics of subordinate clauses in German")
17.	GE169-GE186 *Definition of practice opportunities*	A (prompting, "B reflects on past practice opportunities")
18.	GE187-GE200 *Preparation of cognitive practice opportunities*	A (prompting, "B reflects on the preparation of cognitive practice opportunities")
19.	GE201-GE202 *Definition of an affective learning strategy*	A (asking, "B defines the nature of affective learning strategies")
20.	GE203-GE204 *Definition of a social learning strategy*	A (defining, "B reflects on the characteristics of social learning strategies")
21.	GE205-GE206 *Difference between declarative and procedural knowledge*	A (asking, "B defines the difference between declarative and procedural knowledge")
22.	GE207-GE216 *Proceduralisation of affective learning strategies*	A (prompting, "B reflects on the proceduralisation of affective learning strategies")
23.	GE217-GE222 *Proceduralisation of social learning strategies*	A (prompting, "B reflects on the proceduralisation of social learning strategies")
24.	GE223-GE232 *Proceduralisation of oral skills*	A (prompting, "B reflects on the proceduralisation of oral skills")
25.	GE233-GE244 *Practical use of declarative and procedural knowledge*	A (asking, "B reflects on practical use of declarative and procedural knowledge")
26.	GE245-GE256	A (prompting, "B reflects on the proceduralisation of grammatical skills")

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	Proceduralisation of grammatical skills	
27.	GE257-GE264 *Construction of theoretical declarative knowledge*	A (asking, "B reflects on the construction of theoretical declarative knowledge")
28.	GE265-GE276 *Proceduralisation of declarative knowledge*	A (prompting, "B reflects on the proceduralisation of declarative knowledge")
29.	GE277-GE286 *Importance of grammatical knowledge*	A (asking, "B reflects on the importance of grammatical knowledge")
30.	GE287-GE299 *Proceduralisation of knowledge*	A (prompting, "B reflects on the proceduralisation of knowledge")
31.	GE300-GE319 *The nature of learning*	A (prompting, "B reflects on the nature of learning")
32.	GE320-GE330 *The importance of German*	A (prompting, "B reflects on the importance of German")
33.	GE331-GE346 *Similarities between Norwegian and German*	A (asking, "B reflects on the similarities between Norwegian and German")
34.	GE347-GE354 *Practice opportunities*	A (prompting, "B reflects on practice opportunities")
35.	GE355-GE375 *The acquisition of oral skills*	A (prompting, "B reflects on the acquisition of oral skills")
36.	GE376-GE381 *Motivational issues*	A (prompting, "B reflects on motivational issues")
37.	GE382-GE398 *Practice opportunities*	A (prompting, "B reflects on practice opportunities")
38.	GE399-GE414 *Cognitive strategies*	A (prompting, "B reflects on cognitive strategies")

At the general level, the sequence of these meaningful context units reflects the topics of the SBI programme. Nevertheless, the interaction has produced a certain focus on the importance of grammatical skills (29. GE277-GE286). This focus on the importance of grammar may reflect the special importance grammar has during the acquisition of German. The grammatical structure of German is highly complex, and the system is difficult to master. However, the

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grammatical structure of the German language is an inherent part of the meaningful structure of the language and tends to be emphasised as important in the Norwegian school system. The importance of the German language has also been focused upon (32. GE320-GE330). Germany is one of Norway's most important partners in Europe and has developed into a leading political and economic force in Europe. In addition, the German speaking part of Europe makes up a total of approximately 100 million speakers. This fact makes the language one of the most important languages of the European continent, and the above-mentioned factor may help to motivate Norwegian learners of German in the learning process.

Table 12: The pragmatic Nash equilibrium of the French case

	Pragmatic categorisation of the context units	**The illocutionary force of the corresponding context unit**
1.	FR1-FR25 *Assessment of the SBI programme*	A (defining, "B reflects on the usefulness of the SBI programme")
2.	FR26-FR31 *Assessment of working methods*	A (prompting, "B reflects on the variety of working methods")
3.	FR32-FR37 *Metalinguistic comparison*	A (comparing, "B understands the essential differences between the learning of French and English")
4.	FR38-FR46 *Exposure to the language*	A (prompting, "B reflects on the particularities of learning French")
5.	FR47-FR59 *Practice opportunities*	A (prompting, "B reflects on ways to seek practice opportunities in French")
6.	FR60-FR62 *Regularity in the work process*	A (encouraging, "B takes on the challenge of working regularly towards the goal")
7.	FR63-FR74 *The importance of correct language use*	A (prompting, "B reflects on the importance of grammar")
8.	FR75-FR84 *Vocabulary learning strategies*	A (emphasising, "B understands the importance of efficient word learning strategies")
9.	FR85-FR98 *Motivation and working methods*	A (prompting, "B reflects over previous experience with different working methods")

10.	FR99-FR112 *Motivation and language choice*	A (prompting, "B reflects over the reasons why B has chosen French")
11.	FR113-FR147 *Motivation and goals*	A (asking, "B defines the goal and purpose of the learning process")
12.	FR148-FR151 *Assessment of metacognitive learning activity*	A (defining, "B assesses the development of self-assessment skills")
13.	FR152-FR156 *Cognitive strategies*	A (advising, "B explores previous use of cognitive learning strategies")
14.	FR157-FR165 *Overcome affective obstacles*	A (explaining, "B reflects over the importance of relating conctructively to one's mistakes")
15.	FR166-FR177 *Mistakes as a source of learning*	A (prompting, "B reflects on how to relate to mistakes")
16.	FR178-FR189 *Planning for a language learning activity*	A (focusing, "B identifies specific relevant activities")
17.	FR190-FR200 *Identifying a topic*	A (preparing, "B analyses relevant topics for the forthcoming activity")
18.	FR201-FR205 *Traveling as a source of intercultural understanding*	A (emphasising, "B explores the potential of intercultural encounters")
19.	FR206-FR217 *Topicalisation of learning strategies*	A (defining, "B explores previous experience with learning strategies")
20.	FR218-FR223 *Development of writing skills*	A (asking, "B comes up with ideas in terms of activities related to the development of writing skills")
21.	FR224-FR225 *Categorisation of a social strategy*	A (prompting, "B reflects over the active seeking of practice opportunities")
22.	FR226-FR233 *Reading skills*	A (asking, "B explores B's experience with the development of reading skills")
23.	FR234-FR237 *Listening skills*	A (defining, "B explores opportunities for listening")
24.	FR238-FR243 *Purpose of an educational activity*	A (defining, "B understands the importance of clear goals for the learning process")
25.	FR244-FR255 *Definition of learning strategies*	A (prompting, "B reflects over different applications of learning strategies")
26.	FR256-FR264	A (asking, "B thinks through working methods that reflect goals")

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	The importance of goals	
27.	FR265-FR269 *Important aspects of the learning process*	A (proposing, "B identifies efficient learning strategies")
28.	FR270-FR275 *Definition of focus*	A (topicalising, "B asks about the limits of the test")
29.	FR276-FR279 *Planning as a language learning strategy*	A (theorising, "B thinks through language learning habits")
30.	FR280-FR287 *Assessing a practice opportunity*	A (prompting, "B assesses previous practice opportunities")
31.	FR288-FR290 *Learning the mother tongue*	A (prompting, "B reflects on how the mother tongue was learned")
32.	FR291-FR295 *Conceptual development*	A (focusing, "B reflects on grammatical issues")
33.	FR296-FR319 *Metalinguistic discussion*	A (prompting, "B reflects on working methods")
34.	FR320-FR329 *Initiation to a practice opportunity*	A (advising, "B reflects on previous practice situations")
35.	FR330-FR348 *Planning a practice opportunity*	A (prompting, "B reflects on relevant topics for the practice opportunity")
36.	FR349-FR362 *Difference between procedural and declarative knowledge*	A (defining, "B understands the difference between declarative and procedural knowledge")
37.	FR363-FR368 *Topicalisation of affective learning strategies*	A (defining, "B understands the difference between declarative and procedural knowledge")
38.	FR369-FR373 *Topicalisation of social learning strategies*	A (prompting, "B reflects on the usefulness of social learning strategies")
39.	FR374-FR377 *Topicalisation of cognitive learning strategies*	A (prompting, "B reflects on the usefulness of cognitive learning strategies")
40.	FR378-FR383 *Topicalisation of learning strategies*	A (prompting, "B reflects on the relationship between learning strategies and learning psychology")
41.	FR384-FR390	A (prompting, "B reflects on the usefulness of cognitive learning strategies")

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	Topicalisation of cognitive learning strategies	
42.	FR391-FR410 *Conjugation of verbs*	A (prompting, "B reflects on conjugation patterns of verbs")
43.	FR411-FR421 *Acquisition of words*	A (prompting, "B reflects on the acquisition of words")
44.	FR422-FR431 *Declarative and procedural knowledge*	A (defining, "B reflects on the difference between declarative and procedural knowledge")
45.	FR445-FR450 *Balance between declarative and procedural knowledge*	A (defining, "B reflects on the proper balance between declarative and procedural knowledge")
46.	FR451-FR464 *Difference in learning patterns*	A (explaining, "B reflects on differences in learning patterns")
47.	FR465-FR470 *Language families*	A (explaining, "B reflects on the characteristics of language families")
48.	FR471-FR479 *Importance of previous experience*	A (explaining, "B reflects on the nature of acquisition of procedural skills")
49.	FR480-FR491 *The nature of linguistic perfection*	A (asking, "B reflects on the nature of linguistic perfection")
50.	FR492-FR528 *Integration of declarative knowledge*	A (prompting, "B reflects on methods to integrate declarative knowledge")
51.	FR529-FR540 *Difference between declarative and procedural knowledge*	A (defining, "B reflects on the difference between declarative and procedural knowledge")
52.	FR541-FR550 *The relationship between learning and acquisition*	A (explaining, "B reflects on the difference between learning and acquisition")
53.	FR551-FR572 *Construction of knowledge*	A (prompting, "B reflects on how knowledge is constructed")
54.	FR573-FR596 *Seeking of practice opportunities*	A (prompting, "B reflects on practice opportunities")
55.	FR597-FR612 *The advantage of positive transfer*	A (prompting, "B reflects on positive transfer")
56.	FR613-FR615 *The importance of plurilingualism*	A (asking, "B reflects on the importance of plurilingualism")

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57.	FR616-FR630 *Relevance of practice opportunities*	A (prompting, "B reflects on the relevance of practice opportunities")
58.	FR631-FR636 *Linguistic differences*	A (prompting, "B reflects on the relationship between linguistic differences and language learning issues")
59.	FR637-FR643 *Usefulness of linguistic competence*	A (prompting, "B reflects on the usefulness of linguistic competence")
60.	FR644-FR661 *Learning abilities and age*	A (prompting, "B reflects on age related factors in the language learning process")
61.	FR662-FR673 *Potential for development*	A (asking, "B explores the potential for development")
62.	FR674-FR686 *Fluency*	A (asking, "B reflects on how to develop one's fluency")
63.	FR687-FR705 *Improvement of linguistic skills*	A (asking, "B reflects on methods to improve one's linguistic skills")
64.	FR706-FR724 *Important factors in the language learning process*	A (asking, "B defines important factors in the language learning process")

The structure of the Nash equilibrium of the French case also reflects the topics reviewed during the implementation of the SBI programme. Nevertheless, the focus on the comparison between French and English (3. FR32-FR37) is interesting from a linguistic point of view. During the interaction, this linguistic similarity has emerged as a way of approaching the acquisition of French. This is in line with the Norwegian educational guidelines in terms of the focus on the learners' exploration of their previous experience with language learning when approaching a new language (Utdanningsdirektoratet). The focus on positive transfer (55. FR597-FR612) is closely related to the use of English for Norwegian learners of French. Norwegians who have acquired some basic English vocabulary may use this source in their approach to the acquisition of French. In addition, a considerable number of Norwegian words have both English and Latin roots, something which benefits the pedagogical approach of using this implicit lexical knowledge of the Norwegian learners in the French language classroom. The focus on French grammar in the educational context is less emphasised in the French classroom than in the German classroom. However, the importance of correct grammar use (7. FR63-FR74) is

noteworthy in terms of French representing a linguistic sphere where cultural prestige is highly valued.

Table 13: The pragmatic Nash equilibrium of the Spanish case

	Pragmatic categorisation of the context units	**The illocutionary force of the corresponding context unit**
1.	SP1-SP4 *Perceived learning outcome*	A (prompting, "B reflects on the value of the SBI programme")
2.	SP5-SP8 *The importance of declarative and procedural knowledge*	A (prompting, "B reflects on the importance of declarative and procedural knowledge")
3.	SP9-SP10 *The perception of parallel language learning processes*	A (explaining, "B understands the benefits of parallel language learning processes")
4.	SP11-SP14 *The development of language learning proficiency*	A (prompting, "B reflects on the complexity of the language learning process")
5.	SP15-SP18 *The usefulness of plurilingualism*	A (prompting, "B reflects on the usefulness of plurilingualism")
6.	SP19-SP22 *Language learning and factors related to age*	A (informing, "B reflects on the value of declarative and procedural knowledge")
7.	SP23-SP24 *The importance of previous experiences with language learning*	A (confirming, "B reflects on the value of past experiences in language learning processes")
8.	SP25-SP26 *The importance of seeking practice opportunities*	A (confirming, "B reflects on the effort required to get practice opportunities in Spanish")
9.	SP27-SP30 *The cognitive value of positive transfer*	A (prompting, "B reflects on the effort value of comparative issues")
10.	SP31-SP41 *The role of the teacher for learner development*	A (prompting, "B reflects on the role of the teacher")
11.	SP42-SP48 *The importance of clear goals*	A (prompting, "B reflects on the importance of clear goals")

12.	SP49-SP69 *The necessity of exposure to the language*	A (prompting, "B reflects on the importance of exposure to the language")
13.	SP70-SP73 *The importance of motivation*	A (prompting, "B reflects on the importance of motivation")
14.	SP74-SP79 *The use of the "Wheel"*	A (prompting, "B reflects on the importance of self-assessment activities")
15.	SP80-SP89 *Practical use of social and cognitive learning strategies*	A (prompting, "B reflects on the nature of social and cognitive learning strategies")
16.	SP90-SP95 *Mistakes as a source of learning*	A (prompting, "B reflects on the nature of mistakes as a source of learning")
17.	SP96-SP99 *Remedy for the lack of communicative skills*	A (asking, "B reflects on methods to cope with the lack of communicative skills")
18.	SP100-SP105 *Seeking practice opportunities*	A (asking, "B reflects on the nature of practice opportunities")
19.	SP106-SP110 *Planning an educational activity*	A (asking, "B considers different relevant tools")
20.	SP111-SP116 *Categorisation of a social strategy*	A (correcting, "B categorises experience with a learning strategy")
21.	SP117-SP131 *Linguistic elements required for an educational activity*	A (prompting, "B prepares an educational activity linguistically")
22.	SP132-SP135 *Focus on listening as a source for learning*	A (prompting, "B focuses on listening")
23.	SP136-SP139 *Purpose of an educational activity*	A (prompting, "B reflects on the purpose of one's actions")
24.	SP140-SP144 *Consequence of having clear goals*	A (prompting, "B reflects on the purpose of one's goals")
25.	SP145-SP153 *The importance of goals*	A (prompting, "B reflects on the nature of one's goals")
26.	SP154-SP157 *Purpose of the learning process*	A (asking, "B reflects on the purpose of the learning process")
27.	SP158-SP180 *Procedural application of the strategy "planning"*	A (prompting, "B develops planning procedures prior to a learning activity")

28.	SP181-SP186 *Planning as a language learning strategy*	A (prompting, "B reflects on the implementation of the learning strategy")
29.	SP187-SP190 *Assessment of learning activities*	A (asking, "B assesses the SBI programme")
30.	SP191-SP192 *Transfer issues*	A (asking, "B reflects on transfer issues")
31.	SP193-SP200 *Affective learning strategies*	A (defining, "B reflects on the use of affective learning strategies")
32.	SP201-SP204 *Definition of insight*	A (prompting, "B reflects on the value of insight")
33.	SP205-SP220 *Assessment of the strategy "delayed speech"*	A (prompting, "B reflects on the value of using delayed speech")
34.	SP221-SP228 *Practical focus of metacognitive issues*	A (prompting, "B reflects on the value of metacognitive insight")
35.	SP229-SP230 *Vocabulary learning prior to an educational activity*	A (instructing, "B focuses on vocabulary learning")
36.	SP231-SP236 *Planning for vocabulary learning*	A (prompting, "B defines situations for vocabulary learning")
37.	SP237-SP241 *Topicalisation of strategies related to the activity*	A (prompting, "B plans for the implementation of the activity")
38.	SP242-SP254 *Situations which may occur during the activity*	A (prompting, "B defines practice opportunities")
39.	SP255-SP260 *Assessment of the planning process*	A (prompting, "B assesses the planning process")
40.	SP261-SP276 *Practice and preparation of the activity*	A (prompting, "B plans the learning activity")
41.	SP277-SP285 *Definition of the place to carry out the activity*	A (prompting, "B defines places for practice")
42.	SP286-SP289 *Plans for a trip abroad as a metacognitive activity*	A (explaining, "B understands the meaning of metacognition")

43.	SP290-SP307 *Emotional reactions to the language learning process*	A (prompting, "B reflects on the use of affective learning strategies")
44.	SP308-SP325 *Topicalisation of the concept "learning strategies"*	A (prompting, "B reflects on the use of cognitive learning strategies")
45.	SP326-SP363 *The transition from declarative to procedural knowledge*	A (prompting, "B reflects on the transition from declarative to procedural knowledge")
46.	SP364-SP370 *Inherent skills in the language learner*	A (prompting, "B reflects on the nature of skills")
47.	SP373-SP374 *The importance of clear goals*	A (prompting, "B reflects on the importance of clear goals")
48.	SP375-SP377 *The importance of interest*	A (prompting, "B reflects on the importance of interest")
49.	SP378-SP381 *The nature of acquisition*	A (prompting, "B reflects on the nature of acquisition")
50.	SP382-SP389 *Difference between declarative and procedural knowledge*	A (prompting, "B reflects on the difference between declarative and procedural knowledge")
51.	SP390-SP391 *Difference between learning and knowing*	A (prompting, "B reflects on the difference between learning and knowing")
52.	SP392-SP398 *The transfer value of linguistic skills*	A (prompting, "B reflects on the transfer value of linguistic skills")
53.	SP399-SP400 *SLA acquisition and declarative and procedural knowledge*	A (prompting, "B reflects on basic aspects of SLA")
54.	SP401-SP403 *Exposure to Spanish*	A (prompting, "B reflects on ways to ensure exposure to Spanish")
55.	SP404-SP410 *Comparative issues*	A (prompting, "B reflects on linguistic challenges for Norwegian learners")
56.	SP411-SP414 *Exposure to the language*	A (prompting, "B reflects on the importance of exposure to the language")
57.	SP415-SP416 *The importance of regularity*	A (prompting, "B defines regularity as an important issue")
58.	SP417-SP418	A (asking, "B reflects on the acquisition of words")

	Acquisition of words	
59.	SP419-SP423 *Performance*	A (prompting, "B reflects on performance in the language learning process")
60.	SP424-SP434 *The role of the teacher*	A (asking, "B reflects on the role of the teacher")
61.	SP435-SP440 *Early start issues*	A (prompting, "B reflects on early start issues")
62.	SP441-SP442 *Reasons for the language learning process*	A (prompting, "B reflects on the reason for the language learning process")
63.	SP443-SP446 *Methodology*	A (asking, "B reflects on the nature of methodology")
64.	SP447-SP449 *Learning context*	A (prompting, "B reflects on beneficial learning contexts")
65.	SP450-SP451 *Transfer value*	A (asking, "B reflects on transfer value")
66.	SP452-SP458 *Language learning psychology*	A (prompting, "B reflects on coping with emotional blocks")
67.	SP459-SP460 *Responsibility*	A (prompting, "B reflects on issues pertaining to responsibility")
68.	SP461-SP462 *Listening skills*	A (prompting, "B reflects on the importance of listening practice")
69.	SP463-SP468 *Interest*	A (asking, "B reflects on the nature of interest")
70.	SP469-SP472 *Practice opportunities*	A (asking, "B reflects on the access to practice opportunities")
71.	SP473-SP477 *Overall metacognitive insight*	A (informing, "B reflects on the overall nature of metacognition")

In the German and French cases, the overall structure of the SBI programme is reflected in the way the pragmatic Nash equilibrium has been induced. The same principle applies to the inducement of the pragmatic Nash equilibrium in the Spanish case. However, some salient points may be highlighted in the Spanish case as well. Transfer issues in the acquisition of Spanish (30. SP191-SP192/65. SP450-SP451) have a similar value as transfer issues in the

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acquisition of French, since the learners' knowledge of English, as well as Norwegian words with English or Latin roots, may be used as a source of exploring transfer issues when approaching the acquisition of Spanish. In addition, a point has been made in terms of the practical difficulties related to practice opportunities (54. SP401-SP403/56. SP411-SP414/70. SP469-SP472). Spanish is a language which perhaps requires more personal initiative for bringing about practice opportunities than German and French because of proximity issues. Spain is more accessible than the Spanish-speaking countries of Latin America, but the places Norwegians tend to visit in Spain are the touristy places where practice opportunities are scarce.

From a formal pragmatic point of view, the following formula shows how the three conversational games develop along their sub-game equilibrium paths and thus induce the pragmatic Nash equilibria[98] according to which relevance has been maximised:

The German Case (GE):

U_i　　A (instigating, "Breflects on the reasons for B's language choice"), A (asking, "Breflects on efficient practice for learning"), A (asking, "Bidentifies cognitive learning strategies"),(…),→M (38)

The French Case (FR):

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[98] In this formula, the use of game-theoretical symbols implies that the representation of the INSTRUCTORS and the LEARNERS expressed through ordinary letters (A and B) in Tables 11, 12 and 13 are converted to the standards of game-theoretical symbolism when applied to conversational games (Pietarinen, 2007: 120-121). The letters used by Pietarinen (2007: 120-121) are not identical to the symbolic letters used in this research, but the use of game-theoretical symbolism in terms of the design of the letter system may vary. This tradition of a certain leeway in the use of game-theoretical symbolism is reflected in this formal definition of the conversational games.

U_i A (defining, "Breflects on the usefulness of the SBI programme"), A (prompting,"Breflects on the variety of working methods"), A (comparing, "B understands the essential differences between the learning of French and English"),(…),→M (64)

The Spanish Case (SP):

U_i A (prompting, "Breflects on the value of the SBI programme"), A (prompting,"Breflects on the importance of declarative and procedural knowledge"), A (explaining, "Bunderstands the benefits of parallel language learning processes"),(…),→M (71)

$\geq$ U_i $(a_{i;}a_j)$

$8a_i 2A_i, 8a_j 2A_j; i,j 2N, i \neq j.$

The tautology implied in the principle of defining the evolution of the interaction with the actual evolution of the same is inherent in the structure of the three Nash equilibria presented in the above. The players have thus created a deeper meaningful structure during the interaction as a consequence of the utility function of their heuristics reflected in these context units along the sub-game equilibrium paths of the conversational games. This meaningful structure has been established according to the principles of backwards induction, so the context unit 38 is the equivalent of the first, and the context unit 1 the last meaningful move of GE. The same principle applies to FR and SP. The whole interactional process presented in the Appendices 2A/B, 3A/B and 4A/B as a consequence of the principle of backwards induction is thus reflected in the above-mentioned formula outlining the inducement of the three Nash equilibria.

The inducement of the three pragmatic Nash equilibria of the three conversational games has been influenced by the nature of the INSTRUCTOR's input in the sense that the context units which have been established have been brought about by the content of the SBI programme during each context unit. The players have played against the world with its history, but at the same time certain constraints have been put on the development of the conversations since the topic of the instructional conversation has been determined by the research prior to the actual instruction in the classroom. This is how the researcher has exerted an influence on the implementation of the SBI programme, which could have altered a natural flow of the conversation. In this way, the Hawthorne effect discussed in Section 3.4. may be a crucial issue due to the fact that the influence of the researcher may have caused the participants in the interaction to behave in a certain way according to the expectations of the researcher. The content of the context units in Tables 11, 12 and 13 therefore reflects the topics of the sequences of the SBI programme at an aggregate level. In spite of this overall influence of the SBI programme on the flow of the conversation, during which the participants have played against the world with its history within the constraints of the SBI programme itself, Tables 11, 12 and 13 provide an indication of the topics which have come to the fore when the participants in the three classroom interactions have maximised relevance within the thematic boundaries of the interaction itself.

4.2 Learner beliefs related to metacognitive issues

Research question 1 states that the evolution of the implementation of the SBI programme will be used to establish five categories of learner beliefs related to core metacognitive aspects of the language learning process. The meaningful contexts which have been created as a consequence of the players' heuristics as they moved through the conversational games constantly adding p to the

context[99], have yielded some beliefs about language learning in general, and the learning of German, French and Spanish in particular, according to the categories Creating motivation, Seeking practice opportunities and Acquisition of grammar, Acquisition of pronunciation and Acquisition of vocabulary. The following matrices have been established as a consequence of GE in Appendix 2A/B (Table 14), FR in Appendix 3A/B (Table 15) and SP in Appendix 4A/B (Table 16).

Table 14: Learner beliefs (GE)

Metacognitive category	Learner beliefs about general language learning	Learner beliefs about the acquisition of German for Norwegian learners
Creating motivation	There was an obligation to choose either Spanish, French or German in upper secondary school. The choice was made based on an assumption of which language was the easiest one. The parents' opinion is important for the choice of language (5. GE51-GE78). Regular exposure to the language is important (6. GE79-GE84). It is a useful habit to engage in an enjoyable activity upon completion of a language learning task. In this way, one has something positive to look forward to. The same applies to listening to music parallel to a learning activity (22. GE207-GE216). A good teacher is a source of motivation for learning. It is important to have a special interest for the country where the language is spoken. Learning about the country creates an	

	interest for the language (36. GE376-GE381).

It is important to vary the learning methods so that the activity does not become boring and monotonous (37. GE382-GE398).

It is important to do things which make it fun to learn the new language so that it not only becomes boring and stressful (38. GE399-414). | |
| *Practice opportunities* | Practice and the topics reviewed during the implementation of the SBI programme are important (2. GE27-GE30).

It is preferable to go to a store where people have time to spend to talk about colors, patterns, size and price (18. (GE187-GE200).

It is necessary to have someone who can teach the language, for instance a teacher. A book may also be necessary. It is important to go to places where the language is spoken (6. GE79-GE84, 23. GE217-222, 26. GE245-GE256, 27. GE257-GE264).

It is important to practise with regular intervals. One may use TV, the school setting and find summaries on the Internet (27. GE257-GE264).

One may play games or engage in other kinds of activities while talking to the persons one is playing with, using the target language. Social media and TV are also good sources for learning (35. GE355-GE375).

It is important to read a lot in the target language (38. GE399-GE414). | Use German subtitles instead of Norwegian when watching foreign language movies (3. GE31-GE34, 24. GE223-GE232).

During a forthcoming trip to Berlin the subway can be used instead of taxi in order to read signs and information in German (11. GE109-GE120).

Talking German in Germany is more stressful than talking German in a non-German speaking country (14. GE149-GE158).

When watching a German movie one may try to translate into Norwegian (38. GE399-GE414). |
| *Acquisition of grammar* | It is possible to record adjective endings before going to bed and then listen to them (12. GE121-GE138).

It is important to learn the conjugation paradigm. One has to analyse the sentences in order to find the right pronoun (15. GE158/159-GE160).

One may check the word in a dictionary if one is unsure whether a | An exceptional interest for grammar is required (3. GE35-GE50).

The genitive case may be difficult to learn, but the use of "von" makes this kind of structures easier to learn (10. GE101-GE108).

At an early stage declarative issues such as strong verbs, intransitive verbs, the perfect tense, auxiliaries |

	verb is regular or irregular. One's declarative knowledge helps determine the ending of the verb (26. GE245-GE256).	and prepositions are important. At an early stage the conjugation of auxiliaries is important (28. GE265-GE276). The German grammar is more difficult than Norwegian grammar in terms of analysis (33. GE331-GE346).
Acquisition of pronunciation	It is possible to play Internet games in order to improve pronunciation (24. GE223-GE232). One should listen to texts on CDs (24. GE223-GE232, 28. GE265-GE276).	
Acquisition of vocabulary	It is important to learn new words as well as how to use new words. It is possible to listen in on conversations in order to learn new words and expressions (14. GE149-158). One should look up unknown words in a dictionary after a language learning activity (17. GE169-GE186). It is important to be aware of the words one does not know prior to a practice opportunity, write these words down and look them up at home after the language learning activity (18. GE187-GE200). When watching movies one may identify the words one understands and relate this knowledge to the content in the movie. Vocabulary tests may be used in order to learn new words (24. GE223-GE232). A dictionary may be used in order to look up basic words (26. GE245-GE256).	There are many words in German which are similar to Norwegian words, such as *Tante* and *Onkel*. This makes it possible to make a guess in terms of the meaning of the words (4. GE35-GE50, 29. GE277-GE286, 33. GE331-GE346). Making a guess in terms of the meaning of the words is relevant both for reading and writing (4. GE35-GE50).

In terms of motivational issues, no particular topics in relation to the acquisition of German for Norwegian learners came to the fore. The choice of German was a consequence of the obligation to choose a foreign language in upper secondary school. Regular exposure to the German language is important, and the use of affective incentives during the language learning process may be

beneficial for the process. The teacher is an important motivational factor, and the teacher should assure the use of varied working methods. An interest for and knowledge about the countries where German is spoken are also relevant for motivation in the language learning process.

In terms of practice opportunities, the topics reviewed during the implementation of the SBI programme are perceived as important. Shopping may be an efficient way to practise the language, and the active seeking of practice opportunities has been emphasised. An attitude of seeking practice opportunities on a regular basis is useful, and media may be used as a good source of seeking these practice opportunities in addition to the importance of extensive reading. Some language-specific topics have come to the fore. There is an awareness about the use of German subtitles when watching foreign language movies, although the use of German subtitles is not language sensitive in the sense that this may also be a useful method in French and Spanish. The same applies to the active use of the public transport system during a stay in Germany, the fact that it is perceived as more stressful to talk German in Germany than in a non-German speaking country, and that it is possible to translate into Norwegian when watching a German movie. These metacognitive aspects are equally relevant in relation to French and Spanish, even if they have come to the fore as elements of the learning process pertaining to the acquisition of German for Norwegian learners.

In terms of acquisition of grammar, the conjugation paradigms are considered important, and a method of learning is to record adjective endings in order to listen to them when going to bed. Analytical skills prior to the construction of sentences are useful, and dictionaries may be used in order to identify the regularity or irregularity of a verb. The acquired declarative knowledge may be used for the correct conjugation of the verb. These beliefs are related to general language learning principles without any specific reference to the acquisition of German. However, some beliefs pertaining to the acquisition of German have emerged. The German grammar is perceived as more difficult than Norwegian grammar, and an exceptional interest for grammar is required. This is possibly due to the fact that the German grammatical system is complex, and may be perceived as difficult for foreign learners of the language. Beliefs pertaining to certain aspects of the grammatical system have emerged, such as

communication strategies for circumventing the difficulties related to the genitive case and the importance of learning the strong and intransitive verbs, the perfect tense, prepositions, and the conjugation of auxiliaries.

In terms of the acquisition of pronunciation, no particular beliefs have emerged in relation to the acquisition of German for Norwegian learners. However, the use of media is expressed as a useful method of acquiring good pronunciation skills. In the case of the acquisition of vocabulary, beliefs pertaining to general language learning principles include the importance of constantly expanding one's vocabulary. Listening in on conversations and looking up unknown words in a dictionary may be a good method in this respect. Prior to the learning activity, one should be aware of the words one does not know. In addition, when watching a foreign language movie, one may take note of the words one does not understand and try to relate these words to the content of the movie. Vocabulary tests are a good incentive for learning new words.

In terms of language-specific beliefs, transfer issues have been deduced in the sense that the meaning of many German words may be understood as a consequence of the similarity of these words with Norwegian, both for reading and writing. The inner cognitive structure of the beliefs which have emerged as illustrated in Table 14 will be combined with the corresponding beliefs which have emerged as illustrated in Tables 15 and 16. Together they will form the background to the analysis of the emergent production systems pertaining to the five meaningful categories of creating motivation, seeking practice opportunities and the acquisition of grammar, pronunciation and vocabulary in Section 4.3 and in accordance with research questions 1 and 2.

Table 15: Learner beliefs (FR)

Metacognitive category	Learner beliefs about general language learning	Learner beliefs about the acquisition of French for Norwegian learners
Creating motivation	It is important to create milestones during the learning process. Motivation arises out of discovering that one learns along the way (9. FR85-FR98). Motivation is the first step towards learning; one needs to know what one wants and which goal one wants to achieve. Interest is important. Learners tend to work more with subjects which are concluded that particular school year (11. FR113-FR147). Too much focus on learning strategies may spoil the joy of learning (29. FR276-FR279). When encountering a difficulty during the reading of a text, one may read something one has had before to see if one understands more. Watching a movie or listening to music prior to a learning activity may produce motivation to learn, one understands more and this method can also be used after the activity as a reward (37. FR363-FR368).	
Practice opportunities	Listening to music/buy CD's is useful (5. FR47-FR59, 8. FR75-FR84, 35. FR330-FR348, 57. FR616-FR630). Watching movies is useful (5. FR47-FR59, 8. FR75-FR84, 35. FR330-FR348, 57. FR616-FR630, 63. FR687-FR705). Get pen friends is useful (5. FR47-FR59, 54. FR573-FR596). Reading different kinds of texts is useful (5. FR47-FR59, 57. FR616-FR630, 62. FR674-FR686, 63. FR687-FR705). One may read the French texts in museums or similar places and read informative texts. One may also compare the French text with other languages (5. FR47-FR59).	There is less exposure to French than English. Exposure to French could be created by using the French version of Facebook and Twitter (4. FR38-FR46).

	It is useful to work together with a more proficient learner (8. FR75-FR84, 25. FR244-FR255). It is useful to talk French during the visit to the café, read about Coco Chanel and write down phrases during the stay in the café (16. FR178-FR189). Learning may occur as a consequence of listening to the language in the environment (18. FR201-FR205). One may use Facebook and find French people online (20. FR218-FR223). It is useful to work with a learner who is weaker and teaching others (25. FR244-FR255). It is useful to have someone read out a Norwegian text and translate it (27. FR265-FR269). One may ask about the road, play boule with French people and look for cheap CD's. One may go to café's and clothe's stores in Paris and learn expressions by looking for French music shops on the Internet (35. FR330-FR348). It is useful to talk French to foreign visitors and read out French to others (38. FR369-FR373). Staying in the country where the language is spoken is important. It is possible to talk on one's own (54. FR573-FR596). It is useful to watch TV (62. FR674-FR686). It is useful to talk to others (63. FR687-FR705).	
Acquisition of grammar	Working with texts creates insight into how the sentences are constructed (63. FR687-FR705).	When talking, one has to think through "le" and "les" (14. FR157-FR165). Irregular verbs have to be learned by heart, and these do not easily stick to

	Active use of grammar must be combined with rote learning (64. FR706-FR724).	the mind. Rote learning is important and there are many rules. It is important to write texts after a language learning activity, filling in the verbs into dialogues, talking and using the verbs in tasks taking into account the conjugation paradigms (42. FR391-FR410).
Acquisition of pronunciation	It is useful to write down examples of oral practice (2. FR26-FR31). It helps to talk for oneself, for instance in smaller groups because then more people feel confident. It is a good thing to talk and then be corrected, then it is easier to remember. Then one discovers basic mistakes which are committed in the pronunciation (41. FR384-FR390).	The right accent in *Grèce*, *Norvège* and *Norvégienne* is a difficult issue. Other difficult issues are the spelling of *touristes* vs *tourists*, some preposition issues and the pronunciation of /s/ in *ils habitent* (32. FR291-FR295).
Acquisition of vocabulary	Rote learning is a good way of learning vocabulary (8. FR75-FR84). Fill-in-the-blanks is an efficient method of learning words in a fairly fast way (9. FR85-FR98). One has to build up a vocabulary (19. FR206-FR217). Words may be learned as a consequence of using books and the Internet/Youtube (35. FR330-FR348). It is useful to write down unfamiliar words and use rote learning to learn new words (26. FR256-FR264). It is useful to read texts and look up the words one does not know. When writing a text, it is important to try to use unknown words (43. FR411-FR421). The more one acquires the subject one learns without language, the more words one learns, because the more concepts one needs to use in order to master the subject (60. FR644-FR661). Reading newspapers, books and different kinds of texts is important in addition to conscious writing using the	

	same word over and over again (62. FR674-FR686). New and advanced words are acquired from the news or the media. If one reads a new word in television and sees a new word, then one may look it up and learn what it means if one wonders about something and wants to expand one's vocabulary (63. FR687-FR705). Too much rote learning of words should be avoided making practice and repetition important (64. FR706-FR724).	

In terms of motivation, no particular issues emerged from the learner beliefs which were expressed during the evolution of the classroom interactions in terms of the acquisition of French for Norwegian learners. The creation of milestones during the learning process is important in addition to the establishment of the goals one envisages for the learning process. However, the focus on learning strategies should not be too strong *per se*, since it could take away the focus on the learning process as such. In the case of working with a particular learning activity, the use of previous knowledge is important to stimulate motivation, as well as using music prior to and after a learning activity as an incentive in the language learning process.

In terms of seeking practice opportunities, an awareness has been expressed in terms of French being a language to which the learners are less exposed than English. However, social media could be used to create such an exposure. The use of different kinds of media has also emerged as a belief related to seeking practice opportunities. Extensive reading, both in terms of ordinary texts and signs in public places, has also been suggested, in addition to writing experience as a consequence of acquiring pen friends. Working together with a more proficient learner is one way to seek practice opportunities, as well as working with a less proficient learner since teaching others may be a good way to learn. Finally, being an active listener, and talking extensively when spending time in public places, are also important.

In terms of the acquisition of grammar, some general beliefs about the language learning process have emerged. The active work with texts creates insight into the construction of sentences, and rote learning is a supplement to the active use of grammar. Some beliefs about the acquisition of French for Norwegian learners have also emerged. The difference between the masculine and feminine definite article has been considered a challenge. Rote learning is considered important for the acquisition of the complex system of grammatical rules, in addition to using these rules in learning activities such as writing texts and using the verbal system in different kinds of learning activities.

In terms of the acquisition of pronunciation and general language learning principles, writing down examples of oral practice is considered to be a useful method. Talking aloud in small groups may also enhance confidence, as may being exposed to corrective comments by others. In terms of challenges related to the acquisition of French for Norwegian learners, the pronunciation of /s/ in the third person personal pronoun is mentioned as an example, as well as the orthographic difficulties related to the writing of some words with a complex relationship to the spoken language. No particular issues related to the acquisition of vocabulary for Norwegian learners have emerged.

In terms of general language learning principles, rote learning has been mentioned has a good way of learning vocabulary in addition to fill-in-the-blanks. Writing down unfamiliar words has emerged as a useful method. However, too much rote learning should be avoided, so practice and repetition are highlighted, for example in the form of writing down unfamiliar words and reading texts. The use of different kinds of texts and the media is also important and there is a focus on creating a necessity to learn new concepts as a method of being forced into constantly learning new words. The inner cognitive structure of the beliefs which have emerged, as illustrated in Table 15, will be combined with the corresponding beliefs that have emerged, as illustrated in Tables 14 and 16, and form the background for the analysis of the emergent production systems pertaining to the five meaningful categories of creating motivation, seeking practice opportunities and the acquisition of grammar, pronunciation and vocabulary in Section 4.3, and in accordance with research questions 1 and 2.

Table 16: Learner beliefs (SP)

Metacognitive category	Learner beliefs about general language learning	Learner beliefs about the acquisition of Spanish for Norwegian learners
Creating motivation	Positive previous learning experiences make the learning process easier. A sense of mastery in the other languages may constitute a motivational factor for learning other languages (7. SP23-SP24). Good motivation is essential in language learning processes (13. SP70-SP73). Listening in the bus is a strategy used; understanding in such a situation leads to enhanced motivation (15. SP80-SP89). Playing Tetris is a way to relieve the emotional stress in the language learning process when doing homework. After playing Tetris, one may start all over again with another exercise. When feeling bored, it is possible to eat sweets, watch TV or go out as a way to motivate oneself. Eating sweets may also be used as a reward during exams or after finishing a paragraph (43. SP290-SP307). There is a relationship between motivation and the teacher's choice of learning activities (60. SP424-SP434). Identifying a reason for the language learning process is important (62. SP441-442). There is a relationship between too much rote learning for tests without paying attention to the actual relevance of the knowledge (63. SP443-SP446). Combining the learning process with positive experiences is a method for remembering words and other linguistic elements (66. SP452-SP458). Interest may be created by engaging in relevant language learning activities not necessarily organised in the school setting. Interest may create opportunities	English is mentioned as an example of a language which may be used for comparative purposes (9. SP27-SP30, 44. SP308-SP325).

	for learning languages (69. SP463-SP468).	
Practice opportunities	The active use of books, movies and music is important (45. SP-326-SP363). Watching movies is a good way to learn (18. SP100-SP105). Tritrans is a relevant tool for translations (19. SP106-SP110). Talking to fellow learners and teaching others is a good way of learning (31. SP193-SP200). Going to shops or restaurants and spending time on the beach are situations which can be used in order to practise word acquisition (36. SP231-SP236). When buying clothes, it is possible to go to several stores to try clothes (37. SP237-SP241). Talking to people of the same age on the beach or at the swimming pool is a useful method (41. SP277-SP285). Rattle on without feeling bad about the situation is a useful method (43. SP290-SP307). The learner must take the initiative in terms of reading Spanish books in order to be exposed to the language (54. SP401-SP403). It is important to be exposed to the language in order to learn it well (56. SP411-SP414). Words and phrases must be used on a regular basis in order to learn them properly (57. SP415-SP416). One has to be forced into using the language in natural settings, for instance in countries where English is not widely spoken (68. SP461-SP462).	It is more difficult to get practice opportunities in Spanish than in English. This situation requires an extra effort on the part of B in order to practise Spanish (8. SP25-SP26). Spanish is a language which is difficult to use on a regular basis. An additional factor is that Spanish is learned in school, and not in natural surroundings as the case is with Norwegian. It is easier to learn English since Norwegians are surrounded by English all the time (56. SP411-SP414).
Acquisition of grammar	Mistakes in a test can be used as a source of learning the verb conjugations which can be a problem. When discovering a rule one has to focus on the rule as well as monitoring the nature of the mistakes	Declarative knowledge for the learning of the Spanish verbal system is important since the Spanish verbal system is considered very different from the

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	from one situation to the other. The discovery of systems of mistakes is especially important for correct implementation next time (16. SP90-SP95). Knowledge implies being able to conjugate verbs (23. SP136-SP139). It is important to have some declarative knowledge, for instance about verb conjugation paradigms. These patterns may be used by recalling what the patterns contain (45. SP326-SP363).	Norwegian verbal system (2. SP5-SP8). Spanish grammar is easier than the Norwegian grammar (53. SP399-SP400).
Acquisition of pronunciation		
Acquisition of vocabulary	Things can be said spontaneously based on the basic vocabulary one may have (38. SP242-SP254). It is possible to find words and expressions on the computer and listen to conversations. Words and expressions are not learned word by word, but by focusing on the most important aspects (40. SP261-SP276). It is useful to divide the words into units or try to associate parts of the words with different things in order to remember them better (44. SP308-SP325).	

In terms of motivational issues for general language learning principles, there is a focus on the usefulness of previous language learning experiences. Using everyday situations as practice opportunities is a way to enhance motivation, and media may be used to create stress relieving experiences. The teacher's role in the creation of language learning activities is important, as well as the identification of the reasons for the learning process. Rote learning for tests may reduce motivation if not made explicitly relevant to the task at hand. Positive learning experiences may be combined with methods for remembering words and other linguistic elements for increased motivation. Interest comes out of engaging in extra-curricular language learning activities, and interest as such may create opportunities for language learning. In terms of motivational issues for Norwegian learners of Spanish, the belief is expressed that English may be used as a source of inspiration due to the similarities between Spanish and English.

In terms of practice opportunities, the active use of media is considered to be important, as well as talking to and teaching others. Public places may be used to practise the language, and in those situations it is important to dare to engage in conversation and ensure the regular use of words and phrases in order to learn them well. An active initiative is required in terms of seeking situations of exposure to the language and reading Spanish books. In terms of language-specific issues, it is more difficult to find practice opportunities in Spanish than in English, which makes an extra effort necessary on the part of the learner in order to seek such practice opportunities.

In terms of the acquisition of grammar, mistakes can be used as a source of learning, focusing on how one improves the understanding of a rule from one situation to the other. In this way, it is possible to discover the system behind the rule. Declarative and procedural knowledge in relation to the conjugation of verbs is considered to be an important aspect of the language learning process. In terms of language-specific issues related to the acquisition of grammar, the Spanish verbal system is considered to be very different from the Norwegian one, so declarative knowledge is required in order to master the system. However, Spanish grammar is considered to be easier than Norwegian grammar.

No particular beliefs related to the acquisition of pronunciation emerged. The same applies to language-specific issues in terms of the acquisition of vocabulary. However, the importance of having a basic vocabulary which can be further developed has been mentioned, and the learning of vocabulary is based on a focus on the most important aspects of the linguistic material. In addition, the media and the method of listening to conversations may be used in order develop one's vocabulary. The accurate analysis of the morphological and semantic structure of words may be used in order to learn them better. The inner cognitive structure of the beliefs which have emerged, as illustrated in Table 16, will be combined with the corresponding beliefs that have emerged, as illustrated in Tables 14 and 15 and which form the background to the analysis of the emergent production systems pertaining to the five meaningful categories of creating motivation, seeking practice opportunities and the acquisition of grammar, pronunciation and vocabulary in Section 4.3 and in accordance with research questions 1 and 2.

The occurrences of the five meaningful categories of Motivation, Seeking practice opportunities and the Acquisition of grammar, pronunciation and vocabulary in the three cases have been categorised in the above. In the German case, there were no instances of the categories Creating motivation and Acquisition of pronunciation for Norwegian learners. In the French case there were no instances of the categories Creating motivation and Acquisition of vocabulary for Norwegian learners. In the Spanish case, there were no instances of the category Acquisition of pronunciation, neither in terms of general beliefs about learning nor in terms of Norwegian learners of Spanish. However, these holes in the matrices have no significance for the analysis of the meaningful metacognitive structure of the implementation of the SBI programme in the following section. They are due to the fact that the INSTRUCTORS chose different approaches for the implementation of the SBI programme in the three foreign language classrooms. During the three interactions, relevance was nevertheless maximised, and the patterns which emerged in the above will be used for the establishment of five emergent production systems in order to discuss the structure of the collective metacognitive knowledge that can be identified as a consequence of the aggregate set of learner beliefs.

4.3 Patterns of emergent production systems

The learner beliefs related to the five meaningful categories listed in the above have been transformed into representations of five corresponding production systems which clarify the underlying metacognitive structure of the collective meaning created as a consequence of the interactional process. As stated in Section 3.1, meaning is an elusive matter which is difficult to fathom out even in apparently overt situations of human communication (Benz et al., 2006: 83). Nevertheless, the characteristics of the emergent production systems will constitute a basis for assessing the relevance of the present SBI programme from a structural metacognitive perspective since this visual image creates an indication of the learning potential inherent in the meaningful outcome of the classroom conversations.

The layers of meaning pertaining to the five meaningful categories represented in the matrices of the previous section will therefore reflect a network of semantic structures, both in terms of their overt manifestation in the linguistic structures of the production systems, and in terms of the underlying network of a deeper semantic meaning. In this way, the overt linguistic structure of the production systems represents their *parole* side, and the deeper implicit semantic structures of the production systems represent their *langue* side (Koerner, 1982). This dichotomy was further explored in Section 3.1. The strength profile of the production systems ($r_{ij} = s_j / \sum_k {}^s k$) is a product of the possibility of the spread of activation in the *langue* side of the production systems brought about by the nature of the *parole* side of each and every system. This systemic interconnectedness is a product of the semantic value of the core nodes of the production systems and their relationship to the underlying semantic structures of the same such as described in Sections 2.3.2-2.3.5.

The first step in this analytical process, in compliance with research question 2, is the transformation of the learner beliefs expressed in the matrices in Section 4.2 into linguistic expressions which absorb the metacognitive meaning of these beliefs in the form of the typical IF … THEN … clauses of the ACT* model such as described in Section 2.3.1. These IF… THEN … clauses represent the steps the learner has to take in order to proceduralise the declarative knowledge expressed in the production system. The overt linguistic representation of these

production systems may be deduced from several beliefs, or the same belief may form the basis for several productions.

In the different tables that make explicit the metacognitive structures of the learner beliefs in emergent production systems, P1 illustrates the first production in each production system upon transformation of the learner beliefs expressed in Section 4.2. P2 illustrates the second production in each production system upon transformation of the learner beliefs expressed in Section 4.2 ad infinitum. P[…]^A symbolises the fact that there is a part of the chain of productions missing in the data material in relation to the representation of the complete production system. The three full stops in brackets represent this unidentified part of the chain. In the case of several possibilities for missing meaningful chains of productions, the letter A signifies that this missing chain is the first missing chain in the complete production system. The subsequent letters B, C ad infinitum represent the other missing chains in the production system.

4.3.1 Creating motivation in the learning process

The goal of the learning process is to develop a cognitive and emotional system adapted to the individual needs and personal disposition of the learners, as defined in Section 2.4.1. These systems are bound together by a dynamic interactional pattern (Zoltán Dörnyei, 2009: 225). In this way, the learning behaviour of the learner is influenced by contextual motivational factors (Zoltán Dörnyei, 2009: 209-210). Motivation is the driving force behind the language learning process with enthusiasm, commitment and persistence on the part of the learners as key determinants for the outcome of the language learning process (Zoltán Dörnyei, 2001: 5). Semantic values of the word 'motivation', and the motivational process as such, are highly complex, and it is difficult to relate the reason for an action to motivational aspects such as effort and persistence. The development of assumptions and attitudes as well as the interpretation of events is therefore the goal of the learner (Zoltán Dörnyei, 2001: 6-8). This cognitive system is important for the subsequent development of personal traits for short- and long-term activities and decisions which include self-knowledge and other intellectual competences (Berofsky, 2007: 16). These self-awareness structures thereby insert themselves into the structures of the

possible selves of the learner and a course of action which leads to the growth of the dynamic relationship between inner beliefs and values of the self and the external environment (Zoltán Dörnyei, 2009: 213; Zoltán Dörnyei & Ushioda, 2009: 296). The structures of the possible selves of the learner will guide him/her towards the goal of the learning activity alongside the necessity to make use of one's personal initiative, resourcefulness and persistence (Hacker et al., 2009: 299). This potential for self-development of the learner is important for his/her motivational evolution.

Table 17 illustrates the transformation of learner beliefs pertaining to the creation of motivation expressed in Tables 14, 15 and 16 into a schematic structure that provides an indication of the declarative nature of the collective metacognitive knowledge brought about in terms of creating motivation in the learning process, as expressed through an overt linguistic structure in the form of the IF … THEN… clauses of production systems.

Table 17: A production system for creating motivation

P1	IF the goal is to develop skills in the language THEN take an active initiative in order to develop an interest
P2	IF the goal is to develop an interest in learning the language THEN identify a reason for the language learning process
P[…]^A	
Px^1	IF the goal is to make the learning process easier THEN create positive learning experiences
Px^2	IF the goal is to create affective incentives during the process THEN make an active use of movies and music after a learning activity as a reward
P[…]^B	
Px^3	IF the goal is to avoid monotony in the learning process THEN vary the working methods
Px^4	IF the goal is to vary the working methods THEN combine the active use of the language with games, movies, music, books and texts

The productions categorised in Table 17 reflect the collective cognitive structure of the beliefs about the learning process organised in Tables 14, 15 and 16 in Section 4.2 according to the category *Creating motivation*. In the following table these beliefs are related to the productions expressed in Table 17.

Table 18: Correspondence between learner beliefs and a production system for creating motivation

P1	Motivation is the first step towards learning (FR). Interest is an important motivational issue (FR).
P2	One needs to know what one wants and which goal one wants to achieve (FR). Identifying a reason for the language learning process is essential (SP).
Px[1]	It is a useful habit to engage in an enjoyable activity upon completion of a language learning task. In this way, one has something positive to look forward to. The same applies to listening to music parallel to a learning activity (GE). Affective incentives during the language learning process are important in order to make the process less boring and stressful. It is important to vary the learning methods so that the activity does not become boring and monotonous (GE). It is important to create milestones during the learning process (FR). Motivation comes about as a consequence of the discovery that one learns along the way (FR). The use of movies and music prior to a learning activity in order to create motivation to learn (FR). Positive previous learning experiences make the learning process easier (SP).
Px[2]	It is a useful habit to engage in an enjoyable activity upon completion of a language learning task. In this way, one has something positive to look forward to (GE). The use of movies and music may be used after the language learning activity as a reward (FR).
Px[3]	It is important to vary the learning methods so that the activity does not become boring and monotonous (GE). The use of movies and music after the language learning activity can be used as a reward (FR).
Px[4]	The active use of movies, music, books and texts may lead to enhanced skills (SP).

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The first production, P1, represents a fundamental attitude in the learner in terms of being aware of the responsibility to develop an autonomous attitude towards the language learning process which initiates learning. P1 thus represents the affective part of the learning process. The metacognitive process of understanding the purpose of the activity, which facilitates the implementation of the learning process, is represented in P2. Px^1 illustrates that motivation can be the result of the cumulative effect of positive learning experiences, something which again will make the learning process easier. However, there is a part missing in the material between P2 and Px^1 in terms of the connection between the identification of a reason for the language learning process and the creation of positive learning experiences. The missing connection in terms of chains of production systems expressed in $P[…]^A$ belongs to the realm of defining what kind of learning experiences could be relevant as well as linking these pedagogical experiences to the reasons for the language learning process.

There is a likelihood that the positive learning experiences expressed in Px^1 are ones that are not boring and stressful, thus necessitating the creation of affective incentives during the process. In order to create efficient affective incentives, using methods to reward oneself upon completion of a learning activity is a method expressed in Px^2. When learning experiences have been gathered during the learning process, and motivation has been built up as a consequence of P1-Px^2, there may be a need to keep up this motivation in order to avoid monotony. However, $P[…]^B$ expresses another missing chain in terms of creating a repertoire of language learning activities, which forms the foundation of the experience needed for the accumulation of the feeling of monotony or variety in the learning process expressed in Px^3. When this realisation is in place, the next step is to apply relevant methods to vary the working methods by using games, movies, music and different kinds of texts such as expressed in Px^4.

This emergent production system represents a continuous time frame. From a temporal point of view, the development of metacognitive skills pertaining to creating motivation starts with taking an active initiative in order to develop an interest moving further down the production system in Table 17. This process will necessarily develop along a sliding scale of gradual motivational steps to

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take in order to develop this skill. In addition, time is continuous within each and every production in the sense that there is a temporal relationship between the elements of the IF clause and the THEN clause. In P1 the wish to develop skills in the language will precede the active effort to take an autonomous initiative in the language learning process. In P2, the wish to develop an interest in the language learning process will constitute the background for the identification of a reason in the learning process. The same principle applies to the other productions as well.

However, there is a certain difficulty related to the temporal relationship between the IF clause and the THEN clause in P1, Px^1, Px^2 and Px^4 in the sense that the activity to be undertaken in the THEN clause will have to be repeated for the activity to develop extensively. In P1, taking an active initiative in order to develop an interest requires a time loop in the sense that the act of taking the initiative implies a series of actions, such as making inquiries about language learning, acquiring books about language learning, asking competent people for help and seeking practice opportunities which can stimulate the interest towards learning the language. This means that the development of the skill expressed in the THEN clause will have to be repeated in different forms in a time loop, although there is a direct temporal relationship between the IF clause and the THEN clause as previously stated. The same temporal problem applies to the actions described in the THEN clause in Px^1, Px^2 and Px^4 as well. The cognitive challenge this problem constitutes makes the processing of these aspects of the production system rather difficult, thus breaching the cognitive principle of relevance in terms of processing effort of the input.

At the time of application of the different productions (*t*), there is a set of underlying semantic structures of each declarative unit in addition to the nonnegative level of activation (*a*) of each element (*i*). Examples of these negative levels of activation are the deeper semantic layers pertaining to concepts such as *skills*, *reason*, *positive learning experiences*, *affective incentives*, *monotony*, and *interesting aspects of the language*. These semantic levels of activation at the time of application (*t*) imply semantic structures related to the declarative concepts of speaking/listening/writing/reading skills as well as semantic levels related to phonological systems and lexical structures in the language. Negative levels of activation related to the node *reason* implies

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linguistic representation of insight and awareness in terms of professional development and emotional issues of personal satisfaction as a consequence of learning the language. Concepts taken from personality psychology would cover the negative levels of activation related to this node.

In the case of the node *positive learning experiences* the activation field includes the whole array of incentives created along the way, such as the use of songs and the identification of purposeful language tasks. The semantic structure of this activation field is therefore rather complex and requires an extensive additional set of production systems in order to be adequately elaborate[100]. The same difficulty applies to the node *affective incentives*, which includes a vast activation field pertaining to insight into the different affective learning strategies and an ability to apply relevant production systems related to these strategies. The node *monotony* is a personal matter in the sense that different contexts would produce different emotions in different persons. In this way, the activation field pertaining to this concept requires extensive teaching in the use of the whole spectrum of affective learning strategies in order to assure the acquisition of the declarative concepts necessary to close the gap between declarative and procedural knowledge. The procedural meaning of these declarative concepts within the activation field of each node will have to be made explicit to the learners, thus creating separate production systems for different procedures, such as the identification of reasons for the language learning process and the identification of the nature of positive learning experiences.

This weak accumulation of activation through the system will possibly have consequences for other nodes in terms of the vagueness of the concept *skills* influencing the kind of initiative which has to be taken. The interest required will again determine the reasons which may be identified for the learning process, and these reasons will influence the kind of positive learning experiences the learners are able to create along the way. This principle applies to all the nodes; the potential for accumulation or decay of activation of the

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[100] Production systems are dynamic and can be combined with several other production systems such as described in Section 2.3.

node *positive learning experiences* will also be dependent on the nature of the negative levels of the underlying semantic network pertaining to the different kinds of learning experiences available to the learner at the time of applying the production (*t*). The activation or decay of this node will again influence the perceived outcome of these learning experiences and the way activation flows through the metacognitive system to the interest gathered and the initiatives taken for further learning.

The frequency of use of a cognitive unit (*i*) is related to the strength of each node in declarative memory. This means that the more the cognitive units are rehearsed, the stronger the node of each unit becomes. The overall strength profile of the system is dependent on the cognitive strength of each particular node. Nevertheless, the negative activation fields pertaining to these conceptual nodes are of such a complex nature that a thorough proceduralisation of the complete production systems seems difficult due to a breach of the cognitive principle of relevance, which states that the processing effort of a given input should be as efficient as possible. With such a vast array of negative levels of activation, the processing effort required to implement the production system in its present form seems to be a considerable challenge because of the semantic depths of the declarative part of the productions as established in Table 17. The relative strength between the nodes *i* and *j*, $r_{ij} = s_j / \sum_k s_k$, is therefore rather weak from a cognitive point of view[101] since the combination of all the activation fields creates too complex a pattern for a clear declarative combination of the cognitive units of the production system. The proceduralisation of these declarative units will therefore require extensive teaching in various fields of learning. Production tuning[102], whereby new productions may enter the system for increased strength, seems less likely because of the reduced potential for purposeful spread of activation.

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[101] This formula was explained in Section 2.3.4.
[102] Production tuning is explored in further detail in Section 2.3.5.

4.3.2 Seeking practice opportunities

The purposeful seeking of practice opportunities is important for the transformation of declarative knowledge into procedural knowledge, and thereby linguistic competence, as outlined in Section 2.4.2. The learners ought to be provided with relevant learning activities in the classroom setting (Kumaravadivelu, 2006: 152), but also with the proper skills aimed at taking the initiative for exploring the language on their own. The socialisation process has been defined as particularly important within the frame of practice opportunities in the language learning process (Kasper & Rose, 2002: 42), during which the language plays a vital role (Mackey, 2007: 145). The opportunities for feedback are especially important (Ellis, 2008: 205; Gass & Selinker, 2008: 330; Kumaravadivelu, 2006: 25; Mackey, 2007: 229; Saville-Troike, 2006: 176). The benefits emerging from interaction have thus been established for the process of second language acquisition (Ellis, 2008: 268; Saville-Troike, 2006: 176). An important feature of the skills related to seeking practice opportunities implies being able to plan and assess the learning situations for the development of metacognitive knowledge.

Table 19 illustrates the transformation of learner beliefs pertaining to seeking practice opportunities expressed in Tables 14, 15 and 16 into a schematic structure which provides an indication of the declarative nature of the knowledge which has been brought about during the interactional process in terms of seeking practice opportunities in the learning process, as expressed through an overt linguistic structure in the form of the IF … THEN… clauses of production systems.

Table 19: A production system for seeking practice opportunities

P1	IF the goal is to learn the language THEN create regular exposure to the language
P2	IF the goal is to create regular exposure to the language THEN make an individual effort
P3	IF the goal is to make an individual effort THEN overcome initial fears which may be an obstacle to learning
P[…][A]	

Px^{1i}	IF the goal is to create regular exposure to the language THEN travel to the country where the language is spoken
$Px^{2i} [\ldots]^A$	
Px^{1ii}	IF the goal is to create regular exposure to the language THEN make an active use of books, movies, music, TV and the Internet
$Px^{2ii} [\ldots]^A$	

The productions which have been categorised in Table 19 reflect the collective cognitive structure of the beliefs about the learning process organised in Tables 14, 15 and 16 in Section 4.2 according to the category *Seeking practice opportunities*. In the following table these beliefs are related to the productions expressed in Table 19.

Table 20: Correspondence between learner beliefs and a production system for seeking practice opportunities

P1	It is important to go to places where the language is spoken (GE). It is important to go to a store where people have time to spend to talk about colours, patterns, size and price (GE). One may use TV, the school setting and find summaries on the Internet (GE). One may use Facebook and find French people online (FR). It is useful to talk French to foreign visitors (FR). Staying in the country where the language is spoken is important (FR). It is useful to watch TV (FR). Watching movies is a good way to learn (SP). Talking to fellow learners and teaching others is a good way of learning (SP). When buying clothes, it is possible to go to several stores to try clothes (SP). The learner must take the initiative in terms of reading Spanish books in order to be exposed to the language (SP).

	Words and phrases must be used on a regular basis in order to learn them properly (SP).
P2	An individual effort to seek practice opportunities is important (GE).
	It is important to travel to the country where the language is spoken (GE).
	Regular effort is important (FR).
	It is important to stay in the country where the language is spoken as well as using books, movies and music on an active basis (SP).
P3	Productive skills are important, so one has to overcome initial fears which may be an obstacle to learning (SP).
Px^{1i}	It is important to travel to the country where the language is spoken (GE).
	Traveling to French speaking countries is important in order to promote practice opportunities (FR).
	It is important to stay in the country where the language is spoken (SP).
Px^{1ii}	Practice opportunities may be TV, the school setting and the Internet (GE).
	There are certain practice opportunities in terms of watching German movies and trying to translate into Norwegian (GE).
	The active use of books, movies and music is important (FR).
	Watching movies and listening to music in order to get input from other places than the books is useful (FR).
	Learners should take the initiative to create learning opportunities by for instance using the French version of Facebook and Twitter (FR).
	Using books, movies and music on an active basis is important (SP).

An important feature of this production system is the different nature of the options available when seeking practice opportunities. One may engage in social talk with native speakers, or one may create practice opportunities which do not require social interaction, such as reading material on the Internet. The initial stage of the production systems leading up to the actual engagement in the activity is the decision to take the step and deal with initial obstacles, such as overcoming fear. At this point, the learner stands at a crossroads, since different paths will lead to different kinds of practice opportunities. This bifurcation of opportunities is illustrated in the chain of actions as Px^{1i} - Px^{2i} […]^{A} and Px^{1ii} - Px^{2ii} […]^{A} respectively. This system implies that the decision to travel to the country (^{i}) where the language is spoken will be followed by a

series of actions not represented in the beliefs produced by the implementation of the SBI programme (Px^{2i} [...]^A). This series of actions, involving the social and cognitive strategies of approaching people, and also the metacognitive strategy of evaluating one's performance for further action, will lead to a loop of actions not represented in the corresponding beliefs. In the production system only the first series of actions is represented as (^{A}). Theoretically speaking, there is a possibility of this series of actions repeating itself ad infinitum ($^{A, B,}$ $^{C ...}$). The same principle applies to the practice opportunities involving the use of books, movies, music, TV and the Internet (Px^{1ii} - Px^{2ii} [...]^A).

Nevertheless, the first step in the process of creating a chain of actions for the purpose of creating practice opportunities is expressed in P1 in terms of actually making the decision to engage in a quest for regular exposure to the language. This initial awareness-raising will necessarily lead to some kind of understanding that an individual effort is required in order to take that step in the learning process. The affective nature of this decision is markedly present in this initial stage of the production systems (P1-P2) for creating practice opportunities. The initial fears expressed in P3 are more likely to occur when engaging in practice opportunities which require social interaction (Px^{1i} - Px^{2i} [...]^A), but may also be an obstacle to other kinds of practice opportunities if the learner feels hampered by the fact that he/she faces a difficult website, thus having to use some kind of cognitive strategy to approach the text and thereby overcome this initial fear (P3).

P[...]^A expresses the unidentified chain of actions along which the learners acquire the necessary linguistic skills aimed at either seeking practice opportunities in the country where the language is spoken (^{i}) or practice opportunities which are more accessible to the average learner, i.e. using different kinds of media (^{ii}). In this way, the implementation of the SBI programme yields relatively scarce information in terms of the establishment of a thorough production system for engaging in a chain of actions which lead to the emergence of skills in creating practice opportunities. Travelling to the country where the language is spoken requires additional resources, such as financial means and the time to actually spend some time in the adequate linguistic environment, whereas the use of media is less costly and is possible to actually engage in on a daily basis. Only the initial set of actions expressed

in P1-P3 is present, mostly dealing with the initial affective challenges of taking the decision to make an effort and overcoming the initial hindrances posed by lack of experience with the language.

Time is continuous, since the skills required for the development of metacognitive knowledge for seeking practice opportunities develop along a sliding scale from the creation of regular exposure to the language to the active use of learning material in order to reach that goal. There are possibilities of crossing production systems related to the internal cognitive units, such as the characteristics of regular exposure, the affective process leading up to making an individual effort and identification of the reason for the fear hampering the learning process. The characteristics of these cognitive units will also influence the activation pattern of these nodes. At the time of applying the production, the learner will have to make a pragmatic choice in terms of understanding the meaning patterns, and thus the spread of activation, of concepts such as *regular* and *effort*. *Regularity* is a fairly relative concept in terms of frequency and duration of a given activity. *Effort* implies different kinds of personal determination and activity.

In terms of the relative strength between the nodes, $r_{ij} = s_j / \sum_k s_k$, there are some objections to the overall strength of the system because of the rather extensive range of possible meanings attached to the central nodes of the system. For efficient proceduralisation to ensue, the nodes must be used frequently in order to increase their strength. The question then arises to what extent it is possible to practise extensively declarative knowledge pertaining to regular exposure to the language and the nature of making individual efforts.

In practical terms, this means that the central node *regular exposure to the language* is a vague concept which could influence the flow through the system. The development of a steady maintenance of activation in the network therefore seems less likely, and the practice of these structures will be less feasible. In terms of there being several productions leading to the same goal, which is to influence the learners' behaviour, there are several conceivable ways which are not present in the material. The vagueness of the central nodes of the system in its present form is also an obstacle to purposeful production tuning, whereby

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new productions can develop on the basis of the present structure of this production system.

4.3.3 Acquisition of grammar

In Section 2.4.3, functional cognitive systems for the acquisition of declarative and procedural knowledge in the fields of syntax, morphology, semantics and pragmatics were defined as important for the learning process. Transfer issues and learner knowledge about how the target language differs from the L1 have also been defined as core knowledge in the field of the acquisition of grammar, in addition to knowledge about the complexity of the grammatical system and its influence on language acquisition (Larsen-Freeman & Cameron, 2008; Saville-Troike, 2006: 32). The emergent production system in the field of the acquisition of grammar indicates some viable structures for actions to undertake in order to acquire grammatical insight into the language, but these structures are mostly specific to the three language in question, and provide less information in terms of overall patterns for the metacognitive approach to the acquisition of grammar in the L2.

Table 21 illustrates the transformation of the learner beliefs pertaining to the acquisition of grammar expressed in Tables 14, 15 and 16 into a schematic structure. This provides an indication of the declarative nature of the awareness which has been brought about during the interactional process in terms of the acquisition of grammar in the learning process as expressed through an overt linguistic structure in the form of the IF … THEN… clauses of production systems.

Table 21: A production system for the acquisition of grammar

P[…]	
Px^{1i}	IF the goal is to learn the conjugation of adjectives THEN record adjective endings before going to bed and listen to them
Px^{2i} […]^A	
Px^{1ii} […]^A	

Px^{2ii}	IF the goal is to identify the right pronoun THEN use syntactic analysis
$Px^{3ii}[\ldots]^B$	
Px^{1iii}	IF the goal is to identify the regularity or the irregularity of a verb THEN check the word in a dictionary.
$Px^{2iii}[\ldots]^A$	
Px^{3iii}	IF the goal is to determine the ending of a verb THEN use my declarative knowledge.
Px^{4iii}	IF the goal is to learn the conjugation of a verb THEN study previous mistakes

The productions which have been categorised in Table 21 reflect the collective cognitive structure of the beliefs about the learning process organised in Tables 14, 15 and 16 in Section 4.2 according to the category *The acquisition of grammar*. In the following table these beliefs are related to the productions expressed in Table 21.

Table 22: Correspondence between learner beliefs and a production system for the acquisition of grammar

Px^{1i}	It is possible to record adjective endings before going to bed and then listen to them (GE).
Px^{2ii}	One has to analyse the sentences in order to find the right pronoun (GE).
Px^{1iii}	One may check the word in a dictionary if one is unsure whether a verb is regular or irregular (GE).
Px^{3iii}	One's declarative knowledge helps determine the ending of the verb (GE). It is important to have some declarative knowledge, for instance about verb conjugation paradigms. These patterns may be used by recalling what the patterns contain (SP).
Px^{4iii}	Mistakes in a test can be used as a source of learning the verb conjugations which can be a problem. When discovering a rule one has to focus on the rule as well as monitoring the nature of the mistakes from one situation to the other. The discovery of systems of mistakes is especially important for correct implementation next time (SP).

In terms of the acquisition of grammar, three parallel systems emerge from the data: one system reflecting production systems related to the acquisition of adjectives, one system reflecting production systems related to the acquisition

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of pronouns, and one system reflecting production systems related to the acquisition of verbs. This matrix of an emergent production system for the acquisition of grammar is therefore divided into three separate parts which illustrate how different parts of grammatical knowledge follow an initial phase of identifying the needs to be explored. These three areas are labeled [i]-[iii].

There is no emergence of productions that represent the initial phase of the process of acquisition of grammar, corresponding to the set of productions P[…]. These productions would correspond to the identification of the needs for acquiring certain aspects of the grammatical features of the language, and also approaching the language learning process in such a way that the areas which require further insight are explored. Such areas include syntactical analysis for the acquisition of German grammar and, to a certain extent, the acquisition of French and Spanish, as well as a paradigmatic understanding of the conjugation of nouns, verbs and adjectives. The three aspects of the acquisition of grammar which emerge from the material do not reflect any comprehensive model for a metacognitive system, but some meaningful patterns may be established. There is a potential for interrelated production systems connected to concepts such as the conjugation of adjectives, syntactic analysis, regular and irregular verbs. Conjugation of adjectives implies being able to differentiate gender differences and adjectives in the case system in German. When determining the ending of a verb using one's declarative knowledge, a degree of understanding in terms of suffixes is required. This knowledge also requires a separate production system in order to be fulfilled.

In the following, an attempt has been made to clarify the meaningful structure of the emergent production system in a way which includes all the three aspects of the acquisition of grammar outlined in the above.

In the first set of productions (Px^{1i} - Px^{2i} $[…]^A$), an important reading strategy is expressed in terms of identifying nominal structures in an unknown text as a reading strategy prior to the actual reading of the text. In Px^{1i} the nominal structures are mentioned as the combination of words and adjectives, which would necessarily imply nouns with their adjacent adjective phrases. The next step in this process of understanding the nominal phrases in the text is expressed in Px^{2i} $[…]^A$ as the range of productions which imply the steps to be taken for

using transfer strategies for the determination of unknown words. In addition, cognitive strategies for the learning of the adjectives are also relevant. However, no particular information emerge from the data in this respect.

The second set of productions pertains to the acquisition of the use of pronouns. In Px^{2ii} the need for identifying the syntactical value of the pronoun is expressed, something which is necessary in all the three languages, although the German case system requires more attention on this aspect than Spanish and French. The actual use of the right pronoun, and how to identify the right form in a paradigm, pertains to the production systems in $Px^{3ii}[…]^B$, although these possible productions do not emerge from the data.

The third set of productions pertaining to the acquisition of grammar includes issues related to the conjugation of verbs (Px^{1iii}- $Px^{2iii}[…]^A$ - Px^{3iii}). The first issue arising is whether the verb is regular or irregular and that this knowledge can be found in a dictionary. In $Px^{2iii}[…]^A$ possible productions for how to understand the symbolism used in the dictionaries are found, as well as how to identify the correct conjugation of the paradigms contained in the dictionary. The skill relating to the actual identification of the right ending is dependent on the declarative knowledge the learner has in terms of person and singularity versus plurality of the verbal conjugation system. This action is expressed in Px^{3iii}. The last production expressed in Px^{4iii} expresses that the learner has to use the acquired knowledge in order to repeat the actions for deeper insight and skills.

Time is continuous in the sense that a decision is taken in P […] to make a commitment towards learning grammar. In Px^{i-iii} this commitment translates into the goal of constructing one's linguistic knowledge, and this process does not proceed in discrete intervals. Time is also continuous in terms of the temporal relationship between the IF clause and the THEN clause. Central nodes of this system are *conjugation*, *adjectives*, *pronoun*, *syntactic analysis*, *regularity*, *irregularity*, *verb* and *ending of verb*. In the nodes, there are several layers of negative levels of activation of the cognitive unit of the THEN clause. There is little evidence of a specific relationship between the nodes, (r_{ij}), in the linguistic representation of the cognitive units in the system. Nevertheless, there seems to be some potential for the procedural rehearsal of these nodes in the

system, thus increasing the relative strength between the nodes, $r_{ij} = s_j / \sum_k {}^s k,$ exploring the nonnegative levels of meaning pertaining to *conjugation*, *adjectives*, *pronoun*, *syntactic analysis*, *regularity*, *irregularity*, *verb* and *ending of verb*. The different kinds of conjugation systems related to adjectives, pronouns and verbs can be rehearsed in combination with specific exercises related to these nonnegative levels of meaning.

4.3.4 Acquisition of pronunciation

In Section 2.4.4, the difficulty of developing a near-native phonological perfection was addressed (Ellis, 2008: 103), as well as the fact that the influence of the learners' L1 tends to be strong throughout the learning process and afterwards. Metacognitive knowledge about how the phonological system of the mother tongue affects the phonological system of the target language is important. The learner has to consciously seek practice opportunities for the practice of phonological skills and rehearse the phonological structures on a regular basis. Emotional blocks have to be overcome in order to create these necessary practice opportunities for the development of good phonological skills. Learner effort is therefore closely related to this emotional part of the language learning process (Usó-Juan & Ruiz-Madrid, 2008: 140-163).

Table 23 illustrates the transformation of the learner beliefs pertaining to the acquisition of pronunciation expressed in Tables 14, 15 and 16 into a schematic structure. This provides an indication of the declarative nature of the awareness which has been brought about during the interactional process in terms of the acquisition of pronunciation in the learning process as expressed through an overt linguistic structure in the form of the IF … THEN… clauses of production systems.

Table 23: A production system for the acquisition of pronunciation

P[…]^A	
Px^{1i}	IF the goal is to acquire good pronunciation THEN write down examples of oral practice
Px^{2i}	IF the goal is to improve pronunciation THEN use Internet games

Px^{2i} […]^A	
Px^{3i}	`IF the goal is to improve pronunciation` `THEN listen to texts on CDs`

Px^{4i}	`IF the goal is to improve pronunciation`
	`THEN use corrective feedback in order to learn`
	`from mistakes`

$Px^{1[i, ii, iii, iv …]}$ […]^A	
Px^2	

The productions which have been categorised in Table 23 reflect the collective cognitive structure of the beliefs about the learning process organised in Tables 14, 15 and 16 in Section 4.2 according to the category *The acquisition of pronunciation*. In the following table these beliefs are related to the productions expressed in Table 23.

Table 24: Correspondence between learner beliefs and a production system for the acquisition of pronunciation

Px^{1i}	It is useful to write down examples of oral practice (FR).
Px^{2i}	It is possible to play Internet games in order to improve pronunciation (GE).
Px^{3i}	One should listen to texts on CDs (GE).
Px^{4i}	It helps to talk for oneself, for instance in smaller groups because then more people feel confident. It is a good thing to talk and then be corrected, then it is easier to remember. Then one discovers basic mistakes which are committed in the pronunciation (FR).

The acquisition of pronunciation will be largely dependent on the characteristics of the L1 of the learners. There are also many different ways of rehearsing and practising pronunciation. Seeking practice opportunities will logically be related to the production systems for seeking practice opportunities. In this matrix, it is relevant to create several paths for the productions which in the end lead to the proceduralisation of strategies pertaining to the acquisition of pronunciation skills. In P[…]^A there is a potential for an unidentified set of productions pertaining to the identification

of skills necessary to pronounce sounds relevant for the language the learners are taking. In addition, a set of productions pertaining to the acquisition of skills related to the transformation of phonological structures into phonetic knowledge is relevant in P[…][A]. Once these needs have been identified, the next step is to implement the necessary procedures in order to seek sources which provide the learners with practice opportunities. In this way, this part of the production system is closely related to the matrix pertaining to practice opportunities. One production of this kind is found in Px^{1i}. In Px^{2i} […][A] further steps to be taken after the use of Internet games in order to identify difficulties or analysing clusters of phonological features are relevant. However, using Internet games is not the only way of practising skills related to pronunciation. Therefore, in $Px^{1[i, ii, iii, iv ...]}$ […][A] a subset of loops of productions illustrated as [i, ii, iii, iv ...] represents the different possible ways of approaching the task of improving one's pronunciation skills. These loops are of an infinite nature; it is at least virtually impossible to identify exhaustively all the different loops which these productions can take. In Px^2 each end of the loops illustrated in $Px^{1[i, ii, iii, iv ...]}$ […][A] will necessarily have to be repeated for the knowledge and skills to be sufficiently practised.

This production system is continuous in the sense that the productions have to develop from the initial initiative to engage in the task of improving one's pronunciation in P[…][A]. In the material, there are few instances of declarative units that could yield more information in terms of their strength profile. Nevertheless, there are traces of potential for crossing production systems. In Px^{1i} improvement of pronunciation is expressed. There is a potential for developing productions in relation to methods for improving pronunciation depending on the nature of the language the learner is taking. These are not made explicit in the data material.

4.3.5 Acquisition of vocabulary

Learner awareness in terms of transfer issues and the similarities and differences between words in different languages is important. Important fields of knowledge include semantic insight, transparent words and reading strategies for the acquisition of new words since vocabulary learning is the most important part of the language learning process (Saville-Troike, 2006: 138). As

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stated in 2.4.5, learners should develop a comprehensive metacognitive system for the acquisition of vocabulary, which integrates this cognitive complexity.

Table 25 illustrates the transformation of the learner beliefs pertaining to the acquisition of vocabulary expressed in Tables 14, 15 and 16 into a schematic structure. This provides an indication of the declarative nature of the awareness which has been brought about during the interactional process in terms of the acquisition of vocabulary in the learning process as expressed through an overt linguistic structure in the form of the IF … THEN… clauses of production systems.

Table 25: A production system for the acquisition of vocabulary

P1	IF the goal is to learn the language THEN explore previous linguistic knowledge which may provide a source of positive transfer for vocabulary acquisition.
P2	IF the goal is to learn new words THEN divide the words into units.
P3	IF the goal is to learn new words THEN try to associate parts of the words with different things in order to remember them better.
$Px^{1i}[…]^A$	
Px^{1ii}	IF the goal is to learn new words THEN focus on the most important aspects of texts and not word by word.
$Px^{1iii}[…]^B$	
Px^{2i}	IF the goal is to learn new words THEN find words and expressions on the computer.
$Px^{2ii}[…]^C$	
Px^{3i}	IF the goal is to learn new words THEN listen in on conversations.
$Px^{3ii}[…]^D$	
$Px^{4i}[…]^E$	
Px^{4ii}	IF the goal is to learn new words THEN say things spontaneously based on the vocabulary one has.
$Px^{4iii}[…]^F$	
Px^{5i}	IF the goal is to learn new words

	THEN watch movies in order to identify known words.
$Px^{5ii}[\dots]^G$	
Px^{5iii}	If the goal is to learn new words THEN use books and the Internet/Youtube/CDs.
$Px^{5iv}[\dots]^H$	
Px^{6i}	IF the goal is to learn words fast THEN use fill-in-the-blanks.
$Px^{6ii}[\dots]^I$	
$Px^{7i}[\dots]^J$	
Px^{7ii}	IF the goal is to learn new words THEN read newspapers, books and different kinds of texts.
$Px^{7iii}[\dots]^K$	
Px^{8i}	IF the goal is to expand one's vocabulary THEN look up new words seen in the news or the media.
Px^{9i}	IF the goal is to learn basic words THEN use a dictionary.
Px^{9ii}	IF the goal is to learn new words THEN read texts and look up in a dictionary the words one does not know.
Px^{9iii}	IF the goal is to learn new words THEN write down the words which are unfamiliar.
Px^{10}	IF the goal is to learn vocabulary THEN engage in rote learning.

The productions which have been categorised in Table 25 reflect the collective cognitive structure of the beliefs about the learning process organised in Tables 14, 15 and 16 in Section 4.2 according to the category *The acquisition of vocabulary*. In the following table these beliefs are related to the productions expressed in Table 25.

Table 26: Correspondence between learner beliefs and a production system for the acquisition of vocabulary

P1	There are many words in German which are similar to Norwegian words, such as *Tante* and *Onkel*. This makes it possible to make a guess in terms of the meaning of words (GE).

	Making a guess in terms of the meaning of the words is relevant both for reading and writing (GE).
P2	It is useful to divide the words into units or try to associate parts of the words with different things in order to remember them better (SP).
P3	It is useful to divide the words into units or try to associate parts of the words with different things in order to remember them better (SP).
Px^{1ii}	It is possible to find words and expressions on the computer and listen to conversations. Words and expressions are not learned word by word, but by focusing on the most important aspects (SP).
Px^{2i}	Words may be learned as a consequence of using books and the Internet/Youtube (FR). It is possible to find words and expressions on the computer and listen to conversations. Words and expressions are not learned word by word, but by focusing on the most important aspects (SP).
Px^{3i}	It is possible to listen in on conversations in order to learn new words and expressions (GE).
Px^{4ii}	Too much rote learning of words should be avoided making practice and repetition important (FR). Things can be said spontaneously based on the basic vocabulary one may have (SP).
Px^{5i}	When watching movies one may identify the words one understands and relate this knowledge to the content in the movie. Vocabulary tests may be used in order to learn new words (GE).
Px^{5iii}	One should listen to texts on CDs (GE). Words may be learned as a consequence of using books and the Internet/Youtube (FR).
Px^{6i}	Fill-in-the blanks is an efficient method of learning words in a fairly fast way (FR).
Px^{7ii}	Reading newspapers, books and different kinds of texts. Conscious writing using the same word over and over again (FR).
Px^{8i}	New and advanced words are acquired from the news or the media. If one reads a new word in television and sees a new word, then one may look it up and learn what it means if one wonders about something and wants to expand one's vocabulary (FR).
Px^{9i}	A dictionary may be used in order to look up basic words (GE).
Px^{9ii}	One should look up unknown words in a dictionary after a language learning activity (GE).
Px^{9iii}	It is important to be aware of the words one does not know prior to a practice opportunity, write these words down and look them up at home after the language learning activity (GE). It is useful to write down unfamiliar words (FR). Read texts and look up the words one does not know. When writing a text try to use unknown words (FR).
Px^{10}	Rote learning is a good way of learning vocabulary (FR).

Table 25 presents a structure similar to Table 23 since there are several ways to approach the process of acquiring vocabulary in a given language. The metacognitive value related to P1-P3 forms the background to the specifics expressed in the remainder of the production system for the acquisition of vocabulary. In P1 the focus is on the development of the capacity to explore features of linguistic transfer which can be used to create a cognitive background to the further process of developing practices for the development of a solid vocabulary in the foreign language. The identification of lexical knowledge required for the successful deployment of further language learning strategies leads up to the identification of unknown words whatever the context they are found in. The productions $Px^{1i}[\ldots]^A - Px^{9i}$ express different contexts in which the proceduralisation of the skills may be rehearsed. Prior to the specific steps that need to be undertaken in these specific contexts, the task is to attach some kind of cognitive meaning to the nature and structure of these words such as described in P3.

The next steps in the proceduralisation of skills pertaining to the acquisition of vocabulary are expressed in Px^1-Px^9. These steps are represented in the material in different ways. These different methods require different series of productions in order to form a complete production system representing the particularities of each and every vocabulary learning method. However, they will all depend on the nature of the productions expressed in P1-P3, i.e. the skills related to the preparations of activities leading up to the actual acquisition of vocabulary as a consequence of the rehearsal of particular vocabulary learning strategies such as the ones expressed in Px^1-Px^9.

The first loop of productions following the initial vocabulary learning procedures expressed in the material is the cognitive strategy of focusing on certain parts of a text in order to identify the gist of the text without getting stuck in the particularities of specific unknown words. In $Px^{1i}[\ldots]^A$ there is a lack of series of productions pertaining to the identification of the thematic structure of the text needed for the purposeful proceduralisation of the cognitive strategy of learning new words based on an overall approach to the text, such as expressed in Px^{1ii}. Upon completion of the identification of the thematic

structure of the text at hand and the determined focus on certain aspects of the text for the purposeful acquisition of words, there is a lack of series of productions in the data material pertaining to the processing of the new words, as well as the strategies related to the further elaboration of the text for an ever-widening circle of the cognitive processing of the text at hand. This series of productions related to the processing of new words is expressed in $Px^{1iii}[…]^B$.

Word acquisition may also take place as a consequence of the conscious use of digital materials. This series of productions is rather similar to the one expressed in $Px^{1i}[…]^A$ - $Px^{1iii}[…]^B$, since both series refer to the acquisition of vocabulary based on work with words in different kinds of texts. Nevertheless, in Px^{2i} the focus is on the use of digital sources, an approach which requires other strategies than the ones required for the reading of a specific text where the scope of the text is framed around a particular topic. The approach taken for the acquisition of words and expressions on the computer requires a different kind of cognitive system for the identification of and focus on relevant material. In Px^{2i} the first step in this process is described as the determination to actually engage in the use of computers in order to achieve this goal.

In $Px^{1i}[…]^A$ the initial phase of the use of texts for vocabulary learning purposes finds its natural place. A similar initial phase could also be imagined for the learning of vocabulary based on computerised sources, but in this production system the assumption has been made that it is possible to embark on such a task without an initial phase of preparation due to the open nature of the learner belief transformed into a production in Px^{2i}. However, also in this production, a series of productions following the computer search for words may be imagined for the purposeful processing of the activity expressed in $Px^{2ii}[…]^C$. In this case, the processing phase of the productions will include a series of actions not overtly expressed in the material, such as in $Px^{1iii}[…]^B$.

In the material there is also a trace of a series of productions related to the use of conversations as a method of acquiring new vocabulary. One could imagine an initial phase of identifying some kind of topic for rehearsal prior to the active listening to conversations, something which would require a separate series of productions similar to the previous discussion related to Px^{2i}. However, a learner who finds him/herself in a situation where this language learning

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activity is likely to occur would most probably not be able to influence actively the course of the conversation. Therefore, the series of productions related to the active use of conversations for the acquisition of vocabulary is expressed as a series of productions starting with the exposure to the conversations in Px^{3i} and continuing with the processing of the skills acquired in $Px^{3ii}[…]^D$. Based on the material, it is not possible to determine a specific set of productions pertaining to the processing of the knowledge acquired through listening to conversations. It is therefore possible to imagine a non quantifiable set of productions reflecting the analysis of transfer issues related to this uptake of new words as well as the proceduralisation of the skills related to the use of these words in new settings.

In the set of productions expressed in $Px^{4i}[…]^E$ - Px^{4ii} - $Px^{4iii}[…]^F$ the focus is on using the vocabulary one already possesses in order to use the language from an oral point of view in conversations. In $Px^{4i}[…]^E$ the preparatory work related to the identification of the already existing vocabulary is located and in $Px^{4iii}[…]^F$ a set of productions pertaining to the processing of the words used in Px^{4ii} is imaginable.

Px^{5i} - $Px^{5iv}[…]^H$ the use of movies and music as a relevant tool for word acquisition is expressed. As a consequence of this production, one could also imagine a set of productions pertaining to the identification of words in the movie such as expressed in $Px^{5ii}[…]^G$. However, this set of identification strategies is not represented in the material. The next step pertains to relating new words in a movie to the semantic content of the same, a step which requires a further chain of actions in terms of identifying pieces of information to be combined with the words which the learner has attempted to acquire. This chain of actions is expressed in $Px^{5iv}[…]^H$.

There is also a loop in terms of the use of fill-in-the blanks for the acquisition of new words expressed in Px^{6i} - $Px^{6ii}[…]^I$. The use of fill-in-the-blanks requires some familiarisation of the words to be filled in and the context of which they are a part. These aspects of fill-in-the-blanks exercises is not represented in the material.

In $Px^{7i}[…]^J$ – $Px^{7iii}[…]^K$ the acquisition of vocabulary is related to the reading of newspapers, books and other kinds of texts. This learning activity requires

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some preparatory activity expressed in $Px^{7i}[…]^J$. The actual reading of the texts with a particular focus on certain words and expressions as well as a certain kind of topics and the processing of the knowledge is expressed in $Px^{7iii}[…]^K$.

In Px^{8i} - Px^{10} the focus is on word processing activities upon completion of the vocabulary learning activities expressed in $Px^{1ii} – Px^{7iii}[…]^K$. The words which have been discovered as a consequence of the different activities undertaken in the previous productions will have to be processed in some way, and this activity is expressed in Px^{8i}- Px^{9iii}. This process ends up in rote learning of the words in Px^{10}.

Time is continuous in the sense that the initial phase of exploring previous knowledge and processing the words expressed in P1-P3 leads to the subsequent phases of engaging in specific language learning activities expressed in $Px^{1i}[…]^A$ - Px^{9iii}. The potential for exploring the spread of activation from source nodes is feasible. The learners will have to explore concepts such as *previous linguistic knowledge*, *positive transfer*, *units*, *words*, *expressions*, *vocabulary* and *dictionary* in order to assure a purposeful semantic network for spread of activation through the system. The possibility for rehearsal is not extensively present in the material, but the potential for rehearsing the activities expressed in the emergent production system seems feasible in the foreign language classroom. There are also extensive possibilities for production tuning in order to expand the production system into systems covering the use of media and situations of spontaneous interaction.

4.4 Sequential analysis of the pragmatic turn-taking system

The emergent production systems pertaining to the factual acquisition of grammar, pronunciation and vocabulary have thus indicated that practical rehearsal of declarative knowledge in this field seems more feasible than practical rehearsal of contextual metacognitive knowledge. This contextual metacognitive knowledge seems less substantial since the productions which have been established as a consequence of the collective beliefs in the three

classrooms involved are difficult to carry out in the foreign language classroom. In the following, excerpts from the pragmatic turn-taking system will be provided for a closer analysis of the learning opportunities which have been produced during the interactions. The first excerpts illustrate sequences of the three cases where contextual metacognitive knowledge is topicalised. Thereafter, excerpts taken from the three cases illustrate sequences where factual metacognitive knowledge is topicalised.

4.4.1 Contextual metacognitive knowledge

In the above, it has been claimed that is seems difficult to establish a purposeful context for the instruction of contextual metacognitive knowledge due to the lack of potential for proceduralisation. This means that the underlying meaning of the set of beliefs which have been produced during the interactions do not lend themselves easily to practical rehearsal in the classroom setting.

4.4.1.1   Creating motivation

The following sequence taken from the German case illustrates how aspects of metacognitive knowledge pertaining to motivation have been constructed in the German classroom[103]. This excerpt corresponds to the metacognitive learner belief expressed in Table 14 in Section 4.2 as the fact that as a learner, it is useful to engage in an enjoyable activity upon completion of a language learning task. In this way, one has something positive to look forward to. The same applies to listening to music parallel to a learning activity.

GE207. *Turn 208.*

B says perhaps.

GE208. *Turn 207.*

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[103] These interactional sequences have been taken from the corresponding turn-taking systems in Appendix 2A. These turn-taking systems have been based on the principle of backwards induction, so **GE207.** *Turn 208* is the last turn of the sequence and **GE216.** *Turn 199.* the first one.

A wonders if calm Mozart or Beethoven could have been OK.

GE209. *Turn 206.*

B states that it would have been very much at the same time.

GE210. *Turn 205.*

A asks if one should read that book in German, if a CD with German text would have got B on the right track, or if it would have been distracting.

GE211. *Turn 204.*

B states that in terms of music, the music has to be instrumental. B states that if B has texts when trying to read something, B will easily listen to the text instead of starting to read. B states that B would listen to what they are singing.

GE212. *Turn 203.*

A states that both initial training, and training afterwards, have been mentioned.

GE213. *Turn 202.*

B states that when working with maths, B tends to listen to music because that helps. B states that when reading or getting deeper into something, music does not work. B states that it is easy to turn on the music and have it on, but then it is not much of a help. B feels that it helps in maths. B states that if B is going to work a long time with homework, it helps to run first. B feels that B thinks more clearly if B has trained first.

GE214. *Turn 201.*

A asks if listening to music is of any help or if B just sits there after a while simply listening to the music and forgetting what the activity was all about.

GE215. *Turn 200.*

B states that B tends to do something which B enjoys doing after having worked a good deal. B refers to football training, watching TV, or something like that. B states that B then somehow feels that B has a source of motivation. B states that when working with homework, B knows that B does not have to work only with the homework. B states that there is something nice to look forward to. B states that B does not use that many affective learning strategies except listening to music. B does not know if that is relevant.

GE216. *Turn 199.*

A asks about the affective learning strategies. A asks about B's preferred affective strategy.

From an awareness-raising point of view, the topics used to illustrate how motivation can be brought about can be expressed in plain language, such as the use of Mozart or Beethoven as an affective strategy for the creation of a good learning environment expressed in **GE208.** *Turn 207*. The learners also state in **GE211.** *Turn 204.* that instrumental music can be a beneficial incentive for the language learning process, since using music with lyrics could distract the learner in the learning process. In **GE213.** *Turn 202.*, the use of music is expressed as useful during learning activities in the case of maths. Physical activity is mentioned as beneficial prior to a learning activity. Enjoyable activities as a reward after a learning activity are expressed in **GE215.** *Turn 200*. In these turns, the learners express specific activities which can be used as affective learning strategies on an individual basis. In the belief expressed in Table 14 in terms of engaging in an enjoyable activity, the core meaning of these learning strategies has been transformed into a piece of metacognitive declarative knowledge which the collective learning community has produced during the course of this particular interactional sequence. The learners express particular views on how they can identify personal incentives aimed at the development of their motivational skills. However, the assumption harboured within this research is that purposeful metacognitive knowledge is not achieved until specific pieces of metacognitive knowledge form part of a larger whole, as reflected in an underlying coherent cognitive system which can be produced declaratively and which thereafter lends itself to the proceduralisation of this declarative knowledge.

In terms of the actual evolution of the conversation, the teacher's questions in **GE216.** *Turn 199.*, in terms of what kind of affective learning strategy the learners prefer, elicit a response on the part of the learners, such as playing football, watching TV and listening to music prior to, during and after the language learning activity. The concept of 'affective learning strategy' is thereby associated with specific activities that can be regarded as motivational factors in the language learning process. From the point of view of the cognitive principle of relevance, the learners in this case create relevance as a consequence of associating the questions asked by the teacher with activities that may lead them towards their desired goal. The statements thereby show

that the learners are at least linguistically aware of the necessary steps to take in order to achieve their goal.

On the other hand, having stated these issues in a sequence, as the excerpt above, is not enough for the proceduralisation of the skill to occur. According to the ACT* theory, a production related to an active initiative to create opportunities for an enjoyable learning activity upon completion of a language learning task requires that strong links are created between the central nodes of the cognitive system. This means that several cognitive units must be created in the long-term memory, and these cognitive units must form part of a logical hierarchy of cognitive units which form the background to the proceduralisation of the desired skill. The response of the learners in **GE207.** *Turn 208.*, where they say that Mozart or Beethoven could have been a way to listen to soothing music during the learning process, is an example of this problem. This response does not make any sense from the point of view of the ACT* theory if such a comment is not inserted in a larger sequence where the teacher actually rehearses the procedure of selecting the right kind of music. This reply of the learners relates to **GE211.** *Turn 204.*, **GE213.** *Turn 202.* and **GE215.** *Turn 200.*, where the learners suggest that music, and particularly instrumental music, can be used in order to create an adequate affective learning environment. The issue was raised by the teacher in **GE216.** *Turn 199.*, where the teacher asks about the learners' preferred affective strategy, and **GE214.** *Turn 201.*, where the teacher wonders whether music can be a help in the learning process or whether music is simply a distracting factor. In this way, the teacher builds on the learners' previous experience with task-related activities and prompts the learners to reflect on this particular situation and what can be done to improve the learning opportunities in this particular situation. The cognitive principle of relevance comes into play, since the learners' uptake of information depends on the associative networks between the central nodes of the system, such as *listen to music* and *Mozart* or *Beethoven* as relevant pieces of instrumental music. In Section 4.3.1, these aspects of the conversation pertaining to motivation have been categorised as "IF the goal is to create affective incentives during the process THEN make an active use of movies and music after a learning activity as a reward" in Px^2 (Table 17).

Productions lend themselves to production tuning, whereby productions can be discriminated or generalised. In the case of the above-mentioned production pertaining to the creation of incentives, the part of the clause which denotes the activity to be proceduralised, i.e. "THEN make an active use of movies and music after a learning activity as a reward", could be discriminated by the inclusion of productions pertaining to the selection of Mozart and Beethoven. Such a production would include the steps to be taken from knowing that music can be a help in the learning process to selecting the relevant kind of music as a consequence of the kind of music the learner actually enjoys listening to. In that way, there would be a stronger link between nodes, such as *listening to music* and the name of the music to be used. However, these links should be rehearsed in the classroom if the teacher's task is to provide the learners with this metacognitive knowledge.

The question then arises of how much time the teacher should spend on specific practice of this kind of productions with a view to strengthening the overall associative network of the production system. This would require a good deal of effort and time in the classroom context, and would not lend itself easily to measurement in terms of learning outcomes. If the development towards the ideal self of the learner is to occur, the ACT* theory does not provide the sole answer to what self-awareness of the language learner implies. However, the classroom interaction as such should produce a fertile ground for rehearsing the desired skills, although this would require a systematic construction of the conversation for the development of the skills to occur as a consequence of the cognitive principle of relevance. The way the interactional sequence above evolves does not reflect a targeted construction of knowledge which can be transformed into a coherent production system, and thereby a piece of structural awareness. This problem is a recurrent pattern in many of the interactional sequences which pertain to the contextual factor for the language learning process. In the following, additional instances of this recurrent pattern will be presented and discussed.

The following excerpt is taken from the French case, and corresponds to the belief expressed in Table 15 of the importance of creating milestones along the way, and that motivation arises out of the fact that one discovers that one learns along the way.

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FR85. *Turn 640.*

B states that B has to be very aware about how to learn. B needs a strategy and B has to be as efficient as possible. B also says that B has to work as fast as possible. It is motivating to see that B learns as B moves along.

FR86. *Turn 639.*

A asks if one learns in relation to grammar. A wonders if one may quickly verify if one has understood. One will quickly reveal if one knows all the forms or not, but A states that A agrees that writing is important, and that they will be doing more of that next year. A states that next year they will be writing in the past tense as well. A also tells B to reflect more over other issues that are important to learn, and tells B to reflect over what they have said earlier this year as well. A asks what is important if one has the motivation and clear goals and one wants to learn French. A asks what it takes to write more and to write sentences and face challenges. To express oneself in the language is important and A has tried to work with that all the time in sentences. A asks for more comments.

FR87. *Turn 638.*

B says that no, B learns things, how to use words fairly rapidly.

FR88. *Turn 637.*

A asks what the point is with these.

FR89. *Turn 636.*

B says yes.

FR90. *Turn 635.*

A states that one uses, for instance, some of these fill-in-the-blanks today.

FR91. *Turn 634.*

B states that it is fairly easy, but that when B sees that B has suddenly commented on four to five pages of text, then B feels that B knows French somewhat better than B perhaps believes.

FR92. *Turn 633.*

A says yes.

FR93. *Turn 632.*

B states that B believes that it is very important that B checks out on an individual basis what B knows every once in a while. B also states that writing an essay, writing for a presentation, or using the language

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independently of the fill-in-the-blanks in the book, is very important in
B's view. B states that when doing these fill-in-the-blanks, B thinks
that B does not know that much French. It is not difficult to put in a
word even if everything turns out to be wrong.
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FR94. *Turn 631.*

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A says yes and asks about other issues that were brought up. A asks what
is important in order to learn a language. A asks how to work in terms of
motivation, and then to see goals if one wants to learn French. A states
that if that is the main focus, then it is either about the grades, or
one wishes to acquire a beautiful language, or one wants to travel to
France and know the language so as to talk to people down there.
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As in the previous excerpt taken from the German case, the topics developed by the learners and the teacher in interaction produce statements about what the learners perceive as important for the motivational process as expressed in **FR85.** *Turn 640.* in terms of having a strategy, in addition to being aware of the progress one makes during the learning process. These statements are a response to the teacher's questions about what the learners can do on their own in order to face the challenges which emerge during the language learning process in **FR86.** *Turn 639.* In **FR93.** *Turn 632.*, the learners express that it is important to think through the learning process on a regular basis and that it is important to use fill-in-the-blanks or other kinds of language specific activities in order to ensure motivation. These issues were prompted by the question posed by the teacher in **FR94.** *Turn 631.* in terms of what is important in order to learn a language when focusing on motivational issues. In the case of the above excerpt from the German case, aspects of production tuning were related to the underlying meaning of the sequence in terms of its potential for the creation of comprehensive and functional production systems in the long-term memory. In the case of the present excerpt from the French case, production tuning would also come into play in terms of the creation of language-specific activities which could be developed for the rehearsal of particular motivational skills. However, this approach would pose challenges, such as described in the previous excerpt from the German case. The inclusion of these aspects in the conversation with a view to developing a strong associative network between the central nodes of such a cognitive system, requires thorough planning in terms of how the conversation is to be constructed for a purposeful application of the cognitive principle of relevance. A relevant uptake of information on the

part of the learners should be expected in the collective classroom culture which evolves, and which thereby exerts influence on the collective learning mechanisms in the classroom as a consequence of the travel of ideas which takes place.

The following excerpt from the Spanish case illustrates motivational issues related to exposure to the language in Table 16:

SP63. *Turn 415.*

A acknowledges B's claim about the importance of a teacher.

SP64. *Turn 414.*

B claims that a teacher is not necessarily important, but that B at least needs someone around.

SP65. *Turn 413.*

A asks for clarification in relation to B's claim about the role of the teacher.

SP66. *Turn 412.*

B claims that a teacher is an enormous advantage, but without being absolutely necessary. B mentions situations where people, for instance children, learn the language by simply being in a place where one's own language is spoken, and that this situation may substitute the need for a teacher. B emphasises that exposure to the language is important.

SP67. *Turn 411.*

A repeats B's claim about the importance of exposure to the language.

SP68. *Turn 410.*

B claims that exposure to the language is important, for instance in the work environment, the school setting, or a private setting.

The learners express that exposure to the language is important in some way in **SP68.** *Turn 410.* and compare the exposure required with the natural learning of the language which children are exposed to in **SP66.** *Turn 412.* In **SP64.** *Turn 414.,* the learners express the fact that one should have a teacher around, or at least someone who is able to help out, in the learning process. The information the learners are provided with in this sequence lends itself to discussion in the group, such as shown in the excerpt. Nevertheless, in line with

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the two previous excerpts, the information as such may constitute important knowledge on the road toward expansion of the learner psyche and greater awareness as learners. On the other hand, this kind of information does not easily lend itself to inclusion in an associative network, such as the one required by the ACT* theory for the establishment of production systems. Such production systems should have the potential to develop into a coherent behavioural structure which aligns the conscious self of the language learner with the deeper layers of the learners' psyche. This would require production systems aimed at the development of structures which permit the learner to look for a competent person as an aid in the language learning process. Nevertheless, this kind of rehearsal seems less natural in a classroom setting, as was the situation in the two previous excerpts taken from the German and the French cases.

4.4.1.2 Seeking practice opportunities

The second metacognitive category pertaining to contextual metacognitive knowledge is related to seeking practice opportunities. The claim has been made also in this category that the emergent production systems presented in Section 4.3 indicate that, at an aggregate level, the implementation of the SBI programme in its present form has yielded scarce opportunities for the potential development of a systematic learning behaviour in accordance with the ACT* theory. This is due to the fact that the declarative knowledge which can be deduced from the learner beliefs produced during the interaction is of such a nature that it seems difficult to rehearse these issues in the foreign classroom setting with a view to proceduralising this knowledge. In this way, it contributes to the impression that the foundation of the rationale behind metacognitive instruction in the foreign language classroom, i.e. the contextual conditions for this kind of instruction, is weak. In the following, excerpts from the three cases will be used in order to illustrate the nature of the interaction between the teachers and the learners pertaining to seeking practice opportunities.

The first excerpt is taken from the German case, and illustrates the belief expressed in Table 14 in terms of going to a store in order to talk to people who have time to talk about colors, patterns, size and price:

GE187. *Turn 228.*

B talks about noticing certain words B does not know. B states that B may write them down if possible, bring them back home, and then look the words up.

GE188. *Turn 227.*

A says not being a good Norwegian saying "du", but "Sie".

GE189. *Turn 226.*

B talks about using the right personal pronoun.

GE190. *Turn 225.*

A mentions talking to a person whom B does not know at all and who is of a certain importance. A asks what one has to remember then.

GE191. *Turn 224.*

B states that B should have had a good vocabulary.

GE192. *Turn 223.*

A asks what would be important in that situation, when B is to talk to her.

GE193. *Turn 222.*

B states that B should have written a manuscript in order to think properly through the situation.

GE194. *Turn 221.*

A asks how this would be with Merkel in Paris, and what would be the strategy then.

GE195. *Turn 220.*

B refers to thinking through what kind of situations may occur and what kinds of sentences may be useful in the relevant situation. B thinks that it is important not to be over-stressed. B forgets a lot if B is stressed. It is better to have a note with words on in case one forgets. B states that it is not a good idea to work very hard with some breaks as opposed to working on a regular basis. B states that it is better to be proactive, rehearsing the sentences B wants, if B knows what B wants to rehearse. B states that B then knows that it is related to clothes. B can begin beforehand and has a note with some words on it.

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GE196. *Turn 219.*

A asks about the third point, and what B has come up with.

GE197. *Turn 218.*

B states that B should go to a clothes' store in Berlin. B states that the sentence B needs is related to clothing, currency, size, colours, and so on. B states that B could ask dad or the family what B is to do and what one can ask about. B relates general, normal sentences. B states that B may listen to a Linguaphone course. B states that they have the standard B asks about in the clothes' store. B talks about a place which is not that busy so that the people working in the store have time for B. B states that B thought about colours, patterns, size, price and the like.

GE198. *Turn 217.*

A asks how many girls and boys wanted to go to a clothes' store. A asks about planning. A asks if this was difficult.

GE199. *Turn 216.*

B states that they had dealt with a bakery in Berlin. B states that B could ask about things to buy in the bakery. B states that B could discuss immigration politics with Angela Merkel in Versailles, although this may be more difficult. B states that they could discuss nature, and that they could be in Switzerland and do shopping in Germany. B suggests an intellectual conversation about chocolate, buying a cinema ticket and going to places that B knows about beforehand. B suggests a clothes' store in Munich.

GE200. *Turn 215.*

A says yes. A then wonders about the cognitive learning strategies in terms of understanding, perception and memory. A states that during this session they are going to talk about the metacognitive learning strategies. A states that in that case, we are talking about knowledge about our own learning and what we can do in order to improve this learning. A refers to what one can do to improve this process. A asks if B has anything to contribute with. A asks what kind of situations B had dealt with.

In **GE199.** *Turn 216.* and **GE197.** *Turn 218.*, the learners mention several opportunities for seeking practice opportunities in German, so the learners show insight into how practice opportunities can be created based on the initiative of the learners themselves. However, these specific actions are not easily transferred to a set of productions with IF…THEN clauses which lend themselves to practical rehearsal in the classroom setting. In this way, the cognitive principle of relevance will be breached in the sense that rehearsing

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travelling to Switzerland or Germany is not an activity which can be carried out in the classroom for the learners to develop their assumptions about the language learning process. If these activities are not part of a larger production system, where the aim is to strengthen the associative links with the cognitive network, the question arises whether a specific awareness can be created. As in the case of creating motivation, awareness can be considered to be a linguistic representation *per se*. In such a case, a learner may travel to the country in question for the sheer sake of seeking practice opportunities. This is not a surprising fact. However, according to the ACT* theory learning behaviour should be systematised in a formal structure where the links between the different steps that have to be taken in order to stimulate a certain learning behaviour are to be established and production tuning should occur. A rudimentary awareness, such as the one described in the above, will not produce a cognitive outcome according to which the learner is provided with information and thereafter continues constructing knowledge as a result of the cognitive principle of relevance. The activities expressed in **GE197.** *Turn 218.* in terms of listening to a Linguaphone course or going to certain stores is a more feasible activity than travelling abroad. However, the same question arises here in terms of the extent to which such an activity can be integrated into a targeted model for creating a through semantic associative network in accordance with the ACT* theory. In **GE195.** *Turn 220.*, the learners emphasise the importance of thinking through situations which may occur prior to a practice opportunity. It is also possible to rehearse prior to the practice opportunity in order to be better prepared for the situation, something which is also expressed in **GE193.** *Turn 222*. In **GE191.** *Turn 224.*, the learners express that it is important to have a good vocabulary which may be rehearsed prior to the practice opportunity and after the experience, when unknown words may be looked up. The importance of writing down words is expressed in **GE187.** *Turn 228.* and is an activity which can be rehearsed in a practice situation in the foreign language classroom. In an interactional perspective, this implies that focused attention on word building strategies, and the subsequent application of these skills prior to a conversational activity, could be fostered. In such a case, a targeted way of rehearsing strategies pertaining to the use of words in practice situations should permeate the conversational model used in the interaction. However, such a targeted interactional sequence is more feasible in

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close combination with a corresponding linguistic activity than in a general conversational model such as the one expressed in the above.

In the following sequence taken from the French case, there is a focus on using the practice situations which may occur. The corresponding belief reflected in Table 15 is asking about the road, playing boule with French people and looking for cheap CD's, going to café's and clothe's stores in Paris and learning expressions by looking for French music shops on the Internet.

FR330. *Turn 395.*

A asks if B would have played out dialogues with people.

FR331. *Turn 394.*

B says that if B analyses some dialogues, B would also have people ask questions.

FR332. *Turn 393.*

A says that cooperation makes B better.

FR333. *Turn 392.*

B says that B can find some other learners to play boule with during the breaks.

FR334. *Turn 391.*

A says that if B imagines a dialogue, B imagines whole sentences. If B has many words, it is not always easy for B to know how to use them. However, it is easier if B has sentences.

FR335. *Turn 390.*

B would also have read through the textbook, in which there are many good expressions.

FR336. *Turn 389.*

A asks if B would have created a fictive dialogue.

FR337. *Turn 388.*

B says that it is also possible to imagine a conversation with the other person and then talk to oneself, pretending that B talks to the other person.

FR338. *Turn 387.*

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A says that it is OK to have the cultural understanding that some words are useful to know, but it is not always easy to use them. A states that school French and everyday French are two different aspects.

FR339. *Turn 386.*

B says that it is possible to watch movies. B says that people use words in some American movies that are not used on an everyday basis, such as *fuck*. In everyday life, people would have reacted if someone had mentioned such a word.

FR340. *Turn 385.*

A asks how B would have solved this. A asks where B would have gone to get help.

FR341. *Turn 384.*

B says learning words and expressions they use, since the book presents a good deal of formal material. This refers to oral language and pronunciation.

FR342. *Turn 383.*

A asks B where B would have gone to talk about everyday words and expressions. A says that there is a difference between being visual or auditive in terms of preferences. A asks about other activities prior to the trip.

FR343. *Turn 382.*

B suggests the acquisition of words, expressions and phrases that can be used to get to know people when playing *boule*. It is also useful to learn some general words and expressions in order to be able to talk normally. B states that the Internet, e.g. You tube, is a useful tool to find relevant linguistic material.

FR344. *Turn 381.*

A suggests getting some cultural insight. A says it is a good idea to use music to think about how people may say it in France.

FR345. *Turn 380.*

B says that B has to learn how to buy something when going to a store. Basic courtesy also comes in handy. B states that B learns this in the textbook. B also refers to looking for some French music shops on the Internet in order to see if there are expressions that are much used. B also suggests exchange rates, and how expensive things are in France.

FR346. *Turn 379.*

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A says that the most important thing is to find something B wants to
learn. A asks what B wants to do before B leaves.
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FR347. *Turn 378.*

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B says that B would also look for CD's in a store. B would have found a
bakery. B says that B would have asked about the way. B says that B would
like to play boule with French people. B says looking for cheap CD's. B
says a café and clothes store in Paris.
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FR348. *Turn 377.*

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A says that understanding is a combination of declarative and procedural
knowledge, or applied understanding. A tells B to apply this at a specific
level. A tells B to imagine that B is in France and that B has to use
strategies to get out of these situations. B has to think in cultural
terms, that Paris is different from the countryside. B is to use the
cultural aspect. B is to think what B finds interesting according to B's
competence and level in order to develop these aspects.
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In **FR347.** *Turn 378.*, the learners mention examples of situations which can be used in order to actively seek practice opportunities, such as going to stores and cafés. In **FR345.** *Turn 380.*, the learners say that it is possible to learn important issues prior to the practice opportunity. It is possible to rehearse a kind of learning behaviour which is related to identifying relevant issues prior to seeking practice opportunities in stores and cafés, similar to the situation in the previous excerpt from the German case. However, the same question arises here whether it is feasible to construct meaningful activities in the foreign language classroom to stimulate towards this activity. It is possible to discuss the issue in the classroom based on the hope that the learners will understand the usefulness of actually going to stores in order to practise specific aspects of the French language. Quite another issue is the potential for development of systematic metacognitive knowledge as reflected in the cognitive structure of the principles of the ACT* theory.

Prior to a trip to France, it is also possible to learn words and expressions such as expressed in **FR341.** *Turn 384.* Another method to rehearse prior to a practice opportunity is to imagine a conversation with another person and then talk to oneself as a way to practise, in addition to using the text book as expressed in **FR335.** *Turn 390.* The learners are also prompted to produce the idea that it is important to be analytical in the use of conversations with people

and have people ask questions in **FR331.** *Turn 394.* These possible activities are of the same kind as the ones expressed in the previous excerpt from the German case in terms of preparing for a practice opportunity by focusing on certain aspects of the language. However, as the conversation unfolds, scarce opportunity is provided for the systematic construction of an associative network which lends itself to production tuning, i.e. the development of a comprehensive cognitive structure which discriminates or generalises the cognitive units of the production systems.

Similar topics have come to the fore in the following interactional sequence taken from the Spanish case, as the belief about the possibility to go to several stores to try clothes when buying clothes in Table 16:

SP237. *Turn 241.*

A suggests that B goes into a boring clothes store, and then B has to try more stores. One cannot just buy a stupid blue cap. Perhaps one wants a green cap that fits better. A asks if B has thought of other strategies in order to get things done.

SP238. *Turn 240.*

B says that when buying clothes, it is possible to go to several stores to try clothes.

SP239. *Turn 239.*

A says that everything is possible, but that it has to be planned. This planning is part of the metacognitive thinking process. B decides what to do, and thinks that perhaps the teacher is needed as a bodyguard.

SP240. *Turn 238.*

B says that they could bring along the teacher just in case.

SP241. *Turn 237.*

A says that this is a strategy that A has seen someone use. One practises something, and then one uses it over and over again with several people just to learn it. One is not sure if one is to talk about the weather in Norway, *Llueve mucho en Noruega?* One has said it once, and thereafter one says it several times. A says that A has used that technique in Spain. A states that A has told the learners to ask about the way 20 times, even if they know the way. A tells B to remember this strategy.

In **SP238.** *Turn 240.*, the learners express that it is possible to go to several stores if one wants to practise Spanish. This is a response to the teacher suggesting in **SP239.** *Turn 239.* that planning is an important part of the metacognitive thinking process. The same problem arises here as in the previous excerpts taken from the German and French cases in terms of the accessibility of the context for a purposeful rehearsal and subsequent development of production systems in this area of metacognitive learning. The learners express aspects of the learning process linguistically. If learning awareness is understood as being able to state particular aspects of the learning process, the interactional sequence from the Spanish case above does show that the cognitive uptake on the part of the learners has has been influenced by the teacher. The learners have been prompted to relate a specific activity to the language learning process. However, a specific structure of production systems requires extensive instruction in the chosen field, and the conversational sequence above is far too shallow for the establishment of a comprehensive network of production systems which lend themselves to production tuning.

The conclusion of the above-mentioned discussion based on the excerpts which illustrate the focus on two kinds of contextual metacognitive knowledge is that simply being able to state that a certain activity can be used, and assessing the pros and cons related to this situation, does not create structural metacognitive awareness according to the ACT* theory. According to this theory, metacognitive knowledge consists of declarative knowledge which can be stated about the topic at hand, and in the next step this knowledge should be transformed into procedural actions which lead the person towards his/her desired goal. In the interactional sequences above, only minor pieces of declarative knowledge have emerged which could produce the potential for proceduralisation in the classroom setting.

According to the principle of maximisation of relevance and the Nash equilibrium, the circumstances in the interactions have produced the most relevant outcome for the conversations. Motivational factors, and factors related to seeking practice opportunities, create the contextual background for the development of factual metacognitive knowledge. If the contextual conditions for the purposeful evolution of the classroom interaction aiming at the development of metacognitive knowledge as represented in declarative and

procedural knowledge, is to be achieved, the teacher input should be more targeted according to a systematic approach according to the ACT* theory. The question then arises to which extent this structural approach is feasible in the language learning classroom. There are limited resources available in terms of time to be spent on learning activities aimed at the development of skills which are not directly related to the learning of the target language *per se*.

In the above, an attempt has been made at identifying six sequences which illustrate that the provision of contextual metacognitive knowledge may be difficult to integrate systemically into a conversational model for the foreign language classroom. This point relates to the discussion of what self-awareness as a learner actually implies, and to which extent the application of Anderson's ACT* theory can be used in order to shed light on the relevance of an interactional model for the fostering of metacognitive knowledge in the foreign language classroom. Previously, a point was made in terms of the difficulty of organising separate SBI programmes in the foreign language classroom if the contextual factors for the development of metacognitive skills are difficult to integrate in a purposeful interactional model, such as reflected in the conversational activity of the present research. The factual aspects of metacognitive knowledge have been established as more adaptable to a conversational instruction model. However, the emergent production systems reflect the fact that there is a substantial part of a fully developed associative network missing in the creation of meaning which has taken place during the evolution of the interactions from the point of view of the collective learning mechanisms in the classroom. This claim about the possible enhanced value of the factual aspects of the transmission of metacognitive knowledge will be illustrated in the following section on the structure of the factual metacognitive knowledge produced during the interactions.

4.4.2 Factual metacognitive knowledge.

In the above, six excerpts from the data pertaining to contextual metacognitive knowledge have illustrated the fact that the construction of contextual metacognitive knowledge seems difficult to achieve in the foreign language classroom if the SBI programme has a too general focus on the metacognitive knowledge which is to be developed through the conversational model from the

point of view of the ACT* theory. However, the factual metacognitive knowledge is of another nature. This circumstance is due to the more specific characteristics of the activities which have to be carried out in order to create a relevant associative network in the production systems required for a successful proceduralisation of the necessary skills. In the following sections, excerpts from the data which illustrate how this situation relates to the acquisition of grammar, pronunciation and vocabulary will be presented.

4.4.2.1   Acquisition of grammar

In Table 14, the identified metacognitive belief related to the possibility of recording adjective endings before going to bed and then listening to them was taken from the following interactional sequence:

GE121. *Turn 294.*

B says that the best thing is probably to run first, since it could be difficult to run afterwards because of the time schedule at home with dinner etc. B comments on the fact that running is a good way of dissolving tensions in relation to a language learning activity.

GE122. *Turn 293.*

A asks what is difficult in this situation. A suggests that it perhaps has to do with the fact that the 'e' has to be placed correctly. A asks if this was the case for the rest as well.

GE123. *Turn 292.*

B suggests that B could record endings before going to bed and then listen to them.

GE124. *Turn 291.*

A suggests that B could run while thinking about the conjugation of adjectives after a working session. A asks if the best thing would be to run before or after doing the homework.

GE125. *Turn 290.*

B replies that it was a rather easy task. B says that the adjective was not an easy part.

GE126. *Turn 289.*

A asks if B feels that this task was difficult or easy.

GE127. *Turn 288.*

B says that B has to read a good deal of German. B says that B has to read first and then make an effort to really understand the matter.

GE128. *Turn 287.*

A asks if B could think of other things as well.

GE129. *Turn 286.*

B says that B has to think about grammatical errors B tends to make.

GE130. *Turn 285.*

A asks what B should do if B is to write an exercise in German.

GE131. *Turn 284.*

B replies that B has heard that it is supposed to be a good method of getting prepared for the learning session.

GE132. *Turn 283.*

A asks if B uses this strategy, and if it helps.

GE133. *Turn 282.*

B replies that it is a good idea to browse through the book, looking at the pictures one comes across.

GE134. *Turn 281.*

A asks what kinds of pictures one should look at.

GE135. *Turn 280.*

B says that B would read the words, and then study the conjugation of adjectives. B says that this person would study the rules first, and then look at the task afterwards. B says that B should first learn the new words, and then simply start doing the task. B suggests that one should look at the paradigm first. B says that it is a good idea to look at the pictures prior to the working session.

GE136. *Turn 279.*

A dismisses this comment, and asks B to focus on the task. The homework for the next day consists of learning expressions from a text B has just had. In addition, B should work with grammar in the form of adjective conjugations related to the text. A emphasises the fact that the two parts do not have very much in common, and A asks how B would go about the task.

GE137. *Turn 278.*

B says that reducing sleep could be a strategy, because it is necessary to go to bed late in order to have time to do homework.

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GE138. *Turn 277.*

A asks if B has heard about the word *organisation*. One has to organise to
do things properly. A asks if B has thought about how to get organised.
A tells B to enter It's Learning. A tells them to enter the German section
and look at what A has written for them to do as homework for the next
day. A tells them to read this instruction and find out what B is supposed
to learn for the next day. A tells B to think about how B can get organised
in order to do this, and that A should find a strategy in order to learn
what the instructions say.

In **GE136.** *Turn 279.*, the teacher mentions that the conjugation of adjectives is the topic. The learner response is expressed in **GE135.** *Turn 280.* in terms of studying the rules first, and then approaching the task afterwards. The learners suggest looking at the paradigm first. In **GE129.** *Turn 286.*, the learners suggest thinking about the grammatical errors one tends to make. These activities should be combined with extensive reading, such as expressed in **GE127.** *Turn 288.* These activities should also be combined with recording the endings before going to bed and then listening to them as expressed in **GE123.** *Turn 292.* In the emergent production system in Section 4.3, the activity of recording the endings before going to bed has been related to an overall perspective on the acquisition of grammar. However, in this interactional sequence, other perspectives of the acquisition of German also come to the fore. It is possible to envisage interactional sequences which could lead to the systematic construction of metacognitive insight into the language learning process in terms of studying the rules pertaining to the adjectives in German. Thereafter the identification of purposeful behaviour for analysing one's own mistakes could end up with reading strategies for the development of further insight into the use of adjectives in German. However, the same problem emerges in line with the situation above in relation to metacognitive contextual knowledge. Also in this instance, such a procedure would require a thoroughly elaborated conversational sequence in which the necessary steps to be taken are presented in a logical order. It must also be possible to repeat such a conversational sequence, and it would be time-consuming. Such detailed rehearsal with a view to establishing a comprehensive set of production systems for the fostering of insight into the use of adjectives in German is far more feasible than the equivalent rehearsal of the corresponding structures pertaining to metacognitive contextual knowledge. Relevant activities may be organised in the foreign language classroom in this respect. However, it seems that such a goal is best achieved through the targeted rehearsal of a carefully constructed

conversational model, and not a minor part of a general separate SBI programme. On the other hand, the question again arises of whether awareness should be measured according to the cognitive structure reflected in the ACT* theory, or whether awareness can also be considered to be the mere linguistic expression of a belief and that this linguistic expression is sufficient for awareness to emerge.

The achievement of awareness of how to approach grammar has also been reflected in the French case in relation to the belief that focuses on working with texts as a method to create insight into how the sentences are constructed categorised in Table 15:

FR687. *Turn 38.*

B says that B cannot, B does not think that everybody, there are some learners here who are able to explain all the words in the dictionary, advanced words, make the language more advanced. B also says that if B reads a new word in television and sees a new word, then B may, if B wonders about something, for instance, and wants to expand B's vocabulary, then B may look it up and what it means.

FR688. *Turn 37.*

A asks what B, for instance, refers to and how B can develop the Norwegian language.

FR689. *Turn 36.*

B says yes.

FR690. *Turn 35.*

A says that some talk. A is an old Norwegian teacher, and some talk about the fact that A has the impression that when coming from lower secondary school, they write Norwegian flawlessly, and do not get any of those red lines on their written mistakes. Then they feel that Norwegian is something they know. Is there anything more to learn in Norwegian now? B comes directly from lower secondary school.

FR691. *Turn 34.*

B says that perhaps not on a daily basis, and wonders if they are talking about, for instance, Norwegian. In that case, new words are acquired from the news, for instance, or the media and those kinds of things - more advanced words in a way.

FR692. *Turn 33.*

A mentions the general principle of using the language and says that some people use it automatically on a daily basis and some have to do it actively in order to use it. A asks if B talks English on a daily basis.

FR693. *Turn 32.*

B says that B had talked about the fact that B will use it as well. B needs to develop that language sense.

FR694. *Turn 31.*

A elicits more information.

FR695. *Turn 30.*

B says that B was thinking of the same, and that it is about reading and watching movies. B refers to listening to others talking the other language.

FR696. *Turn 29.*

A asks B about the conclusion B had reached.

FR697. *Turn 28.*

B says yes.

FR698. *Turn 27.*

A says that then B has something to (incomprehensible).

FR699. *Turn 26.*

B says that B thinks that it is very important to work with texts, etc., in terms of Norwegian and English, just as B had mentioned a minute ago – just as in Norwegian, where it is possible to talk in a way. Try to develop and become better from a grammatical point of view. If B works with texts, one sees how the sentences are constructed in a way.

FR700. *Turn 25.*

A asks if B has anything to add from the relevant group.

FR701. *Turn 24.*

B says that it helps to read, watch movies, talk to others, and practise a lot.

FR702. *Turn 23.*

A says yes, in order to improve in languages.

FR703. *Turn 22.*

(Incomprehensible.)

FR704. *Turn 21.*

A asks if B can do anything in order to develop B's language, not only when talking French, but on a general basis.

FR705. *Turn 20.*

B says that it is important to make oneself understood and communicate with the rest of the world.

This interactional sequence deals with how the reading of a text can be used in order to understand the grammatical structure of the language, and thereby how grammatical insight can be acquired. In **FR701.** *Turn 24.*, **FR695.** *Turn 30.*, **FR692.** *Turn 33.* and **FR691.** *Turn 34.*, the learners express that extensive activities in the form of reading, watching movies and communicating with others are purposeful methods for practising grammatical structures. In **FR699.** *Turn 26.*, the use of texts is emphasised as a way to observe how sentences are constructed from a grammatical point of view. In this way, the interactional sequence develops in a manner which illustrates that the teacher's prompting makes the learners construct an uptake of information which develops along a purposeful path towards the use of texts for the acquisition of grammar, such as shown at the beginning of this paragraph. On the other hand, the conversation does not delve into specific details in terms of how to actually go about the creation of such insight beyond the identification of relevant material. If the learners are to develop a systematic learning behaviour, these skills should be practised on a continual basis for proper production tuning to occur. This approach would require the allotment of a substantial amount of time and the extensive use of materials. Once again, the problem arises in terms of the purposefulness of such a generic approach to the teaching of metacognitive knowledge in the foreign language classroom. This obstacle is in line with the same problem identified for the contextual metacognitive knowledge outlined in the above.

The following excerpt from the Spanish case is related to the belief presented in Table 16 that mistakes in a test can be used as a source of learning the problematic verb conjugations. When discovering a rule, one has to focus on the rule as well as monitoring the nature of the mistakes from one situation to the other. The discovery of systems of mistakes is especially important for correct implementation next time:

SP90. *Turn 388.*

B says that B looks at the kinds of mistakes that have been made. B says that B looks at the verb conjugations that B knows, which may be a problem and depends on the test. If B discovers a rule, B tries to focus on this rule. B says that B analyses the mistakes from one occasion to the other. B says that if B discovers any system in the mistakes made, B tries to correct this the next time. B says that B inserts another colour in order to discover typical mistakes. B says that when B gets a test back with many mistakes in it, B's heart sinks. B states that at first it is frustrating, but that it then becomes easier when B receives help from A.

SP91. *Turn 387.*

A asks if B tries to understand the nature of the mistakes.

SP92. *Turn 386.*

B answers that B did this when reviewing the last test. B also states that B looks at the mistakes prior to a test, but that B does not correct all of them. B says that B corrects the mistakes, and then places the test in a drawer. B says that B writes it in a Word document. B says that B uses a mixed method. First, B is disappointed, but takes it out later in order to check it in more detail.

SP93. *Turn 385.*

A asks if B uses this method with all the mistakes.

SP94. *Turn 384.*

B says that B corrects it and writes the mistakes in brackets.

SP95. *Turn 383.*

A asks B about the content of the discussion and what actions B takes in order to correct mistakes.

In **SP94.** *Turn 384.*, the learners express that writing down the mistakes in brackets is a useful method for creating awareness around the mistakes one has made. The mistakes one has made may also be used as a source of information prior to the next test, as expressed in **SP92.** *Turn 386*. This comment on the part of the learners spurs a response from the teacher in **SP91.** *Turn 387.*, in which the teacher develops this conversational sequence in a relevant way, asking if the learners are trying to understand the nature of the mistakes. The learners look at the verb conjugations which they have identified as a problem and use this experience in order to develop insight into the grammatical rules related to this verb conjugation.

This inclusion of this kind of activity in a conversational model is much more feasible in the foreign language classroom than the activities which have been identified for contextual metacognitive knowledge. In this sequence, the teacher develops a relevant conversation based on the learners' input in terms of insight into a specific activity, such as the identification of verb conjugations. In this way, the cognitive principle of relevance implies that the learners develop metacognitive knowledge based on a process which the learners can relate to as a consequence of their own specific experience. On the other hand, this evolution of the conversation could be directed into a more specific track by exploring the work with verb conjugations even further. A comprehensive production system should be rehearsed in a systematic manner by exploring the experiences related to the studying of the mistakes prior to a language learning task and assessed upon completion of the same task. This is far more feasible in the foreign language classroom and lends itself to a far more specific track of developing insight into a detailed part of the language learning process. In a conversational model, it is also possible to develop this track through the use of specific experiences on the part of the learners. The cognitive principle of relevance implies that the input will be processed in a way which develops the assumption already created, and the sequence above shows the feasibility of this approach. The mechanisms of production tuning are therefore also achievable in the sense that the teacher may develop conversational sequences which take into account learner experiences for discrimination or generalisation of the desired metacognitive knowledge.

4.4.2.2 Acquisition of pronunciation

The following excerpt is taken from the belief related to the possibility to play Internet games in order to improve pronunciation, as presented in Table 14:

GE223. *Turn 192.*

B states that B felt that B had read the book without focusing that much on vocabulary. B had tried to understand what the book was all about.

GE224. *Turn 191.*

A states that it is possible to use English as well.

GE225. *Turn 190.*

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B states that B had gone quickly through the book, and then B looks at it afterwards. B goes through it quickly in order to understand the main characteristics. B states that B had not quite understood what was at the back of the book, the part in German where it said what the book was all about. B states that B had looked it up on the Internet in English in order to understand what was in the book when B started to read. B states that it helped a good deal. B claims that B understood much more.

GE226. *Turn 189.*

A tells B to think about the book A had thought about letting B read. A asks how B went about the whole task.

GE227. *Turn 188.*

B says yes. B says that B has to engage in rote learning and read it over and over again.

GE228. *Turn 187.*

A asks if it is efficient to hear a German text being read aloud, for instance by playing a CD.

GE229. *Turn 186.*

B talks about reading aloud. B is then corrected and gets to know how the different words are pronounced.

GE230. *Turn 185.*

A states that when B gives them the prepositions with the accusative, they have learned them by heart. A also refers to using them in practice afterwards.

GE231. *Turn 184.*

B states that B plays a game in order to improve pronunciation. B states that B played Internet games. B states that when watching movies, it is all about perceiving individual words that one understands and seeing the connections in terms of what happens in the movie, and also pictures if it is a book. B mentions vocabulary tests for learning new words. B states that if one watches a German movie, one may see it several times with German subtitles, and then try to understand the language. B states that one has to engage in rote learning as well and that the basics are easier learned if one engages in rote learning. B suggests trying it out afterwards, as it is easier to understand.

GE232. *Turn 183.*

A confirms that it was a P. A summarises and states that they talked about theory and how they can try this out in practice. A explains that today they are going to proceed to B getting a task. A states that B is going to read the introduction first. A states that B is then to think through the questions and sit together. A tells B to read through the first page, all of which is in Norwegian. Then B is to look at the three tasks. A states that B is to do them alone first, and then together. A states that

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they will return to the cognitive learning strategies. A tells B to
present topics B has done in order to learn certain aspects related to
vocabulary and pronunciation.
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In this sequence taken from the German case, the topic is the use of Internet games in order to improve pronunciation in **GE231.** *Turn 184.* However, the topic in this turn is also the acquisition of vocabulary, and in **GE230.** *Turn 185.*, the topic developed by the teacher aims at developing more insight into prepositions with the accusative. In **GE229.** *Turn 186.*, the focus is again on the acquisition of pronunciation, but this time as a consequence of reading aloud parts of text. The development of the conversation is thus not directly related to the topicalisation of using Internet games as a resource for learning. In **GE228.** *Turn 187.*, the focus turns to the use of CDs as a method for acquiring good pronunciation and in **GE226.** *Turn 189.* – **GE223.** *Turn 192.*, the focus shifts to the acquisition of vocabulary again. This lack of a specific focus in the development of the conversation indicates that a more focused approach towards the acquisition of a particular skill, in this case the use of Internet games as a resource for developing good pronunciation skills, should be integrated into conversational sequences aiming at production tuning of that particular skill. This focus seems more relevant in a setting in which the teacher in his or her interaction with the learners, relates this focus to specific work with tasks in which pronunciation is an issue, and not in a conversational sequence where the focus covers different topics in a row without a clear-cut focus on the declarative aspect of the language learning process which one seeks to develop.

The following excerpt is taken from the French case, and the topic is writing down examples of oral practice as a part of the process of acquiring skills in pronunciation as presented in Table 15:

FR26. *Turn 699.*

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A says that A has tried to make the learners read out loud every session,
or if not every session throughout the whole year, at least to have this
as a goal. A also asks if there are any further comments.
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FR27. *Turn 698.*

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B states that it is more fun to work in groups than sitting alone at home
engaging in rote learning.
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FR28. *Turn 697.*

A says yes.

FR29. *Turn 696.*

B states that they only practise pronunciation.

FR30. *Turn 695.*

A says yes.

FR31. *Turn 694.*

B states that they have practised this and that they have also written
down examples of oral practice.

In **FR31.** *Turn 694.*, the learners express that they have written down examples
of oral practice in order to learn pronunciation. The practice of pronunciation
is also the topic in **FR29.** *Turn 696.*, but then the focus turns to group work as
a method for learning. This means that the belief related to writing down
examples of oral practice is not elaborated upon and influenced by the teacher
in the turns which follow. In this way, production tuning, and thus an expansion
of the awareness initially expressed by the statement about writing down
examples of oral practice, is not developed purposefully in the sequence. The
flow of the conversation has occurred during maximisation of relevance in the
context, whereby the learners have contributed to the evolution of the
conversation as a consequence of the cognitive principle of relevance. In this
way the learners have selected experiences which create a relevant processing
of the associations they have gathered so far in their learning process. It is
possible to envisage a comprehensive production system established around the
practice of writing down examples of oral practice. However, this activity
should also be organised around a more detailed conversational focus on this
particular skill, with production tuning as the final objective for the purposeful
development of declarative knowledge related to this particular skill.

In the material no particular instances of beliefs pertaining to the acquisition of
pronunciation have been identified. Therefore, no excerpt from the Spanish
case is presented in this section.

4.4.2.3   Acquisition of vocabulary.

The following excerpt covers the topic of using ongoing conversations as a method for learning new words and expressions as presented in Table 14:

GE149. *Turn 266.*

B says that it feels strange, and that B finds it difficult to find the right words. B says that it depends on the setting. B says that B does not feel like trying since B is afraid that they will simply rattle on. B has tried to talk German in Turkey, and B felt more comfortable there. B says that it is great fun when one knows the language well, but that it is frustrating if one is not able to say very much. B states that it is important to learn new words, and also to learn how to use new words. B states that *rathaus* is a funny word in German. B relates an episode in Germany where B had been with B's parents. B had attended a dinner, and on that occasion B had been listening in on the other guests in order to grasp some useful words and expressions.

GE150. *Turn 265.*

A asks how B feels when B talks.

GE151. *Turn 264.*

B replies that it is fine if we simply move on, but that it may be difficult to break the ice.

GE152. *Turn 263.*

A asks if B sometimes chooses not to say anything, and what we can do to amend this situation. A asks if B thinks it is acceptable to make mistakes.

GE153. *Turn 262.*

B answers that B feels unsecure and stressed, since B feels that B gets it wrong no matter what B does. B says that it feels OK when B speaks to her father, because then B does not feel embarrassed, but it is worse when B is in Germany.

GE154. *Turn 261.*

A asks if B can express what it feels like to talk German.

GE155. *Turn 260.*

B mentions the word *das Erlebnis* (the experience).

GE156. *Turn 259.*

A asks if B remembers other words of the same kind and if B thinks B can make a contribution.

GE157. *Turn 258.*

B remembers the word *Austauschschüler* (exchange student).

GE158. *Turn 257.*

A asks B if B remembers that last week B had started to work on a text
about being an exchange student in Norway and which words they remembered
from the text.

This sequence starts with the teacher asking the learners which words they
remembered from the work they had done last week in **GE158.** *Turn 257.* In
GE157. *Turn 258.*, the learners mention a specific word from last time, and in
GE156. *Turn 259.*, the teacher uses this experience as a basis for asking the
learners if they remember other words of the same kind. In **GE155.** *Turn 260.*,
the learners mention another word, but in **GE153.** *Turn 262.* – **GE150.** *Turn
265.*, the focus shifts towards how the learners' experience talking German in
different situations. In **GE149.** *Turn 266.*, this focus shifts back to the
acquisition of vocabulary as a way to feel more confident in the language
learning process. In this context listening in on conversations as a method for
acquiring useful words and expressions is mentioned. In this sequence there is
a logical development of the conversation from establishing self-confidence in
the learning of the language towards using specific situations for the acquisition
of vocabulary. Self-confidence may be developed as a consequence of
acquiring a good mastery of the vocabulary of the language. In addition,
rehearsing vocabulary acquisition activities, such as listening to taped
conversations with a focus on unknown words for enhancing one's vocabulary,
is feasible in the foreign language classroom. However, a purposeful evolution
of a conversational sequence pertaining to the rehearsal of such word
acquisition skills should contain relevant input, stretching from the
identification of unknown words in the conversation, how to remember them,
and how to explore the meaning related to these new words. Such a
conversational sequence, if targeted, could shift the focus towards the
development of awareness related to the specific activity of using conversations
as a basis for acquiring new words in the language learning process. However,
this targeted development of specific skills, as reflected in the conversational
sequences, also requires a more focused time span for rehearsing these
structures. The relevant flow of the conversation should therefore be based on
a more focused evolution of the sequences, which is not reflected in the
maximisation of relevance which has occurred in this case.

The next excerpt is taken from the French case, and covers the use of rote learning as a good way of learning vocabulary as presented in Table 15:

FR75. *Turn 650.*

B says that B there is not always focus on the fact that a certain issue has to be remembered, but B thinks that it is OK to get some input at least.

FR76. *Turn 649.*

A says yes.

FR77. *Turn 648.*

B says that it is OK to practise to build up a good vocabulary, which means that if B has someone who knows more French than B, then B can ask how to say things. B says that B does this a good deal. B asks what a certain thing is in French even if B, of course, soon forgets much of it.

FR78. *Turn 647.*

A says yes, but that words are something on a list, although it also important to use them in the sentence. This means that a series of words is not that important, but that we are able to write as well. Thus, vocabulary is important, since it is the content, and words may be looked up. We have aids in the exam. Oral practice is something we get with French people if that is a goal, and then we cannot look up words all the time - we need a basic vocabulary.

FR79. *Turn 646.*

B says issues such as music.

FR80. *Turn 645.*

A says yes.

FR81. *Turn 644.*

B says rote learning. B also says that B would also have watched movies and things like that. It is important to gain input from other places than only the books used in the subject.

FR82. *Turn 643.*

A says that they should first focus on words, asking how B can go about learning words.

FR83. *Turn 642.*

B says that B notices this when B starts to think in French in a way, in that B recalls words and that B is able to put names on things and talk a bit about oneself in French.

248

FR84. *Turn 641.*

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A says yes and asks how B can see that. B also asks how B can notice if
B has learned something.
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This sequence starts with the teacher asking how the learners can notice if they have learned something from a specific activity in **FR84.** *Turn 641.* The learners reply that such progress can be measured in terms of the learner thinking in French, something which transforms into the ability to describe different issues in French. This activity should be stimulated by the use of rote learning, as expressed by the learners in **FR81.** *Turn 644.* Another person can be used in order to rehearse building a good vocabulary, such as expressed in **FR77.** *Turn 648.* The input achieved is beneficial, no matter how focused the learner is on remembering the issue being rehearsed, according to the comment in **FR75.** *Turn 650.* In this sequence, the conversation develops from comments pertaining to the use of rote learning to a specific activity, such as the use of another person in order to rehearse vocabulary. These factors of the process leading up to the development of one's vocabulary can be integrated into a conversational model, but again the focus which has developed in this sequence is rather generic, without the specific focus required for production tuning to occur.

The last excerpt is taken from the Spanish case and covers the production of utterances based on the vocabulary one has already acquired as illustrated in Table 16:

SP242. *Turn 236.*

```
B says that B imagines improvisation of some kind. B would also get the
help of a friend to get the necessary support if B gets into difficult
situations.
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SP243. *Turn 235.*

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A says that this learner would improvise, but at the same time have a
topic to use as well, such as going to the disco. A says that the
conversation could develop in different directions. One can use body
language and onomatopoeia. A says that this is also a strategy. It is
possible to plan the use of body language, and A tells B that A knows B
as being expressive. This means that B has a strategy that most likely
fits B well. A says that this becomes really interesting. A tells B to
explain what B will do in order to do what B envisages. A tells B to plan
exactly what to do when going to a disco, and A asks what B does in order
to carry out the activity. A asks what B will do if it keeps raining for
```

a week. In such an event, B does not get the chance to go to the beach to play volleyball, in which case one ends up there alone.

SP244. *Turn 234.*

B confirms this approach, or at least to have someone to ask if necessary. B says that B does not know exactly what B would have done, but that B would think of sentences to get used to.

SP245. *Turn 233.*

A asks if B would talk Spanish to the other learners as well.

SP246. *Turn 232.*

B says that B would have sought the help of a fellow learner to make it less frightening, to have a backup. If it stops, it makes it less frightening.

SP247. *Turn 231.*

A asks if B would prepare for normal daily situations and small talk. A suggests that small talk can be B's goal. It might not be difficult topics, such as bullfighting, *violencia*, *la corrida*. It may just be small talk.

SP248. *Turn 230.*

B says that B would have prepared for small talk in the disco because one cannot have a note in one's pocket and use it as the conversation develops.

SP249. *Turn 229.*

A emphasises the possibility of saying things spontaneously based on the basic vocabulary one possesses.

SP250. *Turn 228.*

B says yes. B also says that, as we have commented upon, all of a sudden the person working in the shop will ask *Hola, ¿de dónde eres?* The answer will be *Noruega*. It would then be useful to know other things as well in order to have a backup. B says that B would have learned some relevant words and expressions. B would also have tried to improvise as well as possible.

SP251. *Turn 227.*

A asks if B would prepare certain words and expressions that have to do with clothes.

SP252. *Turn 226.*

B says that many of them want to learn Norwegian. B says that if B wants
to go to a clothes store, B may use what B knows about that topic. B may
build upon that to find new words and expressions.

SP253. *Turn 225.*

A says that this could be of mutual help, B teaches them Norwegian or
English, which they are sometimes not good at. They will often learn
English.

SP254. *Turn 224.*

B says that B could talk to waiters in restaurants, waiters who often
know some basic Norwegian. B guesses they are interested in learning
Norwegian, and B can practise Spanish with them in order to learn more.

This sequence starts with the learners mentioning, in **SP254.** *Turn 224.* and
SP252. *Turn 226.*, the use of situations which may come about in restaurants
with waiters who want to practise their Norwegian. The learners can talk
Spanish to these waiters in return. This idea is confirmed by the teacher in
SP253. *Turn 225.* In **SP252.** *Turn 226.* and **SP250.** *Turn 228.*, the learners
develop this perspective to the act of going to clothes stores in order to use the
vocabulary one has already acquired. The vocabulary one has already acquired
can be used in order to prepare for small talk in the disco prior to the actual
situation as expressed in **SP248.** *Turn 230.* The learners also confirm that it is
useful to have somebody to ask in **SP244.** *Turn 234.* and **SP242.** *Turn 236.* This
sequence pertaining to the use of daily life situations is rather similar to the
situations which have been reflected in the two categories of contextual
metacognitive knowledge. The activity may seem purposeful, but would
require rehearsal in a real life setting. This makes it less relevant for the foreign
language classroom. The sequences which have developed as a consequence of
the intervention are also rather generic, and the possible awareness which has
been stimulated throughout the conversational sequence seems rather shallow
from the perspective of its potential for production tuning. It may be possible
to extend the focus on the use of spontaneous speech in conversational models
in the classroom setting through the use of targeted structures in the way the
knowledge is being constructed. However, such an approach would require a
comprehensive plan according to which the learners' previous experience with
the field is developed through targeted conversational structures for the
development of the desired declarative awareness.

The potential of the factual metacognitive knowledge for fostering the development of metacognitive knowledge in conversational models of instruction in the foreign language classroom seems more feasible than the contextual metacognitive knowledge. The steps leading up to the desired skills are more easily integrated into a conversational model that can be practised in the foreign language classroom. However, the way the natural flow of conversation has evolved in the present case indicates that the development of such factual metacognitive knowledge should be integrated into more specific conversational sequences which reflect the whole spectre of cognitive units of the relevant production systems. In this way the conversational model could be used to produce a foundation for the initial development of declarative metacognitive knowledge which also can be proceduralised in the foreign language classroom.

4.5 Summary

The five different patterns of production systems presented in the above do not represent any kind of alleged learning outcome of the implementation of the SBI programme in the three classrooms involved in the project. These patterns of emergent production systems are an attempt to create a conceptual framework for the identification of meaning produced as a consequence of the travel of ideas in the three groups of learners in the sequential analysis of excerpts from the cases. In this way, they provide a visual image of the underlying metacognitive structure of the collective beliefs produced during the implementation of the SBI programme. The different productions and cognitive units convey information about the structural characteristics for the potential uptake of information on the part of the learners exposed to the SBI programme. It has thus been possible to determine the purposefulness of the SBI programme in terms of the cognitive principle of relevance in combination with the sequential analysis following the indentifcation of the emergent production systems. According to this approach, the learners ought to relate new information to previous experience with as little effort as possible. The underlying metacognitive structure of the meaning created during the interactions has indicated that the SBI programme developed in such way that

there were scarce opportunities for the development of a systematic learning behaviour in the classroom. This lack of a systematic inner structure of the metacognitive meaning that has been produced will allegedly have a bearing on the processing effort of the input provided by the construction of metacognitive meaning in the classrooms. Such a systematic learning behaviour is necessary for the establishment of relevant declarative knowledge, with the potential of being proceduralised into autonomous learning behaviour. The two contextual categories of metacognitive knowledge, i.e. creating motivation and seeking practice opportunities, have pointed to a low degree of potential for proceduralisation. The three factual categories have indicated a higher potential for proceduralisation in the classroom, but they lack a fully comprehensive inner structure. This means that the SBI programme, in its present form, has not yielded a rich set of opportunities for the development of systematic declarative and procedural knowledge in accordance with the ACT* theory in the collective learning culture in the three foreign language classrooms involved in the study. The next chapter will provide a general discussion of this situation.

5 Discussion

In the research literature, there is a strong recommendation that further studies be conducted in the fields of instructional models and the analysis of the learning opportunities which exist in the foreign language classroom where learners work with language learning strategies in co-operation with the teacher (Cohen, 1998; Cohen & Macaro, 2007). In addition, Cohen and Macaro (2007: 155) call for intervention studies in foreign language classrooms in order to shed light on different aspects of the teaching of language learning strategies in different educational and cultural settings. Oxford welcomes all kinds of research on strategy assistance for L2 learning (2011: 197). The experiential approach adopted in the present study is therefore a contribution to the research field. First and foremost, this experiential approach is innovative in the sense that a game-theoretical approach to the study of classroom processes instigated by an SBI programme has been introduced in the research field.

The main objective of this research project has been the quest to increase the understanding of how metacognitive knowledge can be taught as a part of the teaching practices in the foreign language classroom. Metacognitive knowledge has been defined as knowledge which helps the learner to close the gap between declarative and procedural knowledge during the language learning process. Metacognitive knowledge has been related to self-development theories aiming at helping the individual towards greater self-awareness and expansion of the learner psyche on the road to learner autonomy. This increased understanding of processes leading up to greater self-awareness in the foreign language classroom has been achieved through the establishment of the following research questions:

1. What kinds of metacognitive learner beliefs does the implementation of a separate Strategy Based Instruction programme in three foreign language classrooms (German, French and Spanish) yield in terms of the metacognitive categories Creating Motivation, Seeking Practice Opportunities, and Acquisition of Grammar, Pronunciation and Vocabulary?

2. What kind of information does the metacognitive structure of the learner beliefs expressed in research question 1. yield about the relevance of the SBI programme implemented for the purpose of this research?

3. What are the pedagogical implications of research questions 1. and 2. for separate SBI in the foreign language classroom in line with the recommendations of the *CEFR* and the *LK06* curriculum?

The following will present the results obtained as a consequence of this experiential approach to the study of classroom interaction aiming at the development of metacognitive knowledge in the foreign language learners. The presentation of these results will be provided in the same order as established in the above. This will be followed by a discussion of some core aspects of possible further research in the field.

5.1 Research question 1

Research question 1 has been addressed through the construction and implementation of a separate Strategy Based Instruction programme in three groups of language learners, i.e. one German classroom, one French classroom, and one Spanish classroom. This SBI programme was constructed around core theoretical approaches towards the teaching of language learning strategies in the foreign language classroom. Language learning strategies contribute towards closing the gap between declarative and procedural knowledge in the language learning process. The acquisition of metacognitive knowledge thus depends on the beliefs the learners construct in order to develop towards a state of being autonomous learners who are aware of what it takes to learn a language and who are aware of their strengths and weaknesses in this process.

An SBI programme developed for separate instruction in language learning strategies was developed for a whole school year in three groups of language learners in order to increase the understanding of how metacognitive instruction can be provided in the foreign language classroom. In this way, the afore-mentioned variety of both different educational settings and strategy assistance for L2 learning has been catered for. The result of these three interactions, or

the solution of these conversational games, would constitute the basis for the collective meaning this development produced in terms of metacognitive knowledge from the point of view of the ACT* theory and its potential for the creation of self-awareness in the language learners. The rationale behind this analytical approach is that the aggregate set of learners in the three classrooms involved would create a common ground for learning as a consequence of the travel of ideas (Schwarz et al., 2009: 203-222) that occurs in the classroom and between the classrooms in the three groups of learners beyond individual learner participation. This approach is also in line with Cicurel (2002: 4), who claims that the individual learner blends into the learning environment and contributes to the socialisation process which takes place in the classroom as a *lieu de parole et de socialisation*. In this collective culture, expectations, emotions and attitudes create the aggregate set of conditions which foster learning.

This travel of ideas produces a learning context that equals more than the individual contributions of each and every learner, and it also stretches beyond the participation of the individual teachers. This approach has been strengthened because of the close co-operation between the teachers across the boundaries of the three classrooms and the active involvement on the part of the researcher in all three groups. This active involvement has included a visual and active presence in the three classrooms, in addition to the fact that the teachers have been provided with a steady follow-up based on the ongoing experience with the evolution of the SBI programme in the three groups of learners. This situation has caused the interactional process to consist of both the three groups of learners and the common ground shared by all the participants in the project. This makes it possible to consider the whole interactional process as a unit that can be analysed *per se*, also in terms of the metacognitive meaning produced by the implementation of the SBI programme.

The implementation of the SBI programme was defined as a situation of human communication in the form of three conversational games. During the playing of these three conversational games, the players, or the interactants, have been supposed to maximise relevance along the sub-game equilibrium paths of the games. This maximisation of relevance has been equalled to the inducement of

three Nash equilibria, i.e. that the players have developed an equilibrium play of the conversational games as a consequence of their choice of strategies during the evolution of the interactional process. In this way, a formal context for the instructional process has created a meaningful framework for the identification of the learner beliefs which have emerged as a consequence of the mutual construction of metacognitive meaning in the three classrooms. These learner beliefs have been categorised according to the five metacognitive categories of creating motivation, seeking practice opportunities, acquisition of grammar, acquisition of pronunciation, and acquisition of vocabulary.

In addition to the use of a game-theoretical approach as a formal framework for the implementation of the SBI programme in the foreign language classroom, the game-theoretical approach has been an attempt to build on the rationale of modelling conversations as games (Pietarinen, 2007: 119-133). Pietarinen's contribution to pragmatics (Pietarinen, 2007: 229-240) has thus been widened in the sense that a practical definition of people's heuristics was used in order to establish a formal model for the study of classroom interactions. The maximisation of relevance that occurred in the three classrooms has been supposed to be the core feature of the players' heuristic process. It has also been the ground on which the players have employed conversational strategies which have driven the conversations towards their end and which thereby have created meaning as established by the process of backwards induction upon completion of the playing of the conversational games.

Pietarinen (2007: 119-133) suggests the use of an utterance by utterance and action by action account of how conversational games develop. In the present research, an attempt has been made to widen this approach. Classroom discourse is made up of a large number of utterances when whole sessions of 45 minutes are used as a basis of analysis. In addition, a detailed account of the speech acts used by the players during the conversational process would yield a highly complex structure of the actions the players have used during the playing of the conversational games. In larger conversations, such as the ones produced by the implementation of the SBI programme of this research, the data produced would make it difficult to grasp the pragmatic meaningful evolution of the interactions if a thorough and detailed description of the whole turn-taking system of the conversation was presented. This multitude of

conversational turns that would normally be the implication of a detailed conversational analysis, such as suggested by Pietarinen (2007: 119-133), has thus been brought to a higher level of abstraction. In this way, an alternative model of a game-theoretical approach to the study of classroom conversations and discourse has been proposed in order to cater for the characteristics of the classroom dynamics. The models of human communication established as a consequence of the process of backwards induction have been categorised into context units which describe the pragmatic interplay between the interactants at an aggregate level in order to establish a formal pragmatic framework for the evolution of the SBI programme. For each context unit, the underlying process of construction of knowledge has been identified in the form of a gerund expressing the action the teacher allegedly engages in and a declarative sentence which denotes the underlying illocutionary force of the same context unit. In this way, it has been possible to establish how the interactions have evolved from a pragmatic point of view and thus how maximisation of relevance has occurred from a formal perspective.

In addition, the use of a game-theoretical approach to the study of pedagogical classroom interactions builds on the question posed by Pietarinen (2007: 131) in terms of the need to investigate further the nature of the players' heuristics in conversational games. The game-theoretical approach to the study of conversations has thus been developed in order to suit the practical circumstances of the foreign language classroom. The basis for this view on the three classroom interactions has been that the players have been driven forward by their heuristics, and that this process has created the most relevant solution of the conversational games given the circumstances at hand in the three classrooms involved at the time of the intervention. This model of human communication is not restricted solely to the foreign language classroom. It can also be extended to other kinds of classrooms. The game-theoretical model proposed in this research can be used in order to create data material which is founded in a formal establishment of a model of maximisation of relevance. This approach is related to the communicative and cognitive principles of relevance and how these principles influence the heuristics of the classroom interactions and their ensuing creation of meaning. The game-theoretical approach to the study of classroom interactions is furthermore related to the fact that, in the case of the present research, a discourse group has influenced and

has been influenced by the mutual participation of the interactants and the contextual constriction resulting thereof in a socially communicative practice (Rex & Schiller, 2009: 5). This communicative practice has provided the interactions with their meaning. This interactional meaning has provided the foundation for the further analysis of the three cases in terms of its consequence for the development of a collective awareness for the fostering of metacognitive knowledge in the classroom culture.

The players of these three conversational games have allegedly created a meaningful output of their interaction as a consequence of their bounded rationality. They have not had a complete overview of the possible evolution of the interaction from the start, but have moved through the conversational game as a consequence of their heuristics, i.e. the shared necessity of driving the interaction towards its end as a consequence of not leaving the classroom. This means that they have had a certain sense of the goals of the process without any specific expectations that could lead to clear-cut strategies as a consequence of the payoff patterns of the players. Since they chose to remain in the classrooms, they have found a way through the maze of possible alternatives as a consequence of playing against the world with its history. This is a characteristic of conversational games, in which there are no clear expectations of how the conversational games can evolve due to their unpredictable nature (Pietarinen, 2007: 128-129). In this unpredictable area, the maximisation of relevance has been assumed as a consequence of the inducement of a Nash equilibrium along the sub-game equilibrium paths of the three conversational games as defined by the evolution of the pragmatic nature of the conversational games and their context units.

The communicative and cognitive principles of relevance imply that the interaction itself has produced a meaningful evolution of the conversational games in the sense that the teachers have provided the learners with metacognitive knowledge through several acts of communication which indicate a message of the relevance of this metacognitive knowledge. Two of the teachers were slightly reluctant towards the implementation of the SBI programme, as stated in Section 3.2.2. This is why the researcher had to take over parts of the instruction during some of the sessions. The communicative principle of relevance implies that the communicator will convey a message

about the relevance of the communicative act. During the implementation of SBI programmes in the foreign language classroom, teachers may face challenges due to their lack of experience with this kind of teaching (Cohen & Macaro, 2007: 157). A necessary corollary of this fact, in combination with the communicative principle of relevance, is that the relevant uptake of information on the part of the learners will be influenced by the degree of involvement shown by the teachers. This situation will allegedly have consequences for the heuristics of the interactional process. Both the teachers' attitude towards the teaching of learning strategies in the language learning classroom, and their actual competence in the delivery of SBI, will implicitly influence the stance they take towards the relevance of the content of the SBI programme they provide the learners with. This could constitute a problem when attempting to analyse the outcome of such a pedagogical interaction. However, during the implementation of the present SBI programme, maximisation of relevance has occurred as a consequence of the interaction itself no matter how involved the teachers were in the project. It is not possible to determine how the uptake of information on the part of the learners would have been if the degree of teacher involvement had been higher. At this point, the use of a game-theoretical approach to the pragmatic development of classrooms interactions, such as the way the Nash equilibria have been induced along the sub-game equilibriums paths of the conversational games, solves this problem posed by the communicative principle of relevance. The interactions provide a formal foundation for their analysis as a consequence of the sheer evolution of the conversations as they actually develop. Another issue is that the result of the maximisation of relevance that has actually occurred can provide a basis for an analysis of how further development of the SBI programme can be defined based on knowledge about how the implementation of a given SBI programme has actually evolved. This procedure is beyond the scope of the present intervention, but can be envisaged as an advantageous way of applying a game-theoretical approach to classroom interactions in combination with relevance theory.

The cognitive principle of relevance implies that the uptake of information produces the best cognitive result in a given context. New information must interact with previous assumptions related to the context if the new information strengthens an existing assumption, contradicts and eliminates an existing

assumption, or combines with an existing assumption to yield contextual implications (Wilson & Matsui, 1998: 16). This implies that assumptions about the learning process must be stimulated and fostered as part of the teaching process in the classroom setting. This constant creation of new meaningful information within the group dynamics of the interactions may be seen in light of the strength profiles of the production systems which develop in a dynamic manner as a consequence of production tuning. According to this cognitive principle, new productions develop as a consequence of rehearsal, and rehearsal will produce new contextual implications which will produce more fertile ground for the expansion of self-awareness in the language learning process. Nevertheless, the production of contextual implications will not be relevant enough for the cognitive uptake of new information if the strength profile of the production systems is not apt for rehearsal in accordance with the ACT* theory. A core aspect of the cognitive principle of relevance in terms of processing efforts is the degree of accessibility of the context. The maximisation of relevance is therefore a consequence of the learners' abilities and preferences as well as the ever-unfolding interactional history of the SBI programme, as stated in Section 3.1.3. These aspects of the creation of meaning pertaining to the evolution of the classroom interactions have made up the aggregate production of meaning as reflected in the game-theoretical approach to the interactions in order to establish a formal framework for the implementation of the SBI programme in accordance with research question 1.

5.2 Research question 2

Research question 2 aimed at the identification of the collective metacognitive structure of the beliefs that emerged during the process of creation of meaning in the three interactional processes. The stance taken was that the collective learning culture, where ideas travel and create a context larger than the interactional process itself, produces a collective metacognitve structure influencing the learners in the context. The aggregate set of structures from all the three classrooms was used in order to establish matrices of production systems according to the ACT* theory of cognitive systems. In this way, an attempt was made at creating a visual indication of the underlying

metacognitive meaning produced during the interactional process. These matrices do not claim to reflect the individual outcome of the learning process, nor do they constitute an indisputable set of productions which reflect the underlying metacognitive meaning which has been produced. Nevertheless, they establish a framework for understanding the potential of the SBI programme for stimulating towards the development of metacognitive knowledge beyond the mere linguistic representation of the utterances made by the learners during the instructional process. Since production systems are dynamic, a cognitive set of structures for the forstering of functional metacognitive knowledge needs to be rehearsed over time in order to develop purposeful semantic networks in long-term memory. This process requires comprehensive practice based on the declarative knowledge the learner has acquired in the initial stage of declarative insight. However, the matrices of production systems reflect an indication of the underlying meaning of the uptake of information on the part of the learners. According to the cognitive principle of relevance, they have taken up information in order to process this information with as litte effort as possible. In this way, they have created a meaningful response to the teacher's input, which was in accordance with their alleged worldview at the time of the intervention. Due to this circumstance, these matrices are an attempt at defining a conceptual framework for the analysis of the relevance of the implementation of the SBI programme in its present state.

The underlying declarative pattern of these matrices of production systems based on the collective learning culture in the three groups of learners has indicated that the two contextual categories of metacognitive knowledge, i.e. creating motivation and seeking practice opportunities, seem less relevant for further development in the foreign language classroom from the point of view of the ACT* theory. The input provided by the teacher throughout the instructional process may be considered to create some kind of awareness as a result of the classroom discourse. The learners have actually been able to state verbally the nature of some core activities related to the process of creating motivation in the language learning process, and to seek relevant practice opportunities. However, this fact touches upon a central question posed in this research in terms of what the nature of self-awareness ought to be like. Is it

enough to be able to state a piece of metacognitive knowledge, or should the creation of functional metacognitive knowledge be systematised in some way?

In the case of the second category of metacognitive knowledge, i.e. the acquisition of grammar, pronunciation and vocabulary, the matrices have indicated a slightly different nature of the meaning created during the instructional processes. The cognitive units which may be identified from the beliefs produced during the interactional processes indicate that they lend themselves to practical rehearsal in the foreign language classroom. This has not been the case in terms of the contextual metacognitive knowledge. On the other hand, the present implementation of the SBI programme has not yielded a comprehensive metacognitive system of underlying meaningful patterns of cognitive units. This means that the conversational structures aimed at the construction of metacognitive knowledge have not been targeted enough for creating the potential for a thorough metacognitive system which can be processed in the collective classroom culture.

The excerpts from the three cases have illustrated how the construction of knowledge has taken place as a consequence of the meaningful outcome of the conversations in the classrooms. These excerpts contain the interactional sequences that have provided Tables 14, 15 and 16 with a system of metacognitive beliefs which have emerged during the process. The analysis of these excerpts from the point of view of the systematic focus on the construction of metacognitive knowledge has shown that the explicit emphasis on creating a systematic awareness in terms of cognitive units, which lead to the construction of cognitive units in production systems, has not been sufficiently present. This weakness in the present model is not necessarily related to a lack of focus on the part of the teachers/researcher during the instructional process. The SBI programme was based on a set of criteria developed by scholars in the field for the teaching of language learning strategies. The teachers/instructor tried to make the input as relevant as possible in concert with the overall tuition programme the learners were exposed to. This means that the SBI programme in its present form has been too generic, at least if the goal is to develop a systematic learning behaviour from the point of view of the ACT* theory.

The aggregate contribution of all the learners in the classroom can be used to indicate the structure of a given outcome of the instruction, and in the case of this research, the overall structure of these beliefs in terms of the cognitive structure of the initial stage of metacognitive knowledge which has been produced. The establishment in Section 4.3 of an emergent pattern of production systems according to two contextual and three factual categories of metacognitive knowledge has provided the research with a systematic approach for the analysis of the inner structure of these beliefs pertaining to the development of metacognitive knowledge. In metacognitive learning processes, the learner goes through several stages of metacognitive development. Metacognitive knowledge develops from an initial stage when the declarative knowledge is constructed on a rudimentary basis through a phase of consolidation until a completely functional use is in place. Thereafter, the declarative knowledge must be proceduralised into automatised learning behaviour for the metacognitive learning objective to be fully reached. In the initial stage, some rudimentary knowledge is therefore acquired as a step towards the development of a fully fledged metacognitive behavioural system. In Section 2.1, this metacognitive system was related to models pertaining to the development of self-awareness in the sense that there should be an alignment between the conscious part of the psyche and the deeper structures in long-term memory from which knowledge may be retrieved in order to carry out the intended actions. This focus on intended actions is related to the action-oriented approach of the *CEFR*. In the case of metacognitive knowledge, these intended actions leading towards the acquisition of the target language, or the L2 of the learner, are conscious actions the learners should be able to take in order to plan, implement and assess the language learning process on a continuous basis. According to the view taken in Section 2.1, this awareness may be expressed in language, and the cognitive units of the production systems in Section 4.3 illustrate how this initial stage of the acquisition of metacognitive skills have produced an underlying linguistic structure in the three classrooms involved in this research. In the initial stage of metacognitive development, the learner is able to express linguistically the steps which have to be undertaken for learning to occur. In the associative stage, the systems will develop further as a consequence of rehearsal. However, if the associative stage is to follow the initial stage of acquiring some rudimentary structures, the initial stage should

lend itself to thorough practice of the skills that are to be acquired in order for this self-awareness to develop.

The implementation of the SBI programme of this research has provided the learners with only a small amount of collective structural declarative knowledge at an aggregate level, such as illustrated in Section 4.3. Two main results emerge from the data material. The contextual factors for the language learning process seem to produce scarce opportunities for metacognitive learning processes during which the factual metacognitive knowledge can be accessed and rehearsed. This is at least the situation if the goal is to develop metacognitive knowledge in accordance with the core principles of the ACT* theory. In the case of factual metacognitive knowledge, i.e. the acquisition of grammar, pronunciation and vocabulary, the potential for the proceduralisation of metacognitive knowledge seems better since these categories include productions which may be actually rehearsed in the foreign language classroom. However, the actual implementation of the SBI programme has yielded only a few instances of explicit productions in the three corresponding metacognitive categories of the acquisition of grammar, pronunciation and vocabulary. This indicates that the underlying metacognitive meaning which has been produced during the interactions is not comprehensive enough for ensuing targeted instruction in metacognitive issues.

The productions pertaining to the three categories of factual knowledge also lack a coherent system of productions in their present form. Nevertheless, they are of a different nature when it comes to actually practising these skills in a classroom situation. It is possible to practise structures such as "IF the goal is to identify the right pronoun THEN use syntactic analysis", but the structures in their present form seem too generic for the ensuing proceduralisation of the necessary skills to occur. If metacognitive self-awareness is to be fostered in the foreign language classroom, the pedagogical conditions must be of such a kind that it is possible to practise the structures required for the development towards autonomy and self-regulated learning mechanisms.

5.3 Research question 3

Research question 3 aimed at a discussion of the pedagogical implications of the results related to research questions 1 and 2 in terms of Strategy Based Instruction in the foreign language classroom in line with the recommendations of the *CEFR* and the *LK06* curriculum. In addition, the educational policies developed by the Norwegian national committe chaired by Professor Ludvigsen in terms of the importance of metacognitive learning activities in the classroom were related to the overall objective of this research. The key focus in this respect has been the action-oriented approach to language learning emphasised in the *CEFR* and the focus on the creation of learner insight into previous experiences and achievements in the language learning process expressed in the *LK06* curriculum. These perspectives have also been related to processes of expansion of self-awareness and the development of the possible selves of the language learner as a way to develop one's human potential. The development of self-awareness is a process which proceeds in stages aimed at the strengthened alignment of the conscious psyche with its deeper structures in long-term memory. The goal of the learning process should consequently be to create a pedagogical context where this potential for learning can be stimulated and fostered as a consequence of the instructional process itself.

In the *CEFR*, there is a focus on the acquisition of action-oriented language learning competence towards the development of autonomous language learners. The action-oriented approach takes into account "the cognitive, emotional and volitional resources and the full range of abilities specific to and applied by the individual as a social agent" ("Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR)": 9). Important steps towards the development of the individual as a social agent, and therefore within the context of self-directed learning, are "raising the learner's awareness of his or her present state of knowledge, self-setting of feasible and worthwhile objectives, selection of materials and self-assessment" ("Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR)": 6). These core features of metacognitive knowledge are also reflected in the *LK06* curriculum for the development of language learners in terms of making use of previous language learning experiences when approaching the target language and assessing one's progress

during the language learning process. The contextual metacognitive knowledge in terms of motivation and practice opportunities forms the background to the more directly language-related factual metacognitive knowledge, i.e. the acquisition of grammar, pronunciation and vocabulary.

An important characteristic of the development of such metacognitive knowledge is the active use of language learning strategies. Within the context of this research, there has been a focus on the active use of language learning strategies in order to achieve one's goals during the learning process. The active use of learning strategies as a way to acquire insight into oneself as language learners has been related to theories pertaining to the development of self-awareness for the promotion of independent behaviour and expansion of the potential of the language learners. These self-regulating mechanisms have thus been related to core theories of self-development and self-knowledge (Cambray & Carter, 2004; Campbell, 2008; Edinger, 1972; Jacobi, 1971; Jung et al., 1968; Stevens, 1993), and their relationship with the motivational development of the possible selves of the language learner in terms of his/her potential to expand and grow in the learning process (Zoltán Dörnyei, 2009: 216-218; Zoltán Dörnyei & Ushioda, 2009: 46-48).

A core assumption in this research has been that the cognitive structures that could lead to the development of the possible selves of the learners should encompass a coherent system for the fostering of an independent behaviour in the language learning process. The declarative knowledge the learners construct should be of such a kind that they are able to proceduralise it, i.e. transform the declarative knowledge into practical actions, or procedures to undertake in order to achieve their goals. This means that, according to the ACT* theory, the learners should develop a dynamic set of cognitive structures supporting the ability to relate declarative knowledge to the corresponding procedural action that has to be undertaken (Anderson, 1996; J. Michael O'Malley & Chamot, 1990). According to the ACT* theory, if a systematic learning behaviour is to be achieved, there must be an alignment between the potential for declarative and procedural knowledge in the language learner. This implies that the learner should be able to engage in a particular action as a consequence of the declarative knowledge stored in long-term memory. The deeper structures of the psyche should have developed an associative network of semantic structures

which permit the ever-growing expansion of production systems in the long-term memory of the learners. In this way, the conscious psyche can be provided with declarative input in a way which fosters the procedural execution of a given action. Consequently, instructional activity aiming at the development of metacognitive knowledge should provide the learners with opportunities to rehearse the necessary structures for the development of such a strong alignment of the conscious part of the psyche, in addition to a strong inner structure between a dynamic set of production systems in long-term memory. In line with the ACT* theory, such learning develops in stages whereby productions develop and grow in a semantic network in long-term memory. This is also how self-awareness develops in a gradual process leading up to an expansion of the structures of the psyche. An efficient SBI model should therefore take into account to which extent such a model achieves this goal of aligning the conscious mind with the deeper layers of the psyche.

The overall declarative network of semantic associations should be of such a kind that it is actually possible to practise the productions in sequence and thereby strengthen the profile of these productions. Practice and the ensuing expansion of the semantic network in long-term memory will then expectedly contribute to the consolidation and improvement of the metacognitive knowledge required in order to develop towards learner autonomy. According to the ACT* theory, the declarative system must lend itself to constant practice if proceduralisation is to occur. First and foremost, the learner should possess a comprehensive set of nonnegative levels of activation of the central nodes of the system. These features of the ACT* theory have been outlined in Section 2.3.2. The greater the repertoire of associated networks in long-term memory, the greater the potential for spread of activation through the cognitive system. This approach requires an extensive activation path through the system in the sense that there must be a strong link between the nodes of the productions. The strength of the whole system depends on the flow of information which can occur from one node to another. Each and every node must lend itself to practical rehearsal if the relative strength of the production system ($r_{ij} = s_j / \sum_k s_k$) is to apply. Simply put, the sum of all the nodes in the system must form a coherent network which allows the learner to develop a deeper understanding of the knowledge required for an action to be carried out. In the next step, production tuning may occur as a consequence of the accumulated strength of

the existing productions. A purposeful production system for the development of metacognitive knowledge needs the potential of semantic development across the different productions of the system. Productions such as "IF I am to practise my L2 THEN travel abroad" are not structures of awareness which are easily rehearsed in the foreign language classroom. The other productions which are connected to the above-mentioned example are of a similar nature, i.e. they are difficult to actually rehearse in the foreign language classroom.

This consideration leads to the question of what awareness-raising and the development towards the possible selves of the learners actually mean. The ability to state items of knowledge can be considered as representing a kind of awareness expressed through language. Nevertheless, self-development towards the ideal selves of the learner should take place in stages which lead to an ever-growing expansion of the learner psyche. This development should be initiated with the declarative knowledge needed for this expansion to occur. However, this knowledge should create the foundation for a systematic construction of knowledge based on the rehearsal of the required skill. This is particularly relevant for the contextual factors pertaining to the language learning process, which create the backdrop to the development of factual metacognitive knowledge. In the first place, there must be a set of production systems envisaged for the learning process which create a complete set of productions for the purposeful proceduralisation of the declarative system to occur. Secondly, these production systems must create the grounds for the development of a comprehensive set of nonnegative levels of activation which reflect a purposeful spread of activation and subsequent increased strength of the production systems. In the end, this process would create opportunities for production tuning. This is a complex learning process which requires extensive teaching in the subject, but if the initial stage of the development of declarative metacognitive knowledge in the field is difficult to achieve, it is less likely that the subsequent necessary stages of metacognitive development can be produced as a consequence of the present form of the SBI programme.

This 16-session SBI programme was developed based on a systematic construction of topics recommended by the research literature. In spite of this allegedly solid foundation for the implementation of the SBI programme, the collective nature of the classroom interaction produced only a limited set of

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systematic patterns of potential expansion of comprehensive production systems at a collective level of awareness. This does not mean that the teaching of language learning strategies is not a viable method of providing the learners with metacognitive knowledge. However, in spite of the systematic nature of the present SBI programme, the underlying meaning of collective declarative knowledge is seemingly not comprehensive enough in order to develop a declarative platform for the subsequent proceduralisation of the skill to occur in the collective classroom culture. In addition, this would require far more time than that spent on the focus on metacognitive knowledge in this research. It also requires an extensive set of targeted pedagogical actions, also on an individual basis. The question then arises of whether a long-term conversational model for the fostering of metacognitive awareness is a project worthwhile undertaking in the foreign language classroom; i.e. if such a focus on overall instruction programmes is worth the effort within the time restraints of ordinary classes. The focus should rather be on specific sets of metacognitive knowledge integrated into the classroom instructional structure whenever relevant in close connection to language learning tasks. In this way, conversational models can be used to stimulate learner insight in more specific settings and modes of instruction based on aspects of metacognitive development outlined in Section 1.2.1.

The collective structure of the production systems presented in Section 4.3 has indicated that the contextual metacognitive knowledge seems difficult to practise in the foreign language classroom with a view to developing a fully-fledged declarative system in alignment with its corresponding procedural output. This is due to the vagueness of the cognitive units which have been produced in the present interactional processes. This situation seems to have been different for the factual metacognitive knowledge. In terms of factual metacognitive knowledge, the implementation of the present SBI programme has shown that the rehearsal of the units of declarative knowledge which have been identified as a consequence of the emergent production systems, does seem feasible in the foreign language classroom in a conversational model. However, if the contextual conditions do not produce purposeful opportunities for the learning of metacognitive behavioural mechanisms, the metacognitive factual knowledge will not have a solid enough foundation for development. This possible contradictory nature of general conversational SBI models in

order to fulfil the goals of the *CEFR* for action-oriented competence and the goals of the *LK06* curriculum for metacognitive insight poses problems for a long-term focus on SBI models in classroom settings. Within the boundaries of this research, the targeted focus on the metacognitive aspects of specific language-learning tasks has been suggested as a way to cope with this problem in opposition to the design of the present SBI programme. A systematic construction of interactional sequences aiming at specific cognitive units in a coherent set of production systems may seem more relevant for the language learning classroom.

The first criterion that needs to be established is what metacognitive knowledge implies beyond the definition of the expected outcome of the metacognitive part of the language learning process, as defined in the *CEFR* and the *LK06* curriculum. Awareness can be defined as the ability to state aloud metacognitive aspects of the language learning process. Nevertheless, according to the ACT* theory, declarative knowledge should be transformed into procedural knowledge.

This situation poses a problem for the implementation of the objectives of the *LK06* curriculum and the Language Learning area in terms of what awareness-raising actually implies. Learners have expressed metacognitive beliefs as a consequence of the conversational model. This has been shown both in the belief matrix system of Tables 14, 15 and 16, and in the excerpts from the interactions in the above. The expressions of such beliefs is not a surprising factor *per se*. The interactions in the classrooms have consisted of a conversational model. The learners have responded to the teachers´ prompting in terms of exploring their ongoing experience with metacognitive issues in the language learning process. When the learners, as a consequence of the heuristic process in the classroom, respond to the teachers´ input by engaging in the evolving conversational process, some linguistic output may be expected. Quite another issue is the extent to which this linguistic output of the heuristic process creates metacognitive knowledge and thereby the potential for self-awareness as language learners and if this self-awareness may lead to some kind of systematic learning behaviour. The focus on short-term, specific sequences of metacognitive instruction, where detailed pieces of declarative knowledge pertaining to the development of defined sets of overall metacognitive

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knowledge are to be acquired, has been suggested as a solution to this problem. These defined sets of specific topics ought to be developed according to a plan for what the specific objective is for the instructional sequence to ensue.

The action-oriented approach of the *CEFR* therefore implies that the learners ought to engage in certain actions in order to enhance their autonomy. In the classroom setting, the natural mode of instruction would be the meaningful activities the learners engage in in the classroom alongside the instructional conversations orchestrated in the classroom by the language teacher. A conversational model should develop in a relevant manner in the sense that the teacher should feel obliged to transmit metacognitive knowledge as a consequence of the communicative principle of relevance. In addition, the learners should feel that they are able to process the knowledge with as little effort as possible as a function of their past experiences as a consequence of the cognitive principle of relevance. During the evolution of the interactional process, as reflected in the conversations in the classrooms, maximisation of relevance occurs in this interactional interplay of cognition.

5.4 Further research

Upon completion of this research project, four questions emerge as interesting for further exploration in line with the stance taken in this research:

1. How is the concept of metacognitive awareness to be defined?
2. Which role should the teacher play in the process of self-realisation of the foreign language learner?
3. How should the scope of metacognitive teaching be defined?
4. If metacognitive teaching is time-consuming, how much time should be alotted to this pedagogical field?

5.4.1 How is the concept of metacognitive awareness to be defined?

The approximation towards the possible selves of the learner through an expansion of the conscious alignment between the conscious mind and the deeper layers of the psyche is a vital factor in the development of metacognitive awareness. On the other hand, the question has been posed in this research whether awareness is the mere linguistic expression of declarative knowledge, or whether awareness should be measured in one way or another. The ACT* theory has been used as a way to define the cognitive nature of the collective awareness which has been constructed in the three groups of foreign language learners. This collective awareness is the foundation upon which the classroom culture affects the individual learners in their personal development towards their possible selves. Further research needs to be carried out in terms of the characteristics of both metacognitive collective and individual awareness in accordance with self-realisation theories of personal development. The learners of this research have been defined as high-proficiency learners as compared to other learners in the Stavanger area. The assumption made was that the weak results of the implementation of the present SBI programme could have been even weaker with low-proficiency learners. This perspective makes even more important further research in different classroom settings in order to shed light on the possible generalisability issues of this study.

5.4.2 Which role should the teacher play in the process of self-realisation of the foreign language learner?

The teacher plays a vital role in the construction of metacognitive knowledge from the game-theoretical perspective on the maximisation of relevance in the foreign language classroom. Foreign language teachers may be reluctant to the implementation of SBI programmes, something which was also the case in the present research. Maximisation of relevance in the foreign language classroom will logically be influenced by the quality of teacher participation during the implementation of the SBI programme according to the communicative principle of relevance. Particular attention should therefore be paid to research on teacher development in order to increase teacher awareness of the pros and

cons of targeted conversational modes of SBI. Another area of particular focus could be the degree of active involvement on the part of the teacher in the foreign language classroom in terms of his/her part in the organisation of the classroom activites aiming at the work with language learning strategies and the subsequent process of reflection in the classroom. Feedback processes are vital in this respect as a consequence of the sequential anlysis of the classroom discourse which emerged in this project. This analysis has shown that the conversational feedback was not targeted enough when the conversational games were played. The quality of teacher feedback when exposing the foreign language learners to SBI programmes should be further developed in order to enhance the quality of the maximisation of relevance which occurs in the conversational games which evolve in the foreign language classroom during the implementation of SBI programmes.

5.4.3 How should the scope of metacognitive teaching be defined?

Further research needs to be carried out on altered models of conversational SBI programmes where a more detailed focus on specific metacognitive aspects of the language learning process is carved out. There should be particular focus on attempts to enhance the maximisation of relevance which occurs in the interplay between the communicative and cognitive principles of relevance. A targeted conversational model aimed at a more purposeful uptake of information on the part of the learners could be a better approach to SBI in the foreign language classroom. A thorough planning process that takes into account the specific needs of the learners and that thereby creates a purposeful and targeted construction of the classroom discourse could logically influence the maximisation of relevance which occurs. These altered conversational models can also be combined with research aiming at measuring learner outcomes of the chosen areas of focus from the point of view of the individual creation of production systems in accordance with the ACT* theory. This individual aspect would be a considerable improvement of the focus on the collective production of meaning, which has been a cornerstone of this project in an interactional perspective.

5.4.4 If metacognitive teaching is time-consuming, how much time should be allotted to this pedagogical field?

The major discrepancy in the field of SBI in the foreign language classroom is whether metacognitive teaching should be integrated into or separated from the conventional modes of instruction in the foreign language. Withing the boundaries of this research, a 16-session separate SBI programme was implemented during a whole school year in three groups of foreign language learners. A claim made in this research is that SBI programmes could be more purposeful when organised as targeted separate modes of instruction. Further research is needed on the ratio between time and modes of instruction, in terms of both separate and integrated SBI models.

6 Conclusion

In this research, a general SBI model for the fostering of metacognitive insight as a part of the tuition programme in the foreign language classroom was developed and implementeted in three foreign language classrooms in an upper secondary school in the Stavanger area, Norway during the school year 2010-2011. This was done in order to shed light on the lived learner experience as a consequence of the focus of language learning strategies on the teaching and thereby metacognitive knowledge in three groups of foreign language learners. This intervention was thereby based on recommendations in the research literature in terms of the need to develop intervention studies in which both content and methodology could be further enlightened for the development of Strategy Based Instruction programmes in the foreign language classroom.

A game-theoretical approach to the study of pedagogical interactions in the classroom has been proposed as an innovative approach to the study of pedagogical conversations. In this way, a formal background for the implementation of these SBI programmes was established. The formal structure of the three conversational games was established as three situations of human communication in which three pragmatic Nash equilibria were induced along the sub-game equilibrium paths of the conversational games. These Nash equilibria were established in accordance with the overall turn-taking system at an aggregate level of the classroom interaction between two conversational players, i.e. the INSTRUCTORS (player A) and the LEARNERS (player B) based on the identification of context units. In these context units, the underlying pragmatic dynamics of the conversational games were established as a consequence of the content of the teacher input and the related intended construction of knowledge among the learners. In this way, a purely conversational turn-taking analysis, such as suggested by Pietarinen (2007: 119-133), has been extended in the sense that the pragmatic Nash equilibria were established at a higher level of analysis. The large bulk of conversational data produced by the present intervention has required this kind of abstraction of the turn-taking system. The interactions have thus been analysed as co-operative conversational games of two players in which the turn-taking system covers the aggregate set of turns of these two players. The three conversations

have moved towards their end as a consequence of the players' heuristics in the sense that the learners and the teachers/researcher, in interaction, have found a practical way to lead the conversations towards their end.

The approach taken is that the players have maximised relevance during this interactional process in the three classroom contexts with their complex set of expectations, attitudes and relationships, which have formed the background to the development of the three interactions. The interactional aspect pertaining to the principle of maximisation of relevance has been rooted in the core principles of relevance theory (Sperber & Wilson, 1986, 1995; Wilson & Sperber, 2012) in terms of teacher input and the *communicative principle of relevance*, learner uptake of information in terms of the *cognitive principle of relevance*, and how these factors influence the development of the construction of metacognitive meaning as a consequence of the interaction itself.

This formal foundation of the three classroom interactions has formed the background to the identification of five sets of metacognitive learner beliefs produced during the evolution of the three interactions and representing core metacognitive aspects of the language learning process. This set of five metacognitive beliefs reflects two contextual and three factual categories pertaining to the language learning process. These two main categories of metacognitive beliefs about the language learning process are interrelated in the sense that they reflect the aggregate metacognitive structure of the belief system produced by the interactional creation of meaning during the maximisation of relevance in the three classrooms involved in the project.

The main finding in this respect is that the two contextual factors for the language learning process, i.e. creating motivation and seeking of practice opportunities, seem less feasible in the classroom context within the framework of the characteristics of the SBI programme developed for the purpose of this research. This weakness in the collective cognitive structure produced during the present implementation of the SBI programme may have a bearing on the three factual factors for the language learning process, i.e. the acquisition of grammar, pronunciation and vocabulary. This is due to the fact that the contextual metacognitive knowledge forms the psychological framework for the factual metacognitive knowledge. In addition, both in the case of the

contextual and the factual factors for the language learning process, the overall nature of the emergent production systems has shown that the inner cognitive structure of the created collective meaning is not comprehensive enough for purposeful proceduralisation to occur at the present stage. A separate SBI programme should produce some kind of substantial outcome for the language learning process. However, if the ACT* theory, and its focus on the production of potential cognitive structures in the long-term memory of the learners, shows that this outcome is less likely within the time resources available in the foreign language classroom, or at least requires a substantial amount of effort to be achieved, the overall relevance of separate conversational SBI programmes may be questioned. This will also have consequences for how the development of an action-oriented competence in line with the criteria of the *CEFR*, and how the learning objectives of the *LK06*, should be interpreted, in spite of the fact that this analysis is based on the collective learning culture in the three classrooms. Individual learning opportunities have not been explored, but would be an important contribution to the overall conclusion of this research project.

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8 Appendices

Appendix 1: Description of Sessions 1-16

Appendix 2A: Backwards induction of the German case (GE)

Appendix 2B: Pragmatic Analysis of the German Case (GE)

Appendix 3A: Backwards induction of the French Case (FR)

Appendix 3B: Pragmatic Analysis of the French Case (FR)

Appendix 4A: Backwards induction of the Spanish case (SP)

Appendix 4B: Pragmatic Analysis of the Spanish Case (SP)

Appendix 5: Registration with the Norwegian Social Science Data Services

Appendix 1: Description of Sessions 1-16

Session 1

Goal for the session
The goal for this session is to produce a classroom conversation which will mark the start of the project year. All conversations will be in Norwegian.

Scheme for the session
This session will be divided into two parts. 5 minutes are reserved for necessary start-up and concluding activities. 40 minutes will be divided into two parts of 20 minutes each. During this session, two main questions will be discussed:

1. What is necessary to learn a language?

2. What is necessary to learn Spanish/German/French?

1. What is necessary to learn a language?

During these 20 minutes, the goal is to have the learners think aloud in terms of language learning on a general basis. The teacher starts by mentioning that during this year, the learners will be taught learning strategies, and that we will start with a general conversation on language learning which will be followed up by a similar conversation in June 2011. After this short introduction of about 2 minutes, the teacher moves on to the topic of language learning.

The learners present their ideas about the topic without restriction. However, if the conversation stops, the following key words can be used as cues: rote learning of grammatical rules, rote learning of vocabulary, reading foreign language books, travel to foreign countries, get into touch with friends who speak the foreign language, engage in homework, study for vocabulary tests, listen to foreign language movies, write texts to be corrected by the teacher, watch foreign language news, tackle stress, overcome frustration, etc.

The goal is for the learners to present their personal views on language learning. The teacher directs the flow of the conversation and moves it forward with the necessary above-mentioned key words if they are found relevant. If the above-mentioned keywords are not relevant, the

teacher may use the ongoing conversation as an inspiration. This general introductory conversation ends up in a specific conversation about the language the learners are studying. This specific conversation will be described in what follows.

2. *What is necessary to learn Spanish/German/French?*

During these 20 minutes, the goal is to have the learners reflect on specific problem areas related to the language they are studying. The conversation will be influenced by the experience the learners have with the language, but the following factors are important: degree of difficulty of vocabulary, degree of difficulty of verb conjugations, degree of difficulty of pronunciation, speed of speech flow, cultural differences, degree of formal courtesy in the language, etc.

The goal is to elicit particular views on linguistic and sociolinguistic aspects of the language the learners are studying. Interesting aspects will be, for instance, whether German is perceived as easier when it comes to vocabulary because of similarities with Norwegian, or if Spanish is perceived as difficult because of important vocabulary differences compared with Norwegian. Some learners may think that French pronunciation is difficult for Norwegian learners. While the learners should feel free to express their points of view, the conversation may well be focused on aspects such as vocabulary, grammar and pronunciation. In this way, the learners will have the possibility to talk about what they think is necessary in order to acquire German vocabulary, French pronunciation, Spanish vocabulary, etc.

The main point is nevertheless that the learners are provided with the possibility to express what they feel is necessary in order to learn the language at hand. Relevant possible questions may include:

Is it enough to compare German words with Norwegian words in order to learn them, or does it take more than that?

Is it possible to search for international words in a Spanish text in order to understand Spanish faster?

Would it be purposeful to buy French music in order to learn French pronunciation?

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The main goal is to move the session forward by having the learners reflect on what it takes to learn the language at hand.

Appendix 1: Description of Sessions 1-16

Session 2

During this session, the learners will be provided with basic information in terms of how learning takes place. There is a focus on the difference between learning and acquisition, in addition to the concepts *declarative* and *procedural knowledge*. During Session 3, these basic concepts related to learning will be applied to particular language learning activities. The presentation of the topics is theoretical and this theoretical backdrop, in terms of the dichotomy between learning and acquisition as well as declarative and procedural knowledge, will form the basis for instruction in language learning strategies at a later stage.

The session will be divided into two parts of 20 minutes instruction each, in addition to five minutes for starting up and closing activities. The learners will be provided with an introduction to the topics outlined in the above. This general introduction will be combined with comments and ideas from the learners as in an ordinary teaching session. The learners will be informed about the fact that language learning strategies will be introduced at a later stage, and knowledge from the first sessions related to language learning theory will be an important pillar in this respect.

The difference between the concepts of 'learning' and 'acquisition'

The goal is to develop the learners' basic understanding of the features that characterise learning and acquisition in the form of theoretical knowledge related to practical examples. First of all, the concept of 'learning' will be defined in terms of learning as the development of new knowledge based on old knowledge. The condition for learning to take place is therefore that there is a basis upon which additional learning may be developed. The following model will be used to describe this process:

Basic knowledge + New knowledge = Learning

This year's instruction programme is based on the following principle: learners are to develop knowledge about learning strategies related to foreign language education. For this learning to take place, it is important to possess fundamental knowledge of learning theory, knowledge about language acquisition, and the significance of learning strategies in this process. As the instruction programme progresses, knowledge about learning strategies will increase. Learning is a conscious process that requires concentration and the possibility for maturation.

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The dichotomy between declarative and procedural knowledge.

Knowledge acquired in the learning process on the way towards acquisition may be divided into declarative knowledge and procedural knowledge. Declarative knowledge is the knowledge which can be declared (the learners will be made aware of the connection between the English verb *declare* and the adjective *declarative*), i.e. knowledge which can be declared or explained aloud in some way. In language acquisition processes, these skills may be skills such as saying aloud conjugation rules or lists of words. Declarative learning follows the model outlined during the first part of this session. The process first requires a conscious focus on the topics and skills to be learned. As this process progresses, the knowledge develops into matured knowledge in the form of acquisition. In order to make full use of this knowledge, the next step is to transform the declarative knowledge into procedural knowledge. When declarative knowledge develops into procedural knowledge, this means that the knowledge may be carried out as a procedure that is developed into skills. Procedures are the way we do something, so that procedural knowledge is the knowledge that may be put into practice in one way or another. When it comes to language learning, this is the skill which is being trained when, for instance, one is able to conjugate verbs correctly, or when one uses a word in the right situation.

The purpose of teaching learning strategies is precisely to provide the learners with the knowledge and skills necessary to make full use of declarative knowledge as a basis for the development of good procedural knowledge. When the learners become aware of how to train declarative knowledge, as well as transform this knowledge into procedural knowledge in the next stage, they are being trained to make use of the language learning process based on their knowledge about their own learning style. In this way, their ability to take responsibility for their own learning process is also being trained, since knowledge about one's own learning process makes one more able to work on one's own also outside the school environment.

During the last part of the session, the learners will be informed that, during Session 3, the topics from Session 2 will be used to better understand how language learning takes place.

Appendix 1: Description of Sessions 1-16

Session 3

The learners will reflect on the basic principles pertaining to learning from the previous session in terms of the difference between learning as a conscious process of maturation based on a gradual development of knowledge (the model from the previous session), and acquisition as the automatisation of this knowledge. Thereafter, the learners are once again to explore the difference between declarative and procedural knowledge, also illustrated as the difference between theory and practice. This learning model is then to be transferred specifically to language learning, and at the end of the session the learners are to consider language learning as a phenomenon with the same structure as general learning. This implies that the learner's mother tongue is learned automatically, whereas the foreign language requires the conscious learning of theoretical knowledge that is being trained during the time they are working with the language. This awareness should form the basis of the understanding of the position of the learning strategies in this process, something which is the topic of the next session.

During Session 2, we discussed to what extent all learning requires the training of declarative and procedural knowledge, or whether some forms of knowledge can exist as either the one or the other. Some learners discussed, for example, that it is possible to learn to walk without being told to do so. Others mentioned the fact that the mother tongue is learned without anyone being told how to use it. Cooking was mentioned as an example of how declarative and procedural knowledge may be integrated into each other. During the French session, some learners compared waffles made without a recipe with different degrees of knowledge of French: it is possible to develop a fair knowledge of French if one knows the basic ingredients. This means that it is possible to make oneself understood even with minor knowledge in French, but the goal should be to become better and better, i.e. that the waffles are made more and more according to a recipe. However, waffles may vary even when one follows a recipe. No matter how, most people would be able to make decent waffles of different kinds because one has a basic understanding of how waffles should be made. The learners of French who used this metaphor considered language learning as a gradual training of this linguistic intuition for what is a somewhat correct French.

Other learners mentioned interest and motivation for language learning as important factors in the acquisition of linguistic knowledge. In all the three groups several learners wondered how they best could get opportunities for practising the language and help during the language

Appendix 1: Description of Sessions 1-16

learning process (help from the teacher, travels abroad, get into contact with foreign tourists visiting Norway, music, watching television, and so on).

The learners will be placed in small groups and discuss the following topics for 10-15 minutes:

Declarative knowledge in German/French/Spanish equals topics such as theoretical understanding of grammatical rules, rules of pronunciation, choice of words, use of expressions, and rules of courtesy. Automatised use of this knowledge in language production and understanding will be examples of procedural knowledge. During this session, the learners are to arrive at as many examples as possible of the relationship between declarative and procedural knowledge in the language they are studying. In what follows, some examples of this relationship are provided. However, the list is not exhaustive. The learners are to discuss the ideas freely with each other, and the teacher will assess the results afterwards in a joint session.

German
Declarative knowledge: rote learning of prepositions which take the accusative, accusative and dative, dative and genitive.
Procedural knowledge: The correct use of these prepositions in specific contexts.
Declarative knowledge: Verbs that take *sein* or *haben* in the perfect tense.
Procedural knowledge: Correct use of these verbs in the perfect tense in specific contexts.
Declarative knowledge: Theoretical knowledge about the pronunciation of *st-* and *sch-*sounds seen in relation to Norwegian.
Procedural knowledge: Correct pronunciation of these sounds in specific words.
Declarative knowledge: Rules for the construction of grammatical gender in German.
Procedural knowledge: Use gender properly in specific words.

French
Declarative knowledge: Rote learning of rules for the use of *passé composé* and *imparfait*.
Procedural knowledge: Correct use of these verbal tenses in specific contexts.
Declarative knowledge: Verbs that take *avoir* or *être* in the perfect tense.
Procedural knowledge: Correct use of these verbs in the perfect tense in specific contexts.
Declarative knowledge: Theoretical knowledge about the pronunciation of nasal sounds.
Procedural knowledge: Correct pronunciation of these sounds in specific words.
Declarative knowledge: Rules for the construction of grammatical gender in French.

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Procedural knowledge: Use gender properly in specific words.

Spanish

Declarative knowledge: Rote learning of rules for the use of <u>*indefinido*</u> and <u>*imperfecto*</u>.

Procedural knowledge: Correct use of these verb tenses in specific contexts.

Declarative knowledge: The difference between <u>*–ar* verbs</u>, <u>*-er* verbs</u> and <u>*–ir* verbs</u>.

Procedural knowledge: Correct use of these verbs in specific contexts.

Declarative knowledge: Theoretical knowledge about the pronunciation of the voiceless velar fricative [x].

Procedural knowledge: Correct pronunciation of this sound in specific words.

Declarative knowledge: Rules for the construction of grammatical gender in Spanish.

Procedural knowledge: Use gender properly in specific words.

After a 10-15 minute discussion in small groups, the results will be assessed in a group discussion. The following question may be asked in case there is time left for further discussion based on the group work:

How can the waffles made without a recipe, understood as the production and understanding of German/French/Spanish, be more and more to the point?

Session 4

During this session, the learners should develop a basic understanding of the concept of learning strategies in language education. There are many kinds of categorisations of learning strategies, and only three kinds of strategies will be integrated into the SBI programme. The three kinds of strategies that have been integrated into the SBI programme are cognitive, social and affective learning strategies. The learners will be provided with sheets containing explanations of these strategies. The task sheets are self-explanatory and consist of an introductory sheet and three subsequent sheets. The main purpose is to understand the core features of these three strategies and, to the extent possible, draw on examples the learners have already used during the implementation of the SBI programme.

A short introduction will be given based on the implementation of the programme so far in terms of how language learning takes place in theory and practice/declaratively and procedurally. During the previous session, this approach was related to the language the learners are studying, particularly in terms of the topics which have been dealt with so far in upper secondary school, as well as the knowledge the learners have acquired before they started upper secondary school. During the classroom conversations, the learners mentioned different methods and strategies they use when they learn vocabulary, grammar and pronunciation. During this session, these strategies will be systematised as a starting point and a tool in order to understand one's own language learning. The learners work with the tasks in small groups. Towards the end of the session, approx. 15 minutes will be spent on a summary of the group work.

Language learning instruction programme, task week 44

Thus far in this instruction programme, we have discussed methods and strategies which can be used during second language learning processes. We have talked about topics such as going abroad on holiday, working in tourist places where the language is spoken, and watching foreign language movies. Today we are going to organise these methods, which we call learning strategies. During this session, we will be working with three kinds of learning strategies. These learning strategies are listed in this set of tasks, and the tasks consist of arriving at as many examples as possible under each point. You may find the examples from your own experience

with the language. Spend five minutes on each learning strategy. Write the answers under each point, and then we will sum up at the end of the session.

Cognitive learning strategies

Cognitive comes from the word *cognition*. Cognition includes understanding, learning, memory and perception. As a conclusion, the word simply includes everything we have to do in order to gain knowledge about something. Cognitive learning strategies are therefore all the methods we use to understand, for instance, grammar and vocabulary. If we are to develop grammar, vocabulary and pronunciation, we need to practise the language. We also need to develop our understanding of what other people say.

What have you done yourself in order to learn rules of conjugation, vocabulary and pronunciation?
What have you done yourself in order to understand movies, conversations and texts as much as possible?

See how many methods you can remember ☺

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Social learning strategies

Language is basically communication and communication happens between people. Social learning strategies are therefore learning strategies that can be used in interaction with other people. Examples of social learning strategies are talking to fellow learners or to people who speak the language as their mother tongue, learning about the culture in the countries where the language is being spoken, asking interlocutors to talk more slowly/distinctly/easier, or asking your interlocutor to correct you.

What have you done yourself in order to practise the language in interaction with others? Have you worked at a tourist place? Did you have to ask people to speak more slowly? Did you ask them to correct you? Have you learned anything about foreign traditions and customs at any point in your life?

Write down the examples which come to mind ☺

Affective learning strategies

Affection is another word for feelings, attitudes and values. When talking about something that has sentimental[1] value, we refer to the fact that an item does not have a monetary value in itself, but that the item has value to us because, for instance, our grandmother bought it during the war. In such a situation, our feelings mean more than the monetary value itself. Affective learning strategies are the methods you use to reduce stress and frustration in the language learning process, but also what you do to give yourself recognition for what you have achieved.

Have you ever gone out for a walk or listened to inspiring music in order to get into the right mood to do homework? Have you ever said to yourself that you were pleased with the verb conjugation you had just learned? Have you given yourself a specific reward for something you have achieved in the language learning process? Have you talked to others about something which has been difficult in the language learning process?

Write down as many examples as you can think of ☺

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[1] In Norwegian, the concept for sentimental value is «affeksjonsverdi». In this concept, the affinity to "affective" is easily recognised. While this is not the case in English, in Norwegian the concept may be used to clarify the meaning of affective learning strategies.

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Session 5

During this session, the learners are to acquire a basic understanding of the content of the concept *metacognition*. This is the last session on the basic principles in the field of language learning strategies. From Session 6 onwards, the learners will be working with specific metacognitive learning strategies. The different topics should be related to relevant problem areas in the instructional process, such as work with specific homework, tasks and topics the learners are working with elsewhere.

The learners will be informed that thus far in the instruction programme they have received an introduction to learning psychology related to foreign language acquisition, as well as an introduction to learning strategies for foreign language learning processes. This kind of knowledge can also be called metacognitive knowledge, and metacognitive knowledge simply means knowledge about one's own knowledge, or knowledge about one's own learning. Metacognitive knowledge, i.e. knowledge about one's own learning and what the learners can do in order to increase the quality of this process, is the main topic of this year's instructional programme. The purpose behind learning the pedagogical concepts for language learning is that learning theory in the field states that it may be useful for learners to understand one's own learning. It may be beneficial for the learners to learn the concepts behind this learning process. During this session, the focus is on an imagined situation where the concept of metacognition will be practised. The activity is about planning, implementing and assessing a trip to the country where the language is being spoken. In the set of tasks, the language subjects were not specified in order to avoid too many papers being distributed around, but the teachers were told that "abroad" may be interpreted as a Spanish-speaking country, a German-speaking country, or a French-speaking country.

The learners decide which situation they want to produce based on an awareness of cultural factors that may come into play. In Spain, it is common to gather outside in the evening at certain places and squares. On these occasions, it may be easy to come into contact with elderly people who sit around chatting. This is less common in countries such as Germany. If one is in the large city of Paris, it is more difficult to get to engage in conversation with people than in the countryside in Provence. The point is that the learners are made aware of the fact that such an understanding of the culture involved is an important basis for planning the language learning activity as efficiently as possible.

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In terms of today's activity, it is important that the learners grasp a situation that conforms to their interests and level of language. The metacognitive aspect is for the learners to plan an imagined language activity by analysing their own level and their own gaps that have to be filled. They must ensure that they possess the skills to implement the plan, as well as being able to think about what they have to do in order to assess themselves. These metacognitive principles are brought down to a very specific level in the task, and they all will be able to say something about each learner's way of working with it. At a later stage in the implementation of the SBI programme, the same principles will be used in relation to homework, watching movies, listening to music, reading books and other activities that may be related to the general teaching process according to the topics covered so far in the instructional process. Knowledge about learning strategies follows the same track as general knowledge development: in order to make full use of these strategies, they should be learned both in theory/declaratively and in practice/procedurally. This is essentially the main purpose for the whole year's instructional programme, and the procedural part should be related to the general teaching in the subject as far as possible.

The following sheets will be distributed among the learners. First, they read through the definition of metacognition and then they fill in the set of tasks. The goal is to spend approximately 15 minutes on the summary. The following time schedule is suggested:

- 5 minutes for start-up activities.
- 5 minutes introduction with an explanation of the programme for the session.
- 10 minutes individual planning based on the set of tasks.
- 10 minutes conversation in pairs/groups.
- 15 minutes summary in class.

Although this is the suggested general time schedule, it is possible to adjust the schedule according to the overall evolution of the session.

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Language learning instruction programme, task week 47

During the previous session, the focus was on the concept cognition, which includes understanding, memory and perception. Metacognition is derived from this concept, and the prefix *meta-* means *behind*, *next to* or *with*. In Norwegian, the concept may therefore be explained as understanding one's own understanding, or thinking about one's own thinking. In the language learning process, metacognition simply means knowledge and understanding in relation to one's own language learning and knowledge about what has to be done in order to achieve the learning goals in the language.

Key words in this respect are:

1. How do I learn languages?
2. Which learning strategies can I use in order to learn languages?
3. How can I adapt these learning strategies to what has to be learned?

Metacognitive learning strategies are strategies that help us to plan and implement the language learning process based on the knowledge we possess about ourselves, about what we already know, and about the learning strategies we have at our disposal. At a later stage during the implementation of this SBI programme, focus will be directed to specific metacognitive learning strategies. However, during this session we will start by looking at how metacognition takes place in practice.

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Today's task is the following activity:

You are going abroad with your family and you want to make sure that you get to practise the language. Follow the following recipe, and compare with another learner when you have completed the form! At the end of the session, we will sum up the ideas.

1. Determine a situation where you want to practise the language: clothes shop, sports shop, buy a cinema ticket, talk to someone your age about Norwegian soccer, etc.

2. Explain what you want to do in order to plan your practice. Think through which words and expressions you need to learn, find sources for learning new words and expressions (Internet pages, dictionaries, ask the teacher, get help from fellow learners, write down some sentences you want to use, etc.)

3. Explain what you want to do in order to implement the practice session: ask the family to give you one hour for going to the shop, bring a note in order to not forget words, learn by heart all you can before entering the shop, etc.

4. Explain how you will learn from the situation after the implementation of the plan: learn the words you felt were missing, ask the teacher when you come home about words and expressions you did not understand, write down another imagined situation in order to sum up, etc.

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Session 6

The goal for this session is for the learners to develop basic knowledge about the metacognitive learning strategy:

> **A1. Overviewing and linking with already known material**
>
> "Overviewing comprehensively a key concept, principle, or set of materials in an upcoming language activity and associating it with what is already known. This strategy can be accomplished in many different ways, but it is often helpful to follow three steps: learning why the activity is being done, building the needed vocabulary, and making the associations" (Oxford, 1990: 138).

This metacognitive learning strategy is number one of three metacognitive learning strategies aimed at helping the learners to "converge their attention and energies on certain language tasks, activities, skills, or materials. Use of these strategies provides a focus for language learning" (Oxford, 1990: 138).

This learning strategy will be applied to a specific activity that the learners are already somehow engaged in, for instance homework, a forthcoming task or some other kind of suitable activity. In what follows, the principles for the task in terms of reading a text are described, but this outline must be adapted to the activity that is chosen as a basis for the task.

The learners will be told that, as of this session, a total of 11 metacognitive learning strategies will be reviewed. The concept of metacognition will be explained once again as knowledge about one's own knowledge, insight into one's own learning process, or awareness about one's own learning process.

In other words, this means that there will be a focus on 11 learning strategies, which include planning and assessing one's own language learning process. In order to carry out this process in an efficient way, it is necessary to possess knowledge about best practices adapted to each particular learner. It is also necessary to practise how one approaches a language learning activity. This process will be started during this session. The relationship between theory/practice or declarative/procedural knowledge is also valid for the learning strategies: they can be learned in theory, for example in accordance with the above-mentioned definition, and they can be used in practice, something which is the topic of this session. The learners will

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be told that in order to focus attention there are three questions one may ask oneself before engaging in a language learning activity:

1. Why is the activity to be carried out?
2. Which vocabulary do I have to build up?
3. How is this related to something I have learned before?

When reading a text, the following procedure may be followed:

The learners write down the following:

I am going to read this text in order to … .
In this case, the activity will determine the purpose. For example, this may be to learn a certain grammatical form, rehearse specific vocabulary, or gain insight into a specific cultural topic. The learner's perception of the content of the text is the crucial point.

As a next step, the learner writes:

In order to understand this text I have to learn words which have to do with … .
In this case, the topic will determine what kind of vocabulary needs to be built up. The goal is for the learners to analyse themselves which vocabulary has to be built up, and the scope of this vocabulary.

Finally, the learner writes:

When I see this text, I think of what we previously reviewed about …
In this case, the goal is for the learner to associate the text freely with another topic or activity which he or she has worked with previously. Perhaps the learners have gone through some kind of verb conjugation, and the text will thus be adequate for examples of this verb conjugation. If the learners have studied family-related vocabulary, it may be that the text is adequate for practice in relation to this kind of vocabulary. The point is nevertheless that the learners themselves discover the purpose of the reading task.

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The goal is for the learners to be made aware of the fact that, prior to a language learning activity, it is possible to discover the meaning behind the task based on the knowledge the learner has about the language learning activity, and the knowledge the learner possesses about his or her own learning style and knowledge thus far in the subject. During this session, the learners are not to read the text/do the task, etc., but only think about how they can approach a task by planning it in the way we have now done. The work in other situations in everyday life in school, in the form of homework or activities, will be dedicated to the actual work with the topics. It is the actual approach/pre-understanding that is the topic during this session. Today's activity may be seen in light of how the stay abroad was planned during the previous session, since the purpose behind that task was also to let the learner explore his or her own field of interest and knowledge, and then let this influence our imagined stay abroad in order to achieve the highest possible linguistic outcome.

The procedure outlined in the above may be applied to a series of different activities, for example tasks related to the conjugation of verbs, reading different kinds of texts, conversation tasks, listening to lyrics, and listening tasks. The point is that the learners develop an understanding of how the focus may be narrowed so that the activity becomes as meaningful as possible. By using material that the learners are already working with, the activity is also made relevant for everyday school life. It would be best to use some homework the learners have already been given. The learners may then get help to see how they can plan the homework based on metacognitive principles.

We dedicate some time towards the end of the session to sum things up in a plenary session. The time frame for the summary is dependent on how well the learners work with the activity and how quickly time passes.

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Session 7

During this session, the goal is to provide the learners with basic knowledge about the metacognitive learning strategy:

> **A2. Paying Attention**
>> "*Deciding in advance to pay attention in general* to a language learning task and to ignore distractors (by *directed attention*), and/or *to pay attention to specific aspects* of the language or to situational details (by *selective attention*)" (Oxford, 1990: 138).

This metacognitive learning strategy is number two of three metacognitive learning strategies aimed at helping the learners to "converge their attention and energies on certain language tasks, activities, skills, or materials. Use of these strategies provides a focus for language learning" (Oxford, 1990: 138).

The session starts with a summary of the programme of the autumn term. The first part of the autumn is dedicated to a general introduction to language learning psychology. The main focus is on the difference between declarative and procedural knowledge and the consequences this difference may have for language learning in the form of grammatical rules, rules of pronunciation, and word creation. The learning strategies may be used as a tool in this process. The learning strategies help us to make the right choices in the language learning process, and the most important ones are the cognitive, social, affective and metacognitive learning strategies. The autumn term ended with an extended focus on the metacognitive learning strategies. These are learning strategies that help the learner to gain more insight into his or her own learning style and make use of knowledge about his or her own learning process in order to benefit the most from language teaching and learning. The learning strategies follow the same principle as language learning in general: they may be learned both declaratively and procedurally, i.e. both in theory and practice. This is the focus of the metacognitive learning strategies of the present SBI programme: the learners are presented with the content of the strategy and then these principles are applied to a specific material.

As a parallel to the tuition in language learning psychology and learning strategies, another focus during the autumn term has been mentioning how a learner with a Norwegian background can make best use of the differences and similarities between Norwegian and the target language when facing the learning of the foreign language.

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After this short summary of the activities during the autumn term, there will be a further focus on the metacognitive learning strategies. There is ongoing work with three kinds of metacognitive learning strategies that help the learner to focus prior to a language learning activity. Last time there was focus on the meaning inherent in a task in the form of understanding why the task is to be done in light of previously rehearsed material and acquired knowledge. The same pattern will be followed this time, and there will be focus on how the learner can best focus his or her energy on the upcoming activity. Some kind of relevant language learning activity will be chosen, such as homework or an activity to prepare for a test, and this activity should preferably fit into the general time schedule/programme.

The learning strategy of this session builds on the previous strategy in the sense that the pre-understanding/creation of meaning which was the focus of the previous session enables the learner to keep the right focus during the implementation of the task. If the learner, for instance, has defined the grammatical focus of the task, as well as how this focus fits into previously learned material, it is easier to converge specific attention to these aspects during work on the task.

When working with a text, the following procedure may be followed:

This text has as its main focus 'x'. I may then expect that the text contains words which have to do with 'x'. I will read through the text and write down all the words which have to do with 'x', and then translate them into Norwegian. This time I do not focus on the words that do not have to do with 'x'. Thereafter, this procedure will be applied to the text itself prior to the main activity, which consequently consists of carrying out what the planning process will have provided for.

If the task is applied to a grammatical fill-in-the-blanks task, the following information may be written on the blackboard:

This grammar task has as its main focus 'x'. I may then expect that the task consists of fill-in-the-blanks which have to do with 'x'. Therefore, I will write down the conjugation paradigm for 'x' on a separate sheet and then use this overview when working with the grammar task.

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This procedure is thus intended to be a suggested method for engaging in the learning strategy of this session. However, the goal is for the learners to work with some kind of material that fits into the overall progression of the course, and that they are made aware of the following points:

1) The content of the learning strategy of this session (declarative knowledge) and
2) The application of the strategy to specific material (procedural knowledge)

Upon completion of the procedural task, the experiences with the introduction of this session's learning strategy will be discussed in a plenary session.

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Session 8
The teachers were informed that the goal for this session was to provide learners with basic knowledge about the metacognitive learnings strategy:

> **A3. Delaying speech production to focus on listening**
>
> "*Deciding in advance to delay speech production* in the new language either totally or partially, until listening comprehension skills are better developed. Some language theorists encourage a 'silent period' of delayed speech as part of the curriculum, but there is debate as to whether all students require this" (Oxford, 1990: 138).

This metacognitive learning strategy is number three of three metacognitive learning strategies aimed at helping the learners to "converge their attention and energies on certain language tasks, activities, skills, or materials. Use of these strategies provides a focus for language learning" (Oxford, 1990: 138).

This metacognitive learning strategy does not necessarily have to be linked to a specific exercise. This session is intended to provide the learners with the opportunity to think about the phenomenon that, during the language learning process, it is easier to listen to and understand oral speech than to talk. If it is possible to relate this strategy to an ongoing task, this approach is also possible. Such an ongoing task may be a speech exercise the learners have recently worked with, and their experience of this learning situation. All the learners have probably experienced a situation that can be used in one way or another.

This strategy is related to listening and speech, and not reading and writing, so that the focus will be on the former. It is disputable whether delayed speech production is a conscious strategy which is being used in order to learn, or if it is a strategy which is used in order to avoid the uncertainty inherent in independent speech production.

Some theoreticians recommend that learners consciously avoid producing their own speech for a long period of time in order to only focus on listening. This is largely controversial, since most people agree on the fact that simply starting to speak the language, also in the form of speech, is an important part of language learning. If a learner delays the whole process of speech production, or in the beginning only talks in bits and pieces without producing coherent sentences, most people would maintain that speech production should be stimulated and not

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delayed. As a learning strategy, delayed speech production may still be a way for some people to concentrate on parts of the language in the form of listening comprehension in order to have fewer aspects to relate to. In this way, delayed speech production may be a strategy to avoid stress in the language learning process in the hope that concentration on the understanding of spoken language may lead to enhanced knowledge about linguistic constructions, something which again leads to enhanced speech ability.

This session starts with a few minutes spent on the above-mentioned principles. Following this introductory account of these principles, the learners discuss the following questions in small groups. If the task is related to an ongoing task in the other lessons, this situation is used as a basis for the task. If not the learners may associate freely.

The basis for this exercise is, for instance, the following question or a similar question:

How do you feel about talking the foreign language?

Have you ever remained silent during a conversation in the foreign language in order to concentrate on what is being said in order to learn from it?

Have you ever remained silent during a conversation in the foreign language because you did not quite know how to express yourself?

When the above-mentioned topic has been discussed in small groups, the different input will be summed up in a plenary session. A full session is probably not necessary this time, so the session will end when there are no more topics left for discussion.

Session 9

Goal for the session

During this session, learners will be provided with basic knowledge about the metacognitive learning strategy:

> **B1. Finding out about language learning**
>
> "*Making efforts to find out how language learning works* by reading books and talking with other people, and then using this information to help improve one's own language learning" (Oxford, 1990: 139).

This metacognitive learning strategy is number one of six metacognitive learning strategies aimed at helping the learner to organise and plan the learning process in such a way that he or she gets the most out of the language learning process. These strategies cover many areas: retrieve knowledge about language learning, organise progression plans and learning environment, set goals, assess the purpose with a given task, plan tasks and seek opportunities to practise the language (Oxford, 1990: 139).

Scheme for the session

This metacognitive learning strategy is basically about discovering the implications of language learning processes. Many learners do not know enough about the dynamics and mechanisms inherent in the language learning process, even if such knowledge will make this process more efficient according to some theories. In this way, the scheme of this session will largely provide opportunities for repetition and creation of meaning in relation to the progression of this SBI programme thus far. Theory in the field recommends books about language learning as a relevant source for retrieving information. The SBI programme has thus far provided learners with a summary and a short version of the content of such theoretical presentations. Therefore, this session will be used as a small milestone since the SBI programme thus far illustrates appropriately what knowledge about language learning really is. In accordance with the systematic nature of this SBI programme, it is recommended that this session be dedicated to a conversation about the problems the learners have experienced with their language learning process. This may be done in the form of mutual sharing of experiences about learning strategies, etc. This is basically what we have spent time on so far. Therefore, during this session the learners will briefly analyse the content of the goals in the curriculum for foreign languages

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in terms of language learning and assess whether the SBI programme will help the learners see what they may do specifically in order to collect information about language learning processes. Therefore, the learners will each be given a copy of the description of the Norwegian curriculum. They will then be asked to review this description systematically in order to assess whether the SBI programme thus far has helped them on their way to reach these goals, also in terms of the activities they have engaged in during the language sessions apart from these SBI sessions.

The session starts with a brief introduction related to today's strategy in accordance with the information given in the introduction to this document. This activity will probably take two to three minutes. Afterwards, copies related to the goals in the curriculum will be distributed, and the learners discuss in small groups for approximately 15-20 minutes. Finally, this input will be summed up in a plenary session. If the learners feel that they have finished before 15 minutes have passed, the summary will start thereafter, and the session will finish prior to the given endpoint.

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SBI programme, metacognitive learning strategies week 5 2011

1. Read through the goals in the curriculum from the Directorate of Education below.
2. What can you do yourself in order to reach these goals?
3. Do you feel that you have received any help in this respect as a consequence of the implementation of the SBI programme?

Language learning

The main area *language learning* includes insight into one's own language learning process and language use. Important features are the development of the ability to use purposeful learning strategies, such as defining one's own learning needs, formulate targets, choose working methods, use aids and assess the working process and to what extent targets have been reached on an individual basis and in co-operation with others. This is intended to improve learning outcomes in the subject.

(http://www.utdanningsdirektoratet.no/grep/Lareplan/?laereplanid=123914&visning=2, 25.1.11)

Competence goals - Language learning

After the 10th year/2nd year in the Upper Secondary School (FSP1Z01 – Foreign languages common subject level I), the goal for the education is that the learners shall be able to:

- Make use of their own experiences with language learning when learning the new language
- Examine similarities and differences between the mother tongue and the new language and make use of this in one's own language learning
- Use digital tools and other aids
- Describe and assess one's own work when learning the new language

After the second and third year in the high school system (FSP1Z02 – Foreign languages common subject level II) the goal for the education is that the learner shall be able to:

- Make use of experiences with language learning in order to develop further his or her plurilingualism
- Make use of different sources of authentic texts in one's own language learning
- Use digital tools and other aids in a critical and independent way
- Describe and asses one's own progress when learning the new language

(http://www.utdanningsdirektoratet.no/grep/Lareplan/?laereplanid=123914&visning=5&sortering=3&hoid=123915, 25.1.11)

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Session 10

Goal for the session

During this session, the learners will be provided with basic knowledge about the metacognitive learning strategy:

> **B2. Organizing**
>
> "*Understanding and using conditions related to optimal learning* of the new language; organizing one's schedule, physical environment (e.g., space, temperature, sound, lighting), and language learning notebook" (Oxford, 1990: 139).

This metacognitive learning strategy is number 2 of 6 metacognitive learning strategies aimed at helping the learner to organise and plan the learning process in such a way that he or she gets the most out of the language learning process. These strategies cover many areas: retrieve knowledge about language learning, organise progression plans and learning environment, set goals, assess the purpose with a given task, plan tasks, and seek opportunities to practise the language (Oxford, 1990: 139).

Programme for the session

During this session, it is possible to draw upon experiences from the three classes involved in the project to the extent that it is interesting and relevant for the learners to see the results of the project so far. This summary may serve as background information for the road ahead. Learners may be provided with the summary below to the extent and scope that is relevant and purposeful. In any case, the programme of this session is presented at the bottom of page 3. During session 9, some comments were made in the three groups, which basically point to the fact that a certain awareness has been raised in terms of metacognitive principles. This is the purpose of the project: we are looking at how it is possible to converge focus and attention on language learning as a process in order to see how such metaconversation may be organised in the classroom, as well as how its evolution will be. In this way, it will be possible to make the goals in the curriculum according to the *LK06* curriculum more specific for the optimalisation of learning outcomes in the field of *language learning*. The idea behind this part of the curriculum is thus a higher degree of learner autonomy in the language learning process as such, and important aspects relate to the fact that learners in the Norwegian school system are to be able to give an account of and describe their own work with the language. This SBI programme,

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as previously stated, is a way to render these goals more specific. The ground is being prepared for the learner to develop individually and in co-operation with others' insight and a method for assessing his or her own work with the language, in addition to the learners' own achievement of goals. The role of the learning strategies in this work is a core element. Metacognition is thus about the skills the learners acquire in order to understand their own learning so that this process becomes as efficient as possible. The point is that a learner who has insight into his or her own learning, and how this learning is best achieved, will experience a larger effect in the language learning process. This perspective pertaining to learner autonomy includes general educational perspectives as well and should have the potential to be transferred to other subjects.

Tuition aimed at developing learning strategies in the subject, or *Strategy Based Instruction* (SBI), may thus be included in the normal tuition, or be organised separately in the way we are testing metacognitive principles. The advantage of a separate programme is that a space is created for this kind of tuition so that it is possible to focus upon insight into one's own learning process on an individual basis and/or in co-operation with others. What we are testing is how this kind of tuition can best be organised and handled, and what we are to assess eventually. The goal is to reach a conclusion in relation to how we can best promote learner autonomy in terms of a separate tuition programme for this purpose. This overall assessment will be carried out in June when the programme is finished. At any rate, there is discrepancy in the field in terms of whether tuition in language learning should be implemented as an integral part of the tuition or as a separate programme, or whether a combined model is preferable. However, this project will yield the basis for some conclusions regarding tuition models that may be optimalised and form the basis for educational reforms and assessment according to the curriculum.

During Session 9 (the previous session), we introduced to the learners the curriculum pertaining to *language learning*, and we discussed to what extent this SBI programme can function in order to achieve these goals. During the summary with the groups, interesting elements emerged that reflect the professional debate in the field.

A learner in the Spanish group stated that they had had a test before Christmas in another subject. However, this learner found that the test had been based too much on a "declarative learning process". This comment indicates that the learner has transferred insight into his or her

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own learning from the foreign language over to another subject, something which again points to the fact that we have possibly contributed to a certain general educational development in the learner in this field. In the German group, one learner thought that it had been fun to understand better the difference between theory and practice in the language learning processes. This comment also indicates a trace of awareness-raising in terms of the nature of language learning.

In the same German group, there was a learner who stated that it could be useful to learn more about strategies for the learning of words. Such strategies are of a cognitive nature, but the fact that the learner is aware of what he or she wants to learn more about, bears witness to a metacognitive awareness in terms of the learner being aware of the gaps that need to be filled.

In the French group, two learners had discussed whether it is purposeful to spend time on learning strategies as part of the language learning process. The fact that two learners were able to discuss this topic points to the fact that they had gained enough metacognitive insight to define their own learning needs and working methods. This is an important aim of the curriculum, and strikes at the core of the debate for SBI: Will separate time given to SBI yield more efficiency, since there is greater focus on the topic and that time spent will be compensated for with more efficiency in the ordinary tuition? Or should SBI, i.e. tips and advice related to working with the language learning process, be integrated into the regular teaching? At any rate, two learners who assess this point based on their knowledge about the nature of metacognition provide valuable information about how aware they are in the field. They have been able to make a purposeful assessment of their own working methods and learning needs.

In the French group, one learner mentioned that spending time on defining the kind of learning strategy that is relevant in advance of a language learning activity, seemed demotivating since it is logical how one is to work with the subject. Theory in the field states that skilled language learners have less use of SBI since they have essentially broken a code for learning. If this learner is skilled, separate time spent on SBI may be experienced as an unnecessary waste of time. Theory states that weaker learners may have use of SBI since they receive help to understand their own learning, but again this learner's comment is a sign that a certain awareness has been raised that enables the learner to reflect and describe his or her own learning needs and working methods in accordance with the curriculum.

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The idea is that such an awareness-raising will enable the learner to better assess the purpose of work tasks and to adapt the work method in relation to insight into his or her own learning. In this way, a metacognitively aware learner may, for example, choose to disregard certain parts of work instruction if this learner thinks that the instruction is not adapted to the learner's progress at a given stage. In this way, we may notice that we start to get interesting results that may form the basis for some conclusions. Again the point is whether such insight is best promoted through integrated SBI, separate SBI (in the way we are working), or as a combination of these methods. The summary above of the programme so far is meant as a milestone along the road, and each teacher assesses whether it is useful to spend time on a short summary to the learners, or whether the activity of this session should be organised immediately.

This session's metacognitive learning strategy aims at developing learner awareness in terms of the progress plan for the language learning process, as well as how the physical environment and note books are organised. Learners are told that these are important factors for work at the school and at home, something most people would agree upon. For this session's learning strategy to be best adapted to our groups and to be purposeful in the progression of the SBI programme, the following activities or similar activities are proposed:

A. If the learners have an up-coming test, time may be spent in the class discussing how the preparatory work for this test may best be organised.

B. If the learners are engaged in project work, we may discuss in plenary how the planning and implementation of this work may best be organised throughout the whole project period.

C. The learners may explain how they take notes and if they keep a systematic log book. As a specific task, we may for example use a relevant reading text from the workbook and write down unknown words from this book. Afterwards, the learners may explain to each other why they set up the word list as they did.

D. The learners may discuss and afterwards present how they think the physical learning environment is set in the classroom, or if they have specific tips from their own home environment.

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E. The learners may use a piece of homework they have to do until next time, and then spend 5 minutes planning how to do this piece of homework in order to talk about it afterwards.

F. If the learners are working on a book as a part of their education outside the language learning classroom, they may explain how they have organised the reading so far, and how they plan further reading, as well as upcoming work in relation to this reading.

G. If the learners are going on a study trip in the near future, a possible topic of discussion is the planning of this trip from a linguistic point of view and in relation to the sessions outside the language-learning classroom.

H. If the learners have an overview of verb conjugations, a possible topic of discussion may be how this overview is systematised and how one integrates new verb structures into this overview.

These ideas are mere suggestions and other activities may also be used. What is important is that the learners spend time on reflection and assistance in relation to some kind of ongoing work and that it is related to this session's learning strategy in one way or another (organising of work and/or adaptation of work environment). If the whole session is not used, the session is finished when the discussion has reached an endpoint.

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Session 11
Goal for the session
During this session, the learners will be provided with basic knowledge about the metacognitive learning strategy:

> **B3. Setting goals and objectives**
> "*Setting aims for language learning*, including long-term goals (such as being able to use the language for informal conversation by the end of the year) or short-term objectives (such as finishing reading a short story by Friday)" (Oxford, 1990: 139).

This metacognitive learning strategy is number three of six metacognitive learning strategies aimed at helping the learner to organise and plan the learning process in such a way that he or she gets the most out of the language learning process. These strategies cover many areas: retrieve knowledge about language learning, organise progression plans and learning environment, set goals, assess the purpose of a given task, plan tasks, and seek opportunities to practise the language (Oxford, 1990: 139).

Programme for the session
This metacognitive learning strategy seeks to raise learner awareness about the goals the learners want to achieve. During the previous session, there was focus on organising the language learning work. This session's learning strategy is closely related to the organisation that was the topic of the previous session since, in order to achieve a goal, good organisation and planning is required. However, good organisation and planning also require clear and transparent goals, and this goal setting component is an important part of metacognitive issues. It is easier to measure the achievement of goals on an individual basis when the learner knows what personal goals he or she has set. From an ideal point of view, these goals, and their achievement, may be registered in a log book. At the same time, the teacher has the overall view of plans for homework and tests, and this overall planning is probably enough to push the learners forward. Individual learners may have individual goals they want to achieve, and it may be a good idea to encourage them to define independent learning goals and to register these in a log book.

Whereas the long-term goals may stretch over months or years, the short-term goals help the learner to organise the work on an hourly, daily or weekly basis. During this session, we will

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have a closer look at this setting of goals, and the main intention is to help the learners see how they consider their goals on an individual basis in order for them to go beyond simply wanting to achieve the best grade in the subject. This session's metacognitive learning strategy has as its starting point the four language skills, namely listening, reading, speaking and writing. If the learners are engaged in activities that can be used to exemplify how the road towards the achievement of goals may be defined, it is highly relevant to use these kinds of possible experiences in one way or another.

If the learners have homework for the following day, they may see how this homework fits into the goals they define for their own learning. If the learners are working on a project, they may discuss how the work with this project can be used to achieve the goals they set for themselves. This goal setting component should as far as possible be related to the overall tuition programme in the subject. The learners try to define the goals they have set for the different skills and what they do/can do quite specifically in order to achieve these goals. If they are not aware of these issues, the activity will hopefully be a suitable challenge for the learners to broaden their horizons. The session will be summed up towards the end and will finish when the discussion has reached an endpoint.

The pages with questions will be distributed to the learners as a basis for the activity and several goals may be relevant.

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Course programme in metacognitive learning strategies, week 8/9 2011

Have you ever thought about whether you have set some specific goals in the language subject apart from getting the best possible grade?
Are you aware of why you do the things you do at all times, or do you not think that much about it?
Work together for 10-15 minutes in small groups and review the points below. ☺

Listening

Is your goal to become as good as a native speaker when understanding the spoken language?
Is your goal to understand as much as possible of a conversation with a native speaker?
Is your goal to understand as much spoken language as possible in order to get by as a tourist in the countries where the language is used?
Is your goal to get a job where you have to understand what is being said in a professional setting?
… or do you have other goals for your listening skills?

Have you done anything/do you do anything in particular in order to achieve this goal? Do you have any specific activities coming up in the near future in order to achieve this goal?

Reading

Is your goal to be able to read advanced technical material in the language in some years?
Is your goal to be able to read newspapers or magazines that interest you for the sheer joy of reading?
Is your goal to be able to read literature in the foreign language without making any particular effort?
Is your goal to understand signs and posters in the countries where the language is used?
Is your goal to understand the reading homework without having to look up too many words?
… or do you have another goal for your reading skills?

Have you done anything/do you do anything in particular in order to achieve this goal? Do you have any specific activities coming up in the near future in order to achieve this goal?

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Speaking

Is your goal to learn to speak so well that you get by in a country where the language is used?

Is your goal to be able to talk occasionally with friends or family who have the language as their mother tongue?

Is your goal to get a job some time, for which good speaking skills are important?

Is your goal to speek the language so well that you get by as a tourist in the countries where the language is spoken?

… or do you have another goal for your speaking skills?

Have you done anything/do you do anything in particular in order to achieve this goal? Do you have any specific activities coming up in the near future in order to achieve this goal?

Writing

Is your goal to be able to write to foreign friends?

Is your goal to write the language well enough to be able to study abroad some time in the future?

Is your goal to get a job in which it is important to be able to write the language well?

Is your goal to write well enough to manage the tests in the language subject?

… or do you have another goal for your writing skills?

Have you done anything/do you do anything in particular in order to achieve this goal? Do you have any specific activities coming up in the near future in order to achieve this goal?

Session 12

Goal for the session

During this session, the learners will be provided with basic knowledge about the metacognitive learning strategy:

> **B4. Identifying the purpose of a language task**
>
> "*Deciding the purpose* of a particular language task involving listening, reading, speaking, or writing. For example, listening to the radio to get the latest news on the stock exchange, reading a play for enjoyment, speaking to the cashier to buy a train ticket, writing a letter to persuade a friend not to do something rash. (This is sometimes known as *Purposeful Listening/Speaking/Reading/Writing*.)" (Oxford, 1990: 139).

This metacognitive learning strategy is number 4 of 6 metacognitive learning strategies aimed at helping the learner to organise and plan the learning process in such a way that he or she gets the most out of the language learning process. These strategies cover many areas: retrieve knowledge about language learning, organise progression plans and learning environment, set goals, assess the purpose of a given task, plan tasks, and seek opportunities to practise the language (Oxford, 1990: 139).

Programme for the session

This metacognitive learning strategy seeks to raise learner awareness about the purpose of a language learning activity. If, according to the curriculum, a learner is to assess purposeful learning strategies and working methods, it will be important to know why the activity is to be carried out. This is again related to the programme of Session 11, where the focus was on the overall goal setting the learner has with his or her language learning beyond getting the best possible grade in the subject. It will be much easier to find a meaningful purpose with an upcoming language learning activity for a learner who is aware about the goals he or she has set. In this way, the learner will be more likely to fulfill the curriculum's goal setting in terms of insight into one's own working process.

During this session, we will have a look at the actual implementation of the task, since this activity will form part of the cognitive, social or affective learning strategies that were briefly

considered before Christmas. Since the focus of the whole SBI programme is only on the metacognitive aspect of language learning, this session's programme will only focus on defining the purpose of a task. This purpose will be considered in the possible light of the learners' own goals, which the learners discussed during the previous session.

Just as in other aspects of life, an activity may seem more meaningful if one is aware about the purpose of the activity, and that this activity is considered in a broader context. In this way, awareness about the purpose of specific language learning activities may make the activities more efficient. This session's activity is somewhat different from the strategy A2, which was considered after New Year. At that point, the purpose was to focus attention on the actual content of the activity. During this session, the focus will be on the purpose of a task or an activity, and this purpose will direct the steps the learner has to take in order to carry out the task. In this way, we see how this session's learning strategy is a tool to plan and organise a given activity in the same way as for the other six in group B. The main point with this group of strategies is consequently to help the learners channel their energy in the right direction.

During this session, the learners will discuss the purpose of an activity they are working on in one way or another. They will analyse whether it is about listening, reading, writing or speaking, because the kind of activity will have an influence on the purpose of the activity. If the activity is about reading a text, a possible approach would be to skim through it in order to get an overview, or read certain sections carefully in order to understand some specific details. If the activity is about reading a novel, the point is possibly to learn new words, as well as simply enjoying the book. Listening in the form of understanding the content of a foreign movie implies possibly relaxing in addition to learning new words and expressions. When the task is to write something, it is also useful to know why the text is to be written. An essay requires another textual form than the summary of a text. In this way, the kind of activity (listening, reading, writing or speaking) will have an influence on the purpose of the activity.

Below are some examples of how the activities of this session may be organised after the introduction of this session's learning strategy. It is a good idea to refer to the curriculum's goals in terms of insight into the working process and working methods according to the above. The learners have previously analysed the goals of the curriculum goals related to language learning, and it may be useful to allow them to explore these connections in practice.

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This list is not exhaustive, and similar activities may also be used. Activities which have been used before in the discussions may be used again, such as grammar tasks or a film project. The learners discuss the purpose of the activity they are to work with in pairs or small groups, and after this discussion in class (10-15 minutes) the ideas are summed up as usual in a plenary session. The actual implementation of the tasks/activity is not organised in this session, but is postponed until relevant and suitable.

a. If the learners are engaged in an ongoing project of some kind, they may discuss the purpose of the activity in light of the above-mentioned categories of reading, listening, writing and/or speaking. They are to answer the question: "Why do we work with this project?" Several answers, of course, may be possible.

b. If the learners in the next session are to work with a grammar task, a reading text, a listening text or something similar, they are given the topic of the upcoming task. Thereafter, they discuss the purpose of this task. Again, they may ask the question: "Why shall I do X?" Again, several answers may be possible.

c. If the learners are going on a study trip in the near future, they may discuss the purpose of this trip. They may then ask themselves the question: "Why shall I go on this trip?". Once more, several answers may be possible.

d. If the learners have some homework they have been given/will get for the next day or later, they may discuss the purpose of this homework. This purpose will be influenced by the kind of activity they are engaged in (reading, listening, writing and/or speaking). They may then ask themselves the question: "Why shall I do this homework?" Again, several answers may be possible.

If the discussion is finished before the end of 10-15 minutes, the topics are summed up in a plenary session when the discussion has finished. The summary in a plenary session will also be finished before the end of the session if the discussion during the summary has reached an end.

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Session 13

Goal for the session

During this session, the learners will be provided with basic knowledge about the metacognitive learning strategy:

B5. Planning for a language task

"*Planning for the language elements and functions necessary* for an anticipated language task or situation. This strategy includes four steps: describing the task or situation, determining its requirements, checking one's own linguistic resources, and determining additional language elements or functions necessary for the task or situation" (Oxford, 1990: 139).

B6. Seeking practice opportunities

"*Seeking out or creating opportunities to practise* the new language in naturalistic situations, such as going to a second/foreign language cinema, attending a party where the language will be spoken, or joining an international social club. Consciously thinking in the new language also provides practice opportunities" (Oxford, 1990: 139).

These metacognitive learning strategies are number five and six of six metacognitive learning strategies aimed at helping the learner to organise and plan the learning process in such a way that he or she gets the most out of the language learning process. These strategies cover many areas: retrieve knowledge about language learning, organise progression plans and learning environment, set goals, assess the purpose of a given task, plan tasks, and seek opportunities to practise the language (Oxford, 1990: 139).

Programme for the session

This time, two metacognitive learning strategies have been merged into one session for the above-mentioned practical reasons. These two are not necessarily related, and they consequently have to be presented as two separate strategies. If the learners have an upcoming practice opportunity, these two strategies may well be considered in relation to each other. If it is not possible to implement this approach, learning strategy B6 will be mentioned towards the

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end of the session as a reminder. On previous occasions, the learners have been informed about the importance of seeking situations that provide them with the opportunity to practise the language. Therefore, it is not necessary to spend a good deal of time on it during this session. However, if it is possible to relate this session's strategies to each other, this may be a purposeful approach.

The planning of a language learning activity or task is an important part of the preparation of an activity. The kind of planning will depend on what kind of activity is to be carried out, since writing, reading, speaking or listening will involve different approaches. Irrespective of the kind of activity that is relevant, the preparation of an activity will consist of four steps according to this strategy:

1. Identification of the characteristics of the task/practice/activity.
2. Identification of the necessary steps to take in order to carry out the activity.
3. Identification of the resources the learner already possesses in order to solve the task.
4. Identification of extra resources required for carrying out the activity.

If the activity is about listening to a radio programme in the foreign language, the procedure above will imply the following preparation:

1. Identification of the topic for the radio programme since this will define the direction for the preparation of the topic with words and expressions which are likely to emerge.
2. Identification of possible words and expressions that may emerge based on the identification of topics according to point 1.
3. Analysis of one's own knowledge in order to discover which words and expressions the learner has to read up on or look up prior to the listening activity.
4. Use of dictionary or glossary in order to fill in possible gaps.

It is not possible to identify all the gaps in advance, but the activity as such provides a basis for learning, as well as the fact that the learner benefits more from the listening activity since the linguistic foundation is greater following the preparations.

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If the activity is a reading task, the same approach may be used. If the activity is about reading an article in a music journal, the following model will be used:

1. Identification of the article's topics, since this will define the direction for the preparation of the topic with words and expressions that are likely to emerge.
2. Identification of possible words and expressions that may emerge based on the identification of topics according to point 1.
3. Analysis of one's own knowledge in order to discover which words and expressions the learner has to read up on or look up prior to the reading activity.
4. Use of dictionary or glossary in order to fill in possible gaps.

The same procedure may be used for oral and written production, where the attention to grammar production is also important in the form of mastery of correct conjugation patterns and the use of these patterns.

The learners choose some kind of upcoming activity, for example the homework for the next day, or the partial goal of an ongoing project. They prepare the actual work according to the following procedure. In order to make things easier, four points may be presented to the learners in order to remember the procedure:

1. Topic?
2. What do I have to know?
3. May I use something I know from before?
4. Do I have to get knowledge/aids?

The results are summed up in a plenary session towards the end of the session.

We devote some minutes towards the end of the session to remind the learners about strategy B6 in terms of seeking practice opportunities. This topic has been discussed previously, and the learners are reminded about the importance of seeking situations where they can practise the language.

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Session 14

Goal for the session

During this session, the learners will be provided with basic knowledge about the metacognitive learning strategy:

> **C1. Self-monitoring**
>
> "*Identifying errors in understanding or producing the new language*, determining which ones are important (those that cause serious confusion or offense), tracking the source of important errors, and trying to eliminate such errors" (Oxford, 1990: 140).

This main group consists of two related strategies, and both comprise help functions to control one's own achievement and assess one's own learning. One strategy consists of noticing and learning from mistakes, and the other one relates to assessing the learning process in a holistic perspective (Oxford, 1990: 140).

Programme for the session

An important part of the language learning process is to learn from one's mistakes. In order to do so, it is important to be able to understand the nature of the mistakes, and then possess enough declarative knowledge to improve one's procedural knowledge in the field. One way of getting an overview of what kind of mistakes one commits is simply to register them in a notebook. In this way, the individual learner may gain overall information about the kind of mistakes that are being made and develop an individual understanding of the error patterns of the learner. A good piece of advice when it comes to understanding one's own errors is to try to find out why the mistake or mistakes are being made. By discovering whether the mistake is due to factors such as transfer from some kind of phenomenon in one's own language, or a direct translation that does not work in a given context, the learner will get help to understand more about the construction of the new language in addition to greater insight into his/her own learning strategies. At any rate, it is important to emphasise that too much focus on mistakes may be counterproductive since it may create achievement anxiety, which in turn may prevent learning.

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Self-correction is often associated with oral and written production. However, this technique may also be applied to listening and reading. In terms of listening and reading, such an auto-correction approach would be to think through whether one has understood the message properly, or whether misunderstandings may occur and the nature of these possible misunderstandings.

In terms of oral and written production, the pure linguistic aspects will be important. Another important factor would be whether one expresses oneself correctly in relation to rules of courtesy and other factors that may offend or cause pain if one does not master these rules. At the same time, it is important to emphasise that one must never be afraid of submerging oneself in the language, since this is how learning takes place. Nevertheless, communication is the most important thing, and the fear of making mistakes must not lead to a breakdown in communication. On the other hand, it is always possible to improve in the language if one's strategy is to become better by being aware of the mistakes one makes, and what one can do in order to correct these mistakes.

During this session, the learners will discuss the following based on the above-mentioned aspects of the language learning process:

1. What do I do when I am handed back written tasks? Do I try to understand what kind of mistakes I make? What do I do to correct them?
2. How do I try to correct myself when talking the foreign language?
3. What do I do to check that I understand correctly when I read or listen to the foreign language?
4. How important is it to use the foreign language perfectly? Does it disturb communication if I make any mistakes? Shall I give up talking in order not to make mistakes?

We sum up the discussion as usual in a plenary session towards the end of the session.

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Session 15

Goal for the session

During this session, the learners will be provided with basic knowledge about the metacognitive learning strategy:

> **C2. Self-evaluating**
>
> "*Evaluating one's own progress* in the new language, for instance, by checking to see whether one is reading faster and understanding more than 1 month or 6 months ago, or whether one is understanding a greater percentage of each conversation" (Oxford, 1990: 140).

This main group consists of two related strategies, and both comprise functions to control one's own achievement and assessment of one's own learning. One strategy consists of noticing and learning from mistakes, while the other relates to assessing the learning process in a holistic perspective (Oxford, 1990: 140).

Programme for the session

This learning strategy covers both the learning process in a holistic perspective and specific aspects related to the four skills. The focus on general assessment criteria may possibly be of such a general nature that these criteria become counterproductive. Therefore, the learners are recommended to work with as specific points as possible as part of the self-assessment process. Checklists, diaries or logs are tools the learner may use to assess him/ herself during the process. The learner may be encouraged to divide the self-assessment activity according to the four skills. When it comes to listening, one method is simply to sum up for the interlocutor what the learners have understood from the conversation. In this way, it is possible to check the extent to which the conversation has been understood, and compare this level of understanding with similar previous assessments. If the learner has a plan for his or her own progression, such a survey will yield information about whether he or she has reached the level defined in the long-term planning process. In terms of reading skills in the foreign language, the self-assessment activity may consist of the learners monitoring how the reading speed develops from one checkpoint to another. They may also assess how much of a text they understand and see to what extent this represents a sign of progress. In terms of speech production, the learners may record themselves and then find out how this sounds compared to native speakers. It is also

possible to register how many times one is asked to repeat something during a conversation with a native speaker. If the learner gets used to registering how the interlocutor reacts during a conversation, it is also possible to assess how one's own speech production works. In terms of writing, the learner may assess how the writing process develops in a long-term perspective in the form of sentence length and complexity, precision and grammar as well as semantic correctness.

The above-mentioned aspects are techniques that may be transmitted to the learners as an inspiration for their metacognitive development. During this session, we will render this principle more specific by using the EKSPER wheel, which has been developed at the University of Stavanger. The EKSPER project aims at making learning goals more specific in such a way that the learner may get help to assess his or her own learning as a part of the language learning process.

The learners are provided with a copy of the following form:
http://www.uis.no/getfile.php/HF/EKSPER/Norsk_a2_vg1.pdf
The learners work on an individual basis by shading the fields during the time they have at their disposal during the session. This work may continue after the end of the session if relevant. However, the activity will consist of working with filling-out the form and then discussing learner experiences in a plenary session towards the end of the session. The main point is nevertheless to raise learner awareness about the fact that self-assessment is a method that can be used in order to develop insight into the language learning process, and that it is a good idea to divide this self-assessment into the four skills.

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Session 16

Goal for the session

The goal for this session is to produce a classroom conversation that will mark the end of the experiment. This conversation is a follow-up of the conversation that was conducted when the project started in September 2010.

Programme for the session

The session is divided into two parts. During the session, the two questions asked at the beginning of the SBI programme last autumn will be repeated. The learners will be asked to think through the year we have behind us with separate instruction in metacognitive issues. Thereafter, the learners will talk in small groups for approximately 15 minutes, and then the rest of the session will be spent on a plenary summary, such as in Session 1. The conversation in the plenary session may be structured in such a way that the first question is addressed, and then the second question. As an alternative, the summary in class may follow its own course without dividing the conversation according to the two questions. The learners will first spend approximately 15 minutes on the following questions in small groups, and these questions will form the basis of the summary in the plenary session:

1. What is necessary in order to learn a language?

2. What is necessary in order to learn Spanish/German/French?

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Boston: Heinle & Heinle.

Appendix 2A: Backwards induction of the German Case (GE)

Session 16

GE1. *Turn 414.*
B confirms that B had to take German at this school.

GE2. *Turn 413.*

A asks if B knew that B had to take German when B started at this school.

GE3. *Turn 412.*
B states that Spanish is growing tremendously as an international language.
B states that it is going to be very important to know Spanish, or at least
good to know it. B states that B always wanted to learn Spanish anyway, so
it is a bit cool to be able to learn German knowing that B has enough stamina
to learn Spanish as well. B states that B felt cheated when B could only take
German at the Steiner school, and not be able to choose. B states that B does
not regret.

GE4. *Turn 411.*
A says yes and asks for more information.

GE5. *Turn 410.*
B says yes.

GE6. *Turn 409.*
A states that if B wants to study in Berlin, then it would be useful to know
German.

GE7. *Turn 408.*
B states that as a matter of fact that is how it seems, and that B would have
liked Spanish to be easier. B states that B feels that B will have more use
of German and that German will dominate more.

GE8. *Turn 407.*
A says yes and states that again it is relevant that German and Norwegian
are more related in a way.

GE9. *Turn 406.*
B states that of B's friends, many have expressed that they would have liked
to change now. They have taken Spanish now, but feel that they do not get
by. B states that they would have liked to have German, and they deeply regret
that they have not changed.

GE10. *Turn 405.*
A claims that Spanish is easier up to a certain point. After that point, the
learners discover that there are many things to learn in that language as
well.

GE11. *Turn 404.*
B states that B has the impression that Spanish seems easier sometimes, also
from a grammatical point of view.

GE12. *Turn 403.*
A states that B's language choice could have been a discussion.

GE13. *Turn 402.*
B states that they were cheated for French as well. B states that B did not
have that choice.

GE14. *Turn 401.*
A states that B was cheated for a foreign language by moving to this school.

GE15. *Turn 400.*
B confirms that they started with Spanish in the first grade at the Steiner
school, then advanced Spanish, and the rest was German.

1

Appendix 2A: Backwards induction of the German Case (GE)

GE16. *Turn 399.*
A asks if they had started with Spanish.

GE17. *Turn 398.*
B states that if B had remained at the Steiner school, then B could have taken Spanish.

GE18. *Turn 397.*
A says no.

GE19. *Turn 396.*
B says no.

GE20. *Turn 395.*
A claims that B was forced into a direction that B did not think much about at the age of 7. B could not do much about the situation.

GE21. *Turn 394.*
B states that B has always wanted to learn Spanish.

GE22. *Turn 393.*
A states that B has surely talked to others who attend this school, learners who take French and Spanish. A asks if B has ever thought that it is a pity that B did not take Spanish or French.

GE23. *Turn 392.*
B states that B perhaps works in a different way in order to learn to have everyday conversations and those kinds of things, issues which are more useful during travelling, but which are not that useful in relation to business.

GE24. *Turn 391.*
A asks if B thinks that it will lead to B working differently with German in the time to come and that B in a way has developed a deeper understanding in terms of the reasons for B's actions.

GE25. *Turn 390.*
B states that when they have talked about issues such as why B has chosen German, then B thinks that B has got many more impressions in a way, impressions related to learning German, not simply in relation to work and the like. B adds leisure and travels.

GE26. *Turn 389.*
A asks if B has done anything differently at any point. A asks if B has done homework in a different way, or become more aware of why one has chosen German in the first place. A mentions having a goal with the learning activity.

GE27. *Turn 388.*
B says no. B states that most of what B has thought about is rather logical. B states that it is logical that one has to engage in rote learning in order to master a subject, and it is logical that one has to practise it in order to learn it better, and basically most of what we have been reviewing. B states that B has also seen the importance of how much one needs to learn through rote learning in order to achieve good results.

GE28. *Turn 387.*
A tells B to think back on the year which has passed and the instruction programme B has been exposed to in order to gain insight into the learning process and become more aware of what one may do quite specifically. A states that the point is to find one's own learning style and what suits the individual best, but this depends somewhat on the target one has for the learning process. It also depends on what one finds interesting, what one thinks is easy to work with, and which ways suit one better for the learning of German, as in this case. A reckons that if A had not been present during this year, then B would not have had any relationship to it at all in terms of a conscious approach to what A has written and the issues we have been working with during these sessions. A asks if B has discovered something

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special, if something seems natural, if B has reacted in any way, or if B has developed a certain insight. A also asks if B has done something in a different way just because B got advice during these sessions, or if B has not done things differently.

GE29. *Turn 386.*
B states that it is not that confusing, since B's mother tongue is Chinese. B states that sometimes when B talks to B's older sister, they may switch to Norwegian just like that, then go back to Chinese, and then back to Norwegian again. B states that they do not become confused because of that. B states that sometimes they also switch to German as well. B finds this strange. B states that they also use English once in a while.

GE30. *Turn 385.*
A states that B has probably experienced that if one watches a detective movie in Germany, it will be in German. A states that this might not sound good to us.

GE31. *Turn 384.*
B mentions German subtitles instead of Norwegian ones when watching, e.g. movies. If the movie is in English, then one can use German subtitles.

GE32. *Turn 383.*
A states that B could have opposed that, but A does not want to do that now.

GE33. *Turn 382.*
B states that one needs an exceptional interest for grammar.

GE34. *Turn 381.*
A states that there are certain grammatical structures one has learned in English which one would like to transfer to German. A states that this is because one tends to use the same structures since it is a foreign language, and sometimes this is not the right thing to do. A asks what it takes to learn German. A asks who wants to answer that question. A states that there is a certain overlap with the previous question, so B is only to add issues which have not been mentioned in the previous section.

GE35. *Turn 380.*
B confirms this.

GE36. *Turn 379.*
A states that there are many Latin words in English. A also states that if one uses a dictionary with English words, one may notice that they have different origins. A states that some words come from Anglo-Saxon.

GE37. *Turn 378.*
B states European.

GE38. *Turn 377.*
A states that many words come from Latin.

GE39. *Turn 376.*
B states that not that many do.

GE40. *Turn 375.*
A confirms that English is a bit Germanic.

GE41. *Turn 374.*
B asks if it is true that English and German have two different roots. B wonders if English is Germanic.

GE42. *Turn 373.*
A confirms that B could have tried things out and if B understood them, they would have been OK. A asks the difference B perceives between English and German. A states that when A corrects German, A often notices that the learners think in German. A claims that B knows English well. A claims that

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many structures in English may be recognised in German, something that should
not often be the case.

GE43. *Turn 372.*
B confirms that B could have found support in Norwegian.

GE44. *Turn 371.*
A states that if B, for instance during a conversation, meets a German in
town, then B could have found support in Norwegian to a certain extent.

GE45. *Turn 370.*
B states that B only looks for similar words when reading. B understands the
meaning of a word since it is similar. B states that B can make a guess when
writing. B states that B tends to use a dictionary anyway.

GE46. *Turn 369.*
A asks if B looks for words which are similar or if B takes the word which
is the closest.

GE47. *Turn 368.*
B says no.

GE48. *Turn 367.*
A asks if this is something B does consciously when working with a German
text.

GE49. *Turn 366.*
B states that there are many German words that are similar to Norwegian words.
B states that this is rather practical because it is then possible to make a
guess in terms of the meaning of the words.

GE50. *Turn 365.*
A states that B made a safe choice in many ways. A states that it has occurred
to A that, in terms of making use of Norwegian as a starting point, and also
learning from other languages, A wonders if B has reflected during the year
over the issue how B can make use of B's own mother tongue, Norwegian, or
the learning of other languages, probably English at this point. A wonders
how B can make use of this experience when studying German. A states that
they have touched upon this issue during the year, but since the topic is to
summarise briefly during this session, A wonders if B has had any special
experiences, such as thinking of how to use Norwegian in a particular way
when learning German, or a similar situation in relation to English. A wonders
if B has reflected over how to use experience with previous languages, one's
mother tongue, or English.

GE51. *Turn 364.*
B states that B had heard that the wisest thing to do was to take German.

GE52. *Turn 363.*
A says yes.

GE53. *Turn 362.*
B states that B had wanted to learn the language properly in order to get a
deeper understanding of the language. B states that B had thought of taking
another foreign language than German.

GE54. *Turn 361.*
A acknowledges B's confirmation of the importance of the parents' opinion.

GE55. *Turn 360.*
B confirms that the parents' opinion is important.

GE56. *Turn 359.*
A asks if the parents' opinion is important when it comes to the language
choice the learners make in lower secondary school.

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Appendix 2A: Backwards induction of the German Case (GE)

GE57. *Turn 358.*
B states that B had thought about the subject that was the easiest to take in the first grade. B states that if B learns Spanish without achieving any results, B will not benefit from it later. B states that if B takes German as well, and learns to talk that language, B will benefit more from it irrespective of whether they talk Spanish in more parts of the world. B states that they got to know that Spanish is a language for holidays, whereas German is a business language. B states that B preferred the business language to the holiday language. B states that, in addition, B's mother and father had studied German, which makes it easier.

GE58. *Turn 357.*
A asks if B had thought of the subject which was the easiest to learn and not the subject which would be the most useful.

GE59. *Turn 356.*
B states that B chose the language B thought was the easiest one.

GE60. *Turn 355.*
A states that these are three different languages.

GE61. *Turn 354.*
B states that one was forced into choosing either Spanish, French or German.

GE62. *Turn 353.*
A states that the German teachers also say so.

GE63. *Turn 352.*
B states that the teacher said that since many learners, and B, are good at maths and subjects like that, they are also good at German.

GE64. *Turn 351.*
A asks on what basis.

GE65. *Turn 350.*
B says that B would have recommended it.

GE66. *Turn 349.*
A says no.

GE67. *Turn 348.*
B states that, just as A comments, they had no choice.

GE68. *Turn 347.*
A says yes.

GE69. *Turn 346.*
B states that B is German, so B had to do it anyway.

GE70. *Turn 345.*
A asks if the choice was made without B wanting it.

GE71. *Turn 344.*
B says yes.

GE72. *Turn 343.*
A states that in that case B has talked German for many years.

GE73. *Turn 342.*
B states that they had no choice.

GE74. *Turn 341.*
A says yes.

GE75. *Turn 340.*
B states that in the Steiner school, they had German in the second grade without having the option to decide. They then had to choose German in upper secondary school as well.

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Appendix 2A: Backwards induction of the German Case (GE)

GE76. *Turn 339.*
A wonders whether, when B chose German in lower secondary school, it was something B wished or if it was a coincidence.

GE77. *Turn 338.*
B confirms that it is important that B wants to learn this.

GE78. *Turn 337.*
A asks whether this means, in other words, that B needs to want to learn this.

GE79. *Turn 336.*
B states that in that case, B is forced into talking, or it depends on whether they know English. B thinks that it is a good idea to look at one's mistakes and what B does, namely what B does not know properly, and then try to test these. One can thereafter look at them and learn them so that B can fill the gaps and acquire a larger spectrum. B says that if B wants to learn a language, B thinks it is important in a way to have a goal and know why B wants to learn, and what B wants to achieve.

GE80. *Turn 335.*
A says yes.

GE81. *Turn 334.*
B states that it is somewhat like B said, that if B learns about some grammatical topics, B learns the theoretical part first, and then B may read a text or watch a movie which is about the topics B has learned. In this way, B gets to see it both in practice and in theory. B refers to going to places where they talk the language B is trying to learn.

GE82. *Turn 333.*
A states that if A is going to talk about "Kein Schnaps für Tamara", such as tomorrow, then B must be prepared.

GE83. *Turn 332.*
B states that it is possible to learn a language if one simply enters a native tribe. B refers first of all to something which is perhaps very basic, to someone/something that can teach you the language, for example a book or a teacher. B states that we also need motivation in order to learn grammar and to practise the language. B states that one also needs a strategy, a goal and a plan in a way which can lead you forwards, or that B can follow. B states that the way this is established is up to the individual, but it is very important to have a strategy, a learning strategy. B states that it requires a good deal of individual effort. It is not possible to simply expect that one learns German simply by attending German lessons. B has to be at home, reading and learning on one's own. B states that one has to be exposed to the language on a regular basis by listening, for example to German, reading German, and trying to talk German. B states that B has to carry out in practice what B has learned theoretically. B states that if B reads something, if B learns something, then in a way B thinks that B knows it, and then B at least has to try it.

GE84. *Turn 331.*

A says that during this session the topic is summarising the whole school year by looking at what B remembers in terms of curriculum goals stating that B is to be aware of the learning process and acquiring insight into B's own learning. A states that they are going to start with the questions they had last autumn, spending about 10-15 minutes on it. A also states that afterwards they are going to summarise in class, just as they did the first time. A asks the first question in terms of what it takes to learn a language.

Session 15

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Appendix 2A: Backwards induction of the German Case (GE)

GE85. *Turn 330.*
B replies that the book is used prior to tests.

GE86. *Turn 329.*
A asks whether the learners have ever assessed themselves.

GE87. *Turn 328.*
B says that it is a good tool to use for the teacher. B also says that it is something which he/she has not been involved in before, and that it is difficult to assess. B asks what it means to understand the main content of a certain matter.

GE88. *Turn 327.*
A gives an introduction to the topic after distribution of the wheel. A informs that this is a tool that can be used to develop insight into one's learning process, and that it is closely related to the instruction programme the learners have behind them. A tells B to be honest in order to find out what they can.

Session 14

GE89. *Turn 326.*
B says that B tries to understand what B has done wrong. B tries to avoid making the same mistake again by comparing with previous tests. B says that B does more or less the same, but that it is easier in English. B checks in order to avoid making the same mistakes again. B also says that B checks what spoiled the good grade. B says that when B gets a bad grade, B does not want to look at it at once. B takes out the test at an earlier stage. B says that B looks more at it later, something which makes it easier. B says that making mistakes does not destroy anything. B says that the most important thing is to make sure that others understand what B is saying, but that some mistakes may interfere with communication. B says that listening to the immigrants makes B understand that B learns more and more. B says that children learn to talk as they go along.

GE90. *Turn 325.*
A introduces the topic to the group.

Session 13

A says that it is important to practise looking up in the right places.

GE91. *Turn 324.*
B answers that B does not know all the words, and that this influences solving the task.

GE92. *Turn 323.*
A asks what B thinks about the task at hand. A asks if there is something B should have known more about.

GE93. *Turn 322.*
B comments on going to the grocery store and buying warm rolls as an example. In that case, B has to find out what kind of words B can use. B also says that it is important to rehearse what B knows from before for a specific approach.

GE94. *Turn 321.*
A says that it is important to go about the task in the right way, and that we have to find out the things we do not remember and what we need to solve the task. We have to use a grammatical overview.

GE95. *Turn 320.*

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Appendix 2A: Backwards induction of the German Case (GE)

B says that general grammar is important and so is vocabulary.

GE96. *Turn 319.*
A tells B to analyse in order to find other elements, such as prepositions.

GE97. *Turn 318.*
B says that it is important to be able to analyse.

GE98. *Turn 317.*
A asks what they had to look for.

GE99. *Turn 316.*
B says that the topic of the task is translation. B says that knowledge about general grammar is important, i.e. tenses, etc.

GE100. *Turn 315.*
A tells B to prepare for a task with the four cases.

Session 12[1]

A says that some prepositions always take the genitive, and in those cases the genitive is required, not "von". A says that finding one's own learning style is the goal, and that one may ask the question: "Are there other ways to learn this?"

GE101. *Turn 314.*
B replies "The man's car".

GE102. *Turn 313.*
A asks if B has other tips. A says that the purpose is important. A says that there is one situation where the genitive is necessary.

GE103. *Turn 312.*
B says that it is OK to use "von". With the genitive one gets a larger vocabulary.

GE104. *Turn 311.*
A says that this is an easier way, and it is rather oral. The genitive case varies the language to a further extent.

GE105. *Turn 310.*
B replies that this forms the basis for a deeper understanding of the language, and that it is perhaps not that important for the time being. B says that it is easier to formulate sentences when one knows the genitive case. B says that the German language becomes more proper. B says that it is easier to say things which B wants if B has a better foundation. B says that B does not use it that much. B uses most "von".

GE106. *Turn 309.*
A says that this is why they had not studied this topic so far.

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[1] The Head of the Language Department had announced his presence during this session. He said that he wanted to follow up the evolution of the project. He informed about his presence in the Spanish group, and that he had learned a good deal even though he had worked as a teacher himself. He informed about the importance of learning strategies according to the *LK06* curriculum. He also wanted to know if the learners had learned anything in terms of becoming more aware. Responses were in terms of better understanding of the importance of learning a language. The Head mentioned the use of the genitive case in German and its relevance for the quality of the correct use of German. He asked about the transfer value of the topics, for instance to geography. The response was to find the best way to work. The Head said that as a teacher, he is not aware of what good learning strategies are.

Appendix 2A: Backwards induction of the German Case (GE)

GE107. *Turn 308.*
B says that the genitive case is used in order to be able to get by in Germany. It is important to lift it up to a developed level.

GE108. *Turn 307.*
A explains that having a purpose when doing something is always a good idea, especially if one relates this purpose to some goals. A reminds B about the fact that B had been discussing goals in the previous session, and that today's topic could be related to last session's discussion of topics. A says that they were going to use the workbook, and that they should enter It's learning in order to find out about the homework. The exercise was one introducing the genitive case. A informs that if they had not studied the genitive before, it will now be introduced to them.

Session 11

GE109. *Turn 306.*
B says that being able to write well enough to study abroad is a goal. B says that B wants to study abroad, and that B needs writing skills to achieve this.

GE110. *Turn 305.*
A asks about writing skills.

GE111. *Turn 304.*
B says that being understood as a tourist in the country is important, and also to be able to ask about tourist attractions quite specifically. B says that the objective is to be able to live in a German-speaking country and, for instance, study there.

GE112. *Turn 303.*
A asks about speaking skills.

GE113. *Turn 302.*
B replies that B had tried to read German books. B says that B is going to Berlin very soon, and that instead of taking taxi, the goal is to take the subway on as many occasions as possible in order to be able to read signs and information in German to get where they want.

GE114. *Turn 301.*
A asks what B does quite specifically in order to reach this goal.

GE115. *Turn 300.*
B says that an objective is to be able to read literature in German and also to be able to read newspapers and magazines. B says that the goal is to be able to understand texts for homework. B says that understanding signs and posters is an important goal. B says that reading technical material may seem too advanced.

GE116. *Turn 299.*
A asks about the objectives for reading skills.

GE117. *Turn 298.*
B says that B´s objective is to be able to understand most of a conversation with a native speaker. B says that being able to understand what is necessary to work with the German language later on is an important objective. B says that the goal is not necessarily to get a job where German skills are important, but if such a situation should come about, the objective is to have sufficient skills to hold the post.

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Appendix 2A: Backwards induction of the German Case (GE)

GE118. *Turn 297.*
A explains that the background for the project is the European Council's guidelines for language teaching in Europe and these guidelines' connection with policies of European integration. A relates that, according to political theories, patterns of conflict in Europe can partly be determined by understanding language barriers in Europe. In this perspective, political theories claim that levels of conflict may be reduced by enhancing cultural and linguistic awareness and knowledge among people, since understanding others' perspectives, and being able to have a dialogue with others, is positive for the reduction of conflict. In international crises, keeping a dialogue open and making sure that people speak the same language is important for conflict solving. In this perspective, an important step is to analyse the "Good language learner" and then find out what he or she does in order to learn languages. When these methods and skills have been identified, the purpose is to learn from these experiences in order to improve and vary language teaching methods accordingly. This ultimate goal is perhaps a utopia, but always trying to reach it is a purpose in itself.

GE119. *Turn 296.*
B emphasises the fact that B has now gathered some experience in the matter, and that this experience can be used to understand the purpose of the programme even better.

GE120. *Turn 295.*
A summarises the content of the metacognitive learning strategies so far, and asks if B has any questions regarding the strategy based instruction programme after these months of activity.

Session 10

A writes a memotechnical pattern for adjective ending in German and then asks B if B could place the cases correctly in the grid:

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    M    F    N    Pl
N   e    e    e    en
A   en   e    e    en
D   en   en   en   en
```

A starts with the –*e* endings, and then continues with the –*en* endings.

GE121. *Turn 294.*
B says that the best thing is probably to run first, since it could be difficult to run afterwards because of the time schedule at home with dinner, etc. B comments on the fact that running is a good way of dissolving tensions in relation to a language learning activity.

GE122. *Turn 293.*
A asks what is difficult in this situation. A suggests that it perhaps has to do with the fact that the 'e' has to be placed correctly. A asks if this was the case for the rest as well.

GE123. *Turn 292.*
B suggests that B could record endings before going to bed and then listen to them.

GE124. *Turn 291.*
A suggests that B could run while thinking about the conjugation of adjectives after a working session. A asks if the best thing would be to run before or after doing the homework.

Appendix 2A: Backwards induction of the German Case (GE)

GE125. *Turn 290.*
B replies that it was a rather easy task. B says that the adjective was not
an easy part.

GE126. *Turn 289.*
A asks if B feels that this task was difficult or easy.

GE127. *Turn 288.*
B says that B has to read a good deal of German. B says that B has to read
first and then make an effort to really understand the matter.

GE128. *Turn 287.*
A asks if B could think of other things as well.

GE129. *Turn 286.*
B says that B has to think about grammatical errors B tends to make.

GE130. *Turn 285.*
A asks what B should do if B is to write an exercise in German.

GE131. *Turn 284.*
B replies that B has heard that it is supposed to be a good method of getting
prepared for the learning session.

GE132. *Turn 283.*
A asks if B uses this strategy, and if it helps.

GE133. *Turn 282.*
B replies that it is a good idea to browse through the book, looking at the
pictures one comes across.

GE134. *Turn 281.*
A asks what kinds of pictures one should look at.

GE135. *Turn 280.*
B says that B would read the words, and then study the conjugation of
adjectives. B says that this person would study the rules first, and then
look at the task afterwards. B says that B should first learn the new words,
and then simply start doing the task. B suggests that one should look at the
paradigm first. B says that it is a good idea to look at the pictures prior
to the working session.

GE136. *Turn 279.*
A dismisses this comment, and asks B to focus on the task. The homework for
the next day consists of learning expressions from a text B has just had. In
addition, B should work with grammar in the form of adjective conjugations
related to the text. A emphasises the fact that the two parts do not have
very much in common, and A asks how B would go about the task.

GE137. *Turn 278.*
B says that reducing sleep could be a strategy, because it is necessary to
go to bed late in order to have time to do homework.

GE138. *Turn 277.*
A asks if B has heard about the word *organisation*. One has to organise to do
things properly. A asks if B has thought about how to get organised. A tells
B to enter It's Learning[2]. A tells them to enter the German section and look
at what A has written for them to do as homework for the next day. A tells

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[2] The digital learning platform used at the school.

them to read this instruction and find out what B is supposed to learn for the next day. A tells B to think about how B can get organised in order to do this, and that A should find a strategy in order to learn what the instructions say.

Session 9

GE139. *Turn 276.*
B says that B can learn more about vocabulary learning.

GE140. *Turn 275.*
A asks B if B feels that anything is missing.

GE141. *Turn 274.*
B replies that it is possible to read about memotechnics and find out about learning strategies. B says that when one gets a test back, it is important to analyse the errors. B says that it is important to listen to what the learners tell you to do and be able to take more responsibility oneself. B says that while working with this programme in class, B has understood better the necessity to do something on one's own. Previously, B had not cared that much about what B could do independently of what the teacher tells the learners to do. B says that B understands the difference between theory and practice better.

GE142. *Turn 273.*
A asks how B can look for sources.

GE143. *Turn 272.*
B says that one has to work continuously, focus one's attention during lessons, and take the initiative.

GE144. *Turn 271.*
A emphasises the purpose of the task in relation to the general programme, i.e. that B is expected to discuss to what extent the programme has helped them towards understanding what B can do in order to understand language learning, and what B can do to achieve the curriculum competence aims.

GE145. *Turn 270.*
B answers that B has been working more with these aspects now than in lower secondary school.

GE146. *Turn 269.*
A says that one needs ideas to get the right expressions. A asks how much B has been working with language learning.

GE147. *Turn 268.*
B says that B has been working with communication. B also says that they had been writing texts. B also says that they had been working with the alphabet and the signs of the language. B also says that they had expressed their own opinions and emotions.

GE148. *Turn 267.*
A tells the learners to focus on the first part of the curriculum, i.e. the part focusing on level I, although B is at level II for the time being. This would be the right method since they were already acquainted with this part. A asks whether B does what is stated therein. A explains to B that the curriculum is divided into three parts, and A defines the content of the three areas. A tells B to think through the process of learning the language so far.

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Appendix 2A: Backwards induction of the German Case (GE)

A acknowledges this comment by emphasising the fact that this is an example of this session's strategy, i.e. that listening to others speak, instead of speaking oneself, is a learning method. A asks if someone would answer yes to the last question, i.e. if someone had ever stopped speaking the foreign language because he/she did not know how to express themselves. A applies the concepts of declarative and procedural knowledge to this strategy. A uses examples of how this strategy can be learned from a declarative point of view in terms of being able to state what the strategy is all about and then apply it in real life by being able to delay speech to focus on what is being said from a procedural point of view.

GE149. *Turn 266.*
B says that it feels strange, and that B finds it difficult to find the right words. B says that it depends on the setting. B says that B does not feel like trying since B is afraid that they will simply rattle on. B has tried to talk German in Turkey, and B felt more comfortable there. B says that it is great fun when one knows the language well, but that it is frustrating if one is not able to say very much. B states that it is important to learn new words, and also to learn how to use new words. B states that *Rathaus* is a funny word in German. B relates an episode in Germany where B had been with B's parents. B had attended a dinner, and on that occasion B had been listening in on the other guests in order to grasp some useful words and expressions.

GE150. *Turn 265.*
A asks how B feels when B talks.

GE151. *Turn 264.*
B replies that it is fine if we simply move on, but that it may be difficult to break the ice.

GE152. *Turn 263.*
A asks if B sometimes chooses not to say anything, and what we can do to amend this situation. A asks if B thinks it is acceptable to make mistakes.

GE153. *Turn 262.*
B answers that B feels unsecure and stressed, since B feels that B gets it wrong no matter what B does. B says that it feels OK when B speaks to her father, because then B does not feel embarrassed, but it is worse when B is in Germany.

GE154. *Turn 261.*
A asks if B can express what it feels like to talk German.

GE155. *Turn 260.*
B mentions the word *das Erlebnis* (the experience).

GE156. *Turn 259.*
A asks if B remembers other words of the same kind and if B thinks B can make a contribution.

GE157. *Turn 258.*
B remembers the word *Austauschschüler* (exchange student).

GE158. *Turn 257.*

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Appendix 2A: Backwards induction of the German Case (GE)

A asks B if B remembers that last week B had started to work on a text about being an exchange student in Norway and which words they remembered from the text[34].

<u>Session 7</u>

A tells B to look up the conjugation paradigm for the relative pronoun and A relates this to the conjugation of the definite article. A tells B to focus on the relative pronoun, and think about gender as well as finding cases by analysing the sentences. A defines this exercise as an example of metacognition.

GE159. *Turn 256.*
B answers that one has to learn the conjugation paradigm. B discusses which form of the relative pronoun is important, and B mentions that it is important to analyse the sentences in order to find the right pronoun.

GE160. *Turn 255.*
A decides to use the topic 'relative pronouns' for this exercise. This topic had been introduced the week before this session, and A asks the class if they remember which topic had been introduced. A asks if B knows what one has to know when working with relative pronouns. A gives a summary of last session´s topics, focusing on the introduction to general learning psychology and its consequences for language learning psychology in the form of the dichotomy between declarative and procedural knowledge. A also gives a brief summary of the basic language learning strategies that were referred to: affective, social, cognitive and metacognitive learning strategies. A mentions the terms metacognition and metacognitive learning strategies again, and defines these as knowledge about one's own knowledge, knowledge about the learning process and one's own progress, and the strategies used to make use of this potential to promote one's own language learning process.

<u>Session 6</u>

A comments on the importance of analysing the clause for correct translation. A comments on the use of an adjective derived from a noun[5].

GE161. *Turn 254.*
B writes sentence no 2 on the blackboard: *Ich glaube, dass Anna morgen kommt.* B discusses the use of *morgen* vs *Morgen*. B translates another two sentences in relation to the theory about subordinate clauses. *Wenn ich in Bonn bin, besuche ich Bekannte.* B analyses the sentence in order to translate it correctly.

GE162. *Turn 253.*
A tells B to identify the subordinate clause and to define the word order for the subordinate clause. A states that the verb conjugated according to person must be placed at the end of the clause.

GE163. *Turn 252.*

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[3] Prior to the session, the researcher and the teacher discussed the programme for this session in terms of the relevance of using a text the learners had been working with last week. This was a text about being an exchange student in Norway. We decided to use this text as a starting point for working on this session's learning strategy.
[4] This summary created a link to the final part of session 7, when the researcher and the teacher decided to spend some minutes during session 8 discussing the learners' experience with the exercise used during session 7.
[5] More sentences were analysed according to the same theoretical model. Since the focus of this research is on the metacognitive and metalinguistic issues which arose as a consequence of the SBI programme, this particular grammar activity is not included.

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Appendix 2A: Backwards induction of the German Case (GE)

B writes the first sentence on the blackboard: *Ich weiss, dass Peter heute krank ist*.

GE164. *Turn 251.*
A explains the difference between *als* and *wenn*.

GE165. *Turn 250.*
B answers that the topic is subordinate clauses in German. B refers to clauses introduced by *dass* (that), called adverbial subordinate clauses. B answers that one has to know subjunctions/subordinating conjunctions such as *dass*, *wenn*, *weil*. B states that one has to know the word order with the verb conjugated according to the subject towards the end. B states analysis. B states that this is not particular for subordinate clauses. B asks about the difference between *als* and *wenn*.

GE166. *Turn 249.*
A asks if it is about any particular topic.

GE167. *Turn 248.*
B answers it is about learning the words and the grammar.

GE168. *Turn 247.*
A states that the session is going to be a part of preparing for an upcoming whole-day test. A writes on the blackboard: Why are we working with this text/translation? What do I have to learn/check up on/know in order to translate it? Have I worked with similar material before?

Session 5

GE169. *Turn 246.*
B says no. B states that these people should put something in the corner; they placed a suitcase in the corner. B remembers that B had been to an old people's home in Schönbrunn when B was younger. B had subsequently lost her way and had to ask many old people the way. These people did not speak any English. This is a situation where B simply had to know. At the time, B knew more German in a way than now. B's father talked German to B at the time, but does not do that anymore. B states that B has been to a bakery in Berlin. B bought a loaf of bread and got the bread B wanted.

GE170. *Turn 245.*
A asks if B had learned the word "Ecke". A says that B will never forget this word.

GE171. *Turn 244.*
B states that B has not been to Germany. B states that B had been to Germany some time ago, but there were no situations where B just had to talk. B asked people who passed by where a store was. People thought that B talked English, so they answered in English. B states that things went OK and they understood each other. B states that B had been in such a situation in a train in England, where some people next to B were talking. B thinks that B heard the word *Ecke*, *um die Ecke*, or something like that. B had asked *Bist du Deutsch*? And they said yes. B states that this was three years ago, so B did not know very much German at the time.

GE172. *Turn 243.*
A states that not wanting to learn the dishes is also a kind of consciousness, since they are farfetched and special. A states that B determines what B wants to spend B's energy on. A states that B registers that if there are many special meat dishes in Switzerland, B does not necessarily want to learn

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Appendix 2A: Backwards induction of the German Case (GE)

about them. This is also a way to be aware of B's own learning. A states that B determines what B wants to learn.

GE173. *Turn 242.*
B states that B was in Switzerland. B had been in many kinds of situations. B states that the worst situation was in a restaurant. B states that it is difficult to remember dishes. B states that when B got stuck, B got help from the person next to B, a person who knew more German.

GE174. *Turn 241.*
A asks how many have been in a situation similar to the one described by B.

GE175. *Turn 240.*
B remembers some things that stuck in the memory in that situation when the woman pointed and said that this is that. B states that B remembers this. B states that B learned something in the situation.

GE176. *Turn 239.*
A states that B needs a very special interest.

GE177. *Turn 238.*
B says no.

GE178. *Turn 237.*
A asks if B had looked things up when B came home.

GE179. *Turn 236.*
B states that B should have known more words for items such as food.

GE180. *Turn 235.*
A asks if there were things B feels B should have known.

GE181. *Turn 234.*
B states that there were some words. B says that there were a couple of dishes and names of different hams that were a bit farfetched for B.

GE182. *Turn 233.*
A wonders if there were many words B did not know with the benefit of hindsight.

GE183. *Turn 232.*
B says yes. B states that it went reasonably well. B states that it was about buying sandwiches, and it worked.

GE184. *Turn 231.*
A asks if B had been to a place where B had to use the German language.

GE185. *Turn 230.*
B states that B has been to Berlin. B states that B has been to a café, but not a store.

GE186. *Turn 229.*
A asks who has been to a German-speaking country in the near past, or late past.

GE187. *Turn 228.*
B talks about noticing certain words B does not know. B states that B may write them down if possible, bring them back home, and then look the words up.

GE188. *Turn 227.*

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Appendix 2A: Backwards induction of the German Case (GE)

A says not being a good Norwegian saying "du", but "Sie".

GE189. *Turn 226.*
B talks about using the right personal pronoun.

GE190. *Turn 225.*
A mentions talking to a person whom B does not know at all and who is of a certain importance. A asks what one has to remember then.

GE191. *Turn 224.*
B states that B should have had a good vocabulary.

GE192. *Turn 223.*
A asks what would be important in that situation, when B is to talk to her.

GE193. *Turn 222.*
B states that B should have written a manuscript in order to think properly through the situation.

GE194. *Turn 221.*
A asks how this would be with Merkel in Paris, and what would be the strategy then.

GE195. *Turn 220.*
B refers to thinking through what kind of situations may occur and what kinds of sentences may be useful in the relevant situation. B thinks that it is important not to be over-stressed. B forgets a lot if B is stressed. It is better to have a note with words on in case one forgets. B states that it is not a good idea to work very hard with some breaks as opposed to working on a regular basis. B states that it is better to be proactive, rehearsing the sentences B wants, if B knows what B wants to rehearse. B states that B then knows that it is related to clothes. B can begin beforehand and has a note with some words on it.

GE196. *Turn 219.*
A asks about the third point, and what B has come up with.

GE197. *Turn 218.*
B states that B should go to a clothes' store in Berlin. B states that the sentence B needs is related to clothing, currency, size, colours, and so on. B states that B could ask dad or the family what B is to do and what one can ask about. B relates general, normal sentences. B states that B may listen to a Linguaphone course. B states that they have the standard B asks about in the clothes' store. B talks about a place which is not that busy so that the people working in the store have time for B. B states that B thought about colours, patterns, size, price and the like.

GE198. *Turn 217.*
A asks how many girls and boys wanted to go to a clothes' store. A asks about planning. A asks if this was difficult.

GE199. *Turn 216.*
B states that they had dealt with a bakery in Berlin. B states that B could ask about things to buy in the bakery. B states that B could discuss immigration politics with Angela Merkel in Versailles, although this may be more difficult. B states that they could discuss nature, and that they could be in Switzerland and do shopping in Germany. B suggests an intellectual conversation about chocolate, buying a cinema ticket and going to places that B knows about beforehand. B suggests a clothes' store in Munich.

GE200. *Turn 215.*

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Appendix 2A: Backwards induction of the German Case (GE)

A says yes. A then wonders about the cognitive learning strategies in terms of understanding, perception and memory. A states that during this session they are going to talk about the metacognitive learning strategies. A states that in that case, we are talking about knowledge about our own learning and what we can do in order to improve this learning. A refers to what one can do to improve this process. A asks if B has anything to contribute with. A asks what kind of situations B had dealt with.

GE201. *Turn 214.*
B wonders if it was, for instance, about watching movies and listening to music.

GE202. *Turn 213.*
A acknowledges that it is in communication. A asks about the affective strategies. A states that they had talked about reducing stress in the learning process.

GE203. *Turn 212.*
B says that the social is when you use the language in conversations.

GE204. *Turn 211.*
A states that it is good for B to know these concepts. A writes these concepts on the blackboard, saying that these are the two forms of knowledge, i.e. theoretical and practical. A says that A wants to write some learning strategies they have talked about. A asks B what these mean (cognitive, social and affective). A asks if B remembers anything at all in terms of the difference between them.

GE205. *Turn 210.*
B says that declarative is theory and procedural is practice.

GE206. *Turn 209.*
A repeats declarative and procedural knowledge. A asks if B feels that B understands these concepts. A asks if it is possible to express these concepts in other more simple words.

Session 4

GE207. *Turn 208.*
B says perhaps.

GE208. *Turn 207.*
A wonders if calm Mozart or Beethoven could have been OK.

GE209. *Turn 206.*
B states that it would have been very much at the same time.

GE210. *Turn 205.*
A asks if one should read that book in German, if a CD with German text would have got B on the right track, or if it would have been distracting.

GE211. *Turn 204.*
B states that in terms of music, the music has to be instrumental. B states that if B has texts when trying to read something, B will easily listen to the text instead of starting to read. B states that B would listen to what they are singing.

GE212. *Turn 203.*
A states that both initial training, and training afterwards, have been mentioned.

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GE213. *Turn 202.*
B states that when working with maths, B tends to listen to music because that helps. B states that when reading or getting deeper into something, music does not work. B states that it is easy to turn on the music and have it on, but then it is not much of a help. B feels that it helps in maths. B states that if B is going to work a long time with homework, it helps to run first. B feels that B thinks more clearly if B has trained first.

GE214. *Turn 201.*
A asks if listening to music is of any help or if B just sits there after a while simply listening to the music and forgetting what the activity was all about.

GE215. *Turn 200.*
B states that B tends to do something which B enjoys doing after having worked a good deal. B refers to football training, watching TV, or something like that. B states that B then somehow feels that B has a source of motivation. B states that when working with homework, B knows that B does not have to work only with the homework. B states that there is something nice to look forward to. B states that B does not use that many affective learning strategies except listening to music. B does not know if that is relevant.

GE216. *Turn 199.*
A asks about the affective learning strategies. A asks about B's preferred affective strategy.

GE217. *Turn 198.*
B states that one has to go to a place where they only talk German and nothing else. B states that it is easy to switch over to English, since this is a language that both parties understand.

GE218. *Turn 197.*
A states that most people are aware of the fact that one does not know that much, and then people are good at moderating things and talking a little slower.

GE219. *Turn 196.*
B says not now, but perhaps at a later stage. B states that B had used it with German tourists when B worked in an amusement park. B states that in school it is possible to talk with the learner next to one's own seat. B states that a big part of B's family in Austria only speak German, and there is no other option than speaking German to them. B states that it is a mixture of Bosnian and German. B talks about ordering food and drinks and getting by on one's own when being abroad. B states that B had to talk quite a good deal of German in Switzerland, but that most people knew English there. B states that, once in Turkey, they had been better at talking German than English. B states that B had tried to talk German to them, but it had turned out to be difficult after all. B states that B's family had once been in Germany and then B had tried to talk German. However, it had not gone well. B states that it is a good idea to travel to countries where people talk their mother tongue and where there are many German tourists, so that they have to learn German. B states that they would then talk more easily and they would understand that they have to talk more slowly. B states that if B goes to Germany, things may happen quickly.

GE220. *Turn 195.*
A asks if B would have done this in German.

GE221. *Turn 194.*

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Appendix 2A: Backwards induction of the German Case (GE)

B states that B has not done that much. B states that they have read quite a good deal in school. They have read in pairs. The other has tried things out to the extent possible. Listen and try to correct the other. B also states that B has used quite a good deal of chatting on the Internet, such as games and the like. B states that when B had started to learn English at a younger age, B used this knowledge as a basis for playing on the Internet. B states that B talked a good deal on those occasions. B wanted to be understood and understand what the others were saying. B states that B had forced B into learning this. B states that this was a nice and useful way to learn.

GE222. *Turn 193.*
A states that A had intended that B should understand what it was all about. A states that sometimes when this is the goal, B may have to look up some very important words in order to understand the content. A states that the next point is the social learning strategies. A wonders if B has ever done anything to rehearse the language in interaction with others.

GE223. *Turn 192.*
B states that B felt that B had read the book without focusing that much on vocabulary. B had tried to understand what the book was all about.

GE224. *Turn 191.*
A states that it is possible to use English as well.

GE225. *Turn 190.*
B states that B had gone quickly through the book, and then B looks at it afterwards. B goes through it quickly in order to understand the main characteristics. B states that B had not quite understood what was at the back of the book, the part in German where it said what the book was all about. B states that B had looked it up on the Internet in English in order to understand what was in the book when B started to read. B states that it helped a good deal. B claims that B understood much more.

GE226. *Turn 189.*
A tells B to think about the book A had thought about letting B read. A asks how B went about the whole task.

GE227. *Turn 188.*
B says yes. B says that B has to engage in rote learning and read it over and over again.

GE228. *Turn 187.*
A asks if it is efficient to hear a German text being read aloud, for instance by playing a CD.

GE229. *Turn 186.*
B talks about reading aloud. B is then corrected and gets to know how the different words are pronounced.

GE230. *Turn 185.*
A states that when B gives them the prepositions with the accusative, they have learned them by heart. A also refers to using them in practice afterwards.

GE231. *Turn 184.*
B states that B plays a game in order to improve pronunciation. B states that B played Internet games. B states that when watching movies, it is all about perceiving individual words that one understands and seeing the connections in terms of what happens in the movie, and also pictures if it is a book. B mentions vocabulary tests for learning new words. B states that if one watches a German movie, one may see it several times with German subtitles, and then

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try to understand the language. B states that one has to engage in rote
learning as well and that the basics are easier learned if one engages in
rote learning. B suggests trying it out afterwards, as it is easier to
understand.

GE232. *Turn 183.*
A confirms that it was a P. A summarises and states that they talked about
theory and how they can try this out in practice. A explains that today they
are going to proceed to B getting a task. A states that B is going to read
the introduction first. A states that B is then to think through the questions
and sit together. A tells B to read through the first page, all of which is
in Norwegian. Then B is to look at the three tasks. A states that B is to do
them alone first, and then together. A states that they will return to the
cognitive learning strategies. A tells B to present topics B has done in
order to learn certain aspects related to vocabulary and pronunciation.

GE233. *Turn 182.*
B states P for procedural.

GE234. *Turn 181.*
A confirms declarative. A also asks what the other nice letter was.

GE235. *Turn 180.*
B says declarative.

GE236. *Turn 179.*
A says yes. A also states that they are first going to have a bit of theory.
A states that B contributed with some theory, and then they tried things out
in practice. A states that this is what they have tried to talk about. A asks
if B remembers the expressions they have used. A reminds B about the nice
words for theory and practice. A asks B if B has written them down somewhere.
A states that B has mentioned something with a 'D'.

GE237. *Turn 178.*
B relates ways to learn and practical rehearsal.

GE238. *Turn 177.*
A says yes, the prepositions. A states that some people have first mentioned
prepositions, and then they have tried to sing them again and to see how it
is possible to use these prepositions. A states that this is something B has
learned from these German lessons. A asks what they have talked about during
these lessons.

GE239. *Turn 176.*
B answers accusative and dative, and the prepositions.

GE240. *Turn 175.*
A asks what kind of grammar, what kind of topic.

GE241. *Turn 174.*
B answers grammar.

GE242. *Turn 173.*
A asks what kind of songs they had been singing.

GE243. *Turn 172.*
B states that they had been singing songs.

GE244. *Turn 171.*
A asks if B remembers what they had done last Friday.

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Appendix 2A: Backwards induction of the German Case (GE)

GE245. *Turn 170.*
B states that in lower secondary school, B spent a good deal of time understanding what nominative, accusative and dative meant. B did not understand these concepts, and the teacher did not say that it was subject, direct object, etc.

GE246. *Turn 169.*
A asks if the concept of cases is something which has been useful during the time B has studied German, or if it has confused matters. A wonders what B thinks about the use of these declarative concepts.

GE247. *Turn 168.*
B says that cases are not vital in order to get the message across. B states that it does not matter if B writes *ein* or *einen* - B still gets the message across.

GE248. *Turn 167.*
A says that one needs certain grammatical principles. A states that what B has said is at least to check the agreement between subject and verb. A states that word order is also important and that B has to remember what is special for German. A states that it is easy to choose the wrong case with prepositions and that the better declarative knowledge one has, the easier it is.

GE249. *Turn 166.*
B says that B tries to use the declarative knowledge B has when writing a text, but this often happens spontaneously as well. B states that B feels that the most important thing is to get the message across, not the degree of grammatical mistakes in the text. B states that if B were to write a proper text, B would have used a language B knows well, for instance Norwegian or English. B states that there are more letters and private items, if B had chosen German. B states that the most important thing is the message, not the grammar.

GE250. *Turn 165.*
A says that they had talked about the difference between regular and irregular verbs.

GE251. *Turn 164.*
B answers that there are many regular and irregular verbs that B already knows. B states that if one does not know something, B finds it in the dictionary. B states that then B uses one's declarative knowledge to know what the ending is.

GE252. *Turn 163.*
A asks how B knew what an irregular verb was to start with. A wonders if B remembers this, or what has made B aware of the fact that a verb was irregular.

GE253. *Turn 162.*
B says that when B was unsure if a verb was regular or irregular, the verb was checked in the dictionary. B states that B then learned which ending was relevant.

GE254. *Turn 161.*
A says that B does not need very much to be understood. A says that now that B has produced information about how to systematise the different fields in German, B has a topic to learn something about. A says that in the following session B will be handed back an essay. B could then see how B has practised language and this will show if B has to go back to the declarative form of knowledge, and to brush up on the declarative knowledge in order to move to the procedural form. This is complicated with German since there are so many rules that have to be used at the same time, so one has to practise constantly. The more one writes, the better it is. A says that the point about learning the concepts of the perfect tense and accusative is that it makes it possible, for example, to look up in a list in order to understand conjugation patterns.

Appendix 2A: Backwards induction of the German Case (GE)

A states that this is why these concepts are used, not to make it more difficult for B, but rather to make it easier to acquire declarative knowledge when B knows what this knowledge consists of. A wonders how conscious B has been in terms of looking at conjugation patterns for the perfect tense when B has written tasks and essays. A wonders if B has ever thought explicitly about this, or if B does it because the teacher tells B to do so. A wonders if B has ever thought about the importance or the necessity of knowing the perfect tense as a concept and also to learn conjugation patterns from a list which has "perfect tense" as a heading. A wonders if B wrote spontaneously when writing the essay, or if B ever looked up conjugation patterns for different topics in order to create a particular sentence.

GE255. *Turn 160.*
B talks about travelling to a place in Germany where they do not talk English, so that one has to talk German. B says that if someone had to do it, it would be possible. B states that one may use hands and feet. B had been to Croatia during the summer holiday and had tried to use a dictionary to look up certain basic words. B states that B learned some words that enabled B to communicate. B says that the same principle could apply to German. B had been on an exchange programme in Germany, and the mother in the host family spoke a particular dialect that was difficult to understand. They did not speak English. They had to use body language sometimes.

GE256. *Turn 159.*
A asks how to put this into practice.

GE257. *Turn 158.*
B points to TV, at school, and finding summaries on the internet.

GE258. *Turn 157.*
A asks where one has to be in order to learn grammatical rules. A wonders if one has to go far. A states that for the practical aspect, it is fun to attend language courses. A asks where it is possible to learn grammatical rules. A suggests in the textbook.

GE259. *Turn 156.*
B says that if one is to remember these rules when reaching the age of 50 B has to have been in Germany and talked. B has to practise with regular intervals.

GE260. *Turn 155.*
A says that practice is a necessity.

GE261. *Turn 154.*
B says that one constructs knowledge as a consequence of trying out the same knowledge over and over again. B says that B has to practise, otherwise B would have to read it over and over again. If B does not use it, it will not be stored in the mind.

GE262. *Turn 153.*
A asks how it is possible to construct one's theoretical knowledge.

GE263. *Turn 152.*
B says that this person feels that B has moved beyond the purely theoretical stage, and that B returns to the basic principles in order to develop knowledge further into procedural knowledge. B states that it is like a curve that grows in height.

GE264. *Turn 151.*
A tells B to think in terms of the perfect tense and wonders how this has been. A wonders if it went well and if the theory is still there. A wonders about the prepositions.

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Appendix 2A: Backwards induction of the German Case (GE)

GE265. *Turn 150.*
B says that B had written down sentences and tasks. B says that B had listened to CDs to learn pronunciation. B states that B learns pronunciation in order to pronounce words in Germany. B focuses on theory and practice when reading texts and also on tasks in order to see if anything can be transferred from theory to practice.

GE266. *Turn 149.*
A asks what B needs then. A says that when writing an essay all these basic skills have to be in place. A asks if B had done anything particular with the different topics in order to rehearse them.

GE267. *Turn 148.*
B says that B had written an essay.

GE268. *Turn 147.*
A asks how B had tried to transform declarative knowledge into procedural knowledge.

GE269. *Turn 146.*
B refers to strong verbs, intransitive verbs, and the perfect tense and auxiliaries. B also refers to the conjugation of auxiliaries in general terms in addition to prepositions.

GE270. *Turn 145.*
A asks if B has had anything particular this semester.

GE271. *Turn 144.*
B says that in an early stage of the learning process, declarative issues may be important.

GE272. *Turn 143.*
A says that B learns how to walk by watching others walk. A asks about B´s mother tongue. A wonders if that is similar to walking. A wonders if we see others do the same. A asks if they are comparable. A wonders if German is something B has to focus upon consciously because B does not see others do the same. A states that they are going to work with German to find out about declarative and procedural knowledge. A states that they have recently worked with the preteritum tense and the use of auxiliaries, and they have talked about prepositions. A wonders how this fits in with the topics of the programme. A wonders how B can go about these matters and what it is when B goes home to rehearse the auxiliaries *sein*/*haben*. A says that rote learning refers to the theoretical part. If B says it after having rehearsed several times, it is the practical part, i.e. procedural knowledge. A tells B to think about the topics they had covered this autumn. A tells B to find out what they have worked with in terms of theoretical knowledge and how they have tried to use it in practice. A tells B to use as many examples as occurs to B. A asks B if B so far had had some kind of declarative knowledge this semester.

GE273. *Turn 142.*
B says that one learns to walk by watching others walk.

GE274. *Turn 141.*
A says that declarative is the theoretical material B has to learn and procedural the practical aspect. A asks if B remembers any examples of declarative and procedural knowledge in terms of the general items they discussed last time, such as cycling, walking, and waffles made without recipe. A wonders if one needs theoretical knowledge in order to cycle, or just procedural knowledge.

GE275. *Turn 140.*
B says that it is the same as the difference between theoretical and practical knowledge.

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Appendix 2A: Backwards induction of the German Case (GE)

GE276. *Turn 139.*
A says that they are both Germanic languages. A asks if there are other issues which occur to B. A asks if B remembers the difference between declarative and procedural knowledge.

GE277. *Turn 138.*
B says that there are many similar words. B asks why there are many similar words. B says that it is because the two languages have the same origin.

GE278. *Turn 137.*
A asks what the right ingredients are in terms of German. A mentions pronunciation and pain, i.e. it is painful to learn German. A states that there are different words. A asks what B can say about the difference between words in German and Norwegian. A asks if German is a language which is difficult as far as vocabulary is concerned.

GE279. *Turn 136.*
B says that one has to learn grammar in order to know what it is all about. B states that one has to know what the basic differences are compared to other languages. B says that one has to find the right ingredients.

GE280. *Turn 135.*
A says that this is equal to making waffles when having 100 ingredients in front of you – you must know which ingredients to pick if you want to make waffles. A asks what it is that one needs in order to learn German, as in the case of the waffles. A asks what B needs to learn in relation to the basic recipe for these waffles. The waffles will develop into real waffles as time goes by and not only waffles made without a recipe. A asks what they have talked about and asks what B has to do. A tells B to say just what crosses B´s mind.

GE281. *Turn 134.*
B says that B is to learn German and not French.

GE282. *Turn 133.*
A says that if A had put forward 100 different ingredients and asked B to make waffles, B would have found the right ingredients. A states that B would not have made anything else. A then asks how they could compare the making of waffles with the learning of German. A asks if B sees any parallels between German spoken without a recipe and what is not German spoken without a recipe.

GE283. *Turn 132.*
B says to make waffles spontaneously, but with knowledge about how it is done.

GE284. *Turn 131.*
A asks what the thing was with the waffles made without recipe.

GE285. *Turn 130.*
B replies practical and theoretical forms of learning. B says waffles made without recipe.

GE286. *Turn 129.*
A asks what B remembered from last time.

Session 2

GE287. *Turn 128.*
A says that they have talked about learning today. The curriculum states that learners are to learn about learning a language as a part of language instruction. Often, this happens as part of regular instruction. There is advice in the books, the teacher talks about it, etc. A states that they are going to see what happens when it is wrapped up like a parcel, and systematising the topic and served as they go along. A states that, during a whole year, B will get the recipe for learning a new language. A states that

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during the normal lessons, B works with gaining practice in the field. B is
going to get systematised knowledge about learning a language in terms of
what it implies and what B has to do. A states that during these sessions,
they have talked about the fact that something is learned as a child,
something as an adult, so it depends on the point in life. All these issues
will also come to the surface when learning a new language. A states that B
learns Norwegian as B's mother tongue, English after a while at an early
stage in life, and German and French later. All this is dependent on what B
has learned before, B's point in life, interest in the subject, etc. Knowing
about language learning, what this process implies and what B has to do in
order to learn based on the experience B has, is something which is important
for learning German. A states that during this session, they talked about
learning in general terms so that B could reflect on what learning is all
about, i.e. what it means to learn something. A states that next time they
will talk about the linguistic aspect in terms of what one needs to do when
learning a language. A states that then they are going to talk about what
one can do from B's situation, what B can learn about learning a language
based on the content of these sessions. B works with B's German as usual,
but it will be interesting to see if B works with B's homework in a different
way, or if B becomes aware of learning or not. They are going to see what
happens when knowledge about language learning is wrapped up as a parcel and
served like this in the classroom for a whole year. A tells B to think about
it, to see what kind of ideas B gets.

GE288. *Turn 127.*
B says that when learning English, it was more confusing when learning the
theory.

GE289. *Turn 126.*
A tells the learners to spend three minutes discussing other aspects of life
when they have had to learn declarative and procedural knowledge, such as
playing games, cycling, etc. A asks if B has to know the rules and how to
perform them. A tells B to find examples of this from B's daily life, such
as dancing, swimming and breathing, which is procedural knowledge. A states
that crawling requires more theory.

GE290. *Turn 125.*
B states that it would not have been possible to go straight to the procedural
part. B also states that one learns a bit in theory, then one moves on to
the practical part etc.

GE291. *Turn 124.*
A says that they may have entered the procedural part.

GE292. *Turn 123.*
B says that they are still in the declarative part at an early stage.

GE293. *Turn 122.*
A says that B knows that it is not necessary to use potatoes. B knows these
things, and B gets waffles even if B has made them without a recipe. The
result may vary, but B gets waffles. A says that B may include many ingredients
in something, and still produce the same, although with a different taste. A
then used B's German tuition as an example. A asks how far B has reached when
it comes to the perfect tense of the verbs. A wonders if B has reached the
declarative part or the procedural part.

GE294. *Turn 121.*
B says that one knows more or less what ingredients to use, but not exactly
how much.

GE295. *Turn 120.*
A says that the easiest activity was to get up and walk. Those kinds of
activities are something B has had to learn. A asks if B remembers when B
learned to walk. A asks B if B has seen any pictures from that time. A
compares this to the time when A had small children. A related that one

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followed them closely with one's arms. A states that the child nowadays has
to get up on its own, when it feels right. A asks how B related to waffles
made without a recipe. A asks if B makes waffles without a recipe, and if B
still makes waffles. A wonders how this may happen.

GE296. *Turn 119.*
B answers with, for example, cycling and swimming, talking and reading. B
says that it took a long time before B learned to talk.

GE297. *Turn 118.*
A tells B to think back when B learned to eat ice cream. A wonders how B did
it. A suggests that someone may have given B a spoon, a bowl, and showed B
how to eat. A asks what B does now. A guesses that B takes a spoon
automatically now. A guesses that B learned it quickly. A wonders if there
are other things B has learned during B´s life, things that have taken a
certain amount of time.

GE298. *Turn 117.*
B says that B did not get it all into their mouth in the first place; most
of it came outside.

GE299. *Turn 116.*
A wonders if B remembers how B went about this activity. A asks how B had
got everything into B's mouth.

GE300. *Turn 115.*
B states that B eats it with a spoon, a bowl.

GE301. *Turn 114.*
A asks how B eats ice cream. A tells B to think go back 15 years in time and
what would have happened if someone had put a bowl of ice cream in front of
B.

GE302. *Turn 113.*
B confirms this.

GE303. *Turn 112.*
A says that it seems to be a habit. A states that B knows how to do it - it
goes automatically.

GE304. *Turn 111.*
B replies that B has done it since B was a small child.

GE305. *Turn 110.*
A asks B if B at any point had learned to eat ice cream or cakes, or if this
comes automatically. A wonders why B does it automatically if nobody has
taught B how to eat these things.

GE306. *Turn 109.*
B says yes. B says that the only thing B had done during the weekend was to
eat ice cream.

GE307. *Turn 108.*
A then says that one goes straight to the practical part since the declarative
part has been acquired. A states that learning has then taken place and the
theoretical part has come into the right place in your mental system. A states
that B takes it out and uses it. A asks if B remembers it and if it went
well.

GE308. *Turn 107.*
B says that it was the practical part. B asks what it may be called when one
makes dinner as B did. B went straight to making it, since B remembered what
this declarative stuff was all about, but before B had to read the recipe.

GE309. *Turn 106.*

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Appendix 2A: Backwards induction of the German Case (GE)

A asks if B was so skilled at it that B could go straight to the practical part or if B had to study the theory first.

GE310. *Turn 105.*
B says muffins and brownies.

GE311. *Turn 104.*
A asks if B baked anything last weekend. A asks what B baked.

GE312. *Turn 103.*
B says that it can be compared to the difference between theory and practice. B states that one grabs the cooking book and finds the recipe for apple pie. B states that after this it is about theory, how much B is to put into the apple pie. B states that B then starts following this recipe, and then B is into the practical part.

GE313. *Turn 102.*
A says that it has to do with the process. A states that it is when B is told that that is the way it is. We have a simple way to explain this. It is to boil eggs. If A says how to boil hard eggs, B can write down water, pot, boil the water, and put the eggs into the water. Then B lets it boil for about ten minutes to get really hard eggs. A states that when B follows that recipe, B makes use of declarative knowledge. However, when B actually does things, B makes use of the procedural part. That is when B actually indulges in the process B has got to know.

GE314. *Turn 101.*
B says that B does not know what these concepts mean, but that procedural knowledge is perhaps what happens when one learns something gradually, when something new is constructed. B states that B learns something easily, and then B can construct this into a holistic understanding in a way. B states that B learns plus and minus and then B learns to use it with lines.

GE315. *Turn 100.*
A says that one knows something, and then one adds a little bit more. A shows this principle by using boxes which are added to each other with the answer in the formula being the biggest box. A says that A wanted to teach them two expressions they could jot down somewhere. A writes declarative and procedural knowledge on the blackboard. A asks what they have done now and what this is.

G316. *Turn 99.*
B says that knowledge or learning is adaptation. B says that the more knowledge one gets, the more new knowledge one may learn. B says that if one knows two languages, it will be easier in a way to learn the third one.

GE317. *Turn 98.*
A comments that what one does not know is something one is more afraid of.

GE318. *Turn 97.*
B says that it is about acquiring new knowledge and skills. B says that it is a process that lasts for one's whole life. When one gets older, one gets wise because one acquires more knowledge. B says that it is a step-wise addition of information that goes on throughout one's life. All parts of the information are equally important. B compares it to bricks. B says that learning is when one has received or understood knowledge or information so that one can repeat it oneself and use it. It is knowledge based on one's own experiences. B says that it is desired or not desired exposure to useful or less useful information. B says that enhanced knowledge yields enhanced understanding. B mentions religion as an example, where B learns about other religions, and then accepts other religions more easily as well. B knows what they are all about in a way. B states that this is why it is important to learn about these religions.

GE319. *Turn 96.*

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Appendix 2A: Backwards induction of the German Case (GE)

A writes on the blackboard: "What is learning?" and states that this is today's question.

<u>Session 1</u>

GE320. *Turn 95.*
A says *Elch*, *der Elch*. A mentions that traffic signs tend to get lost along the road. A asks if this is new to B or if these were things which B had thought about previously. A states that they are going to delve deeper into these matters in the upcoming weeks. A states that they have had a conversation about language learning. A states that in June next year there will be a similar conversation when they will look back on this year to see if they have learned anything new or anything they have not thought about before. Next time they will look at how they acquire languages from a psychological point of view. Thereafter they will talk about learning strategies. A explains that learning strategies are quite specific advice in terms of what one may do in order to learn German related to what they talked about today. As examples, A mentions movies, working on camping sites, and going to Austria.

GE321. *Turn 94.*
B mentions *Elch* (moose).

GE322. *Turn 93.*
A talks about caravans which they have filled up with food and drinks. A also mentions items such as fishing rods and freezers. A states that it may be interesting talking to them and that one does not need that many words either.

GE323. *Turn 92.*
B mentions car.

GE324. *Turn 91.*
A repeats camping sites and asks how they get to Norway.

GE325. *Turn 90.*
B states along the coast and on camping sites.

GE326. *Turn 89.*
A asks where one gets in touch with them.

GE327. *Turn 88.*
B confirms Europe and mentions countries such as Germany, Switzerland and Austria. B claims that there are many German tourists in Norway.

GE328. *Turn 87.*
A asks in which parts of Europe.

GE329. *Turn 86.*
B states that there are several German-speaking countries.

GE330. *Turn 85.*
A asks why it is important for Norwegians to learn German when people know English.

GE331. *Turn 84.*
B states that it is a relatively important language.

GE332. *Turn 83.*
A asks what happens when one hears something in German. A asks if B corrects him/herself. A asks if B pays attention to this.

GE333. *Turn 82.*
B states that one hears much more English than German.

GE334. *Turn 81.*

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Appendix 2A: Backwards induction of the German Case (GE)

A states that A thought it was great fun to learn German since there were so many rules. A states that when knowing the rules, A knew the language, but this was not the case since there were always exceptions to the rules. A states that there is no rule without exceptions. If one knows a rule, then one usually knows that rule, but it may be difficult.

GE335. *Turn 80.*
B states that there are rules.

GE336. *Turn 79.*
A states that the grammar which they often find difficult, is grammar they may also make use of, for instance, in Norwegian. If B is to write proper Norwegian, this is useful knowledge since Norwegian has cases as well.

GE337. *Turn 78.*
B states that the grammar is somewhat more difficult in terms of analysis.

GE338. *Turn 77.*
A states that they have a really big advantage when learning German because they know so many of these words from before. It is much more difficult for an English person to learn German. A asks if B had reached any particular conclusion in terms of German.

GE339. *Turn 76.*
B states that they are probably much closer.

GE340. *Turn 75.*
A states that they are from the same family.

GE341. *Turn 74.*
B states that they are Germanic.

GE342. *Turn 73.*
A states that the pronunciation is almost the same. In relation to English and French it is terribly difficult, but German is OK.

GE343. *Turn 72.*
B states that the words are very similar to Norwegian.

GE344. *Turn 71.*
A states that if one reads in Norwegian, it becomes different, but the moment we see them, we see that this is quite understandable. A asks what it is about German which makes it similar. A states that A does not think about articles then. A asks what A might be thinking about.

GE345. *Turn 70.*
B reads *Tante* (aunt), *Onkel* (uncle).

GE346. *Turn 69.*
A states that A agrees with B to a certain extent. A asks if there is something specific about learning German in comparison with English. A states that B has been through that process. First B had several years of only English, and then they started to study German in addition. A states that A has written three words on the blackboard. A asks how these words are read in German.

GE347. *Turn 68.*
B states that the most important thing is to be able to extend B's vocabulary in order to make oneself understood. B states that the most important thing is to be able to express oneself orally.

GE348. *Turn 67.*
A says yes. A states that there is a difference between talking and writing. A asks what is most important – talking and writing.

GE349. *Turn 66.*

Appendix 2A: Backwards induction of the German Case (GE)

B states that it depends on the context. People would normally understand you if it is a normal conversation.

GE350. *Turn 65.*
A asks if it is not possible to use the word because B does not know the gender.

GE351. *Turn 64.*
B states that very often B learns a word and then later remembers what kind of gender it is, and then B cannot use the word because B does not remember the gender.

GE352. *Turn 63.*
A states that A does not think that the most important thing is to learn the gender, but it is important to learn the words.

GE353. *Turn 62.*
B states that especially in German, it is a car or something like that.

GE354. *Turn 61.*
A confirms that this is important. A claims that they do this at school on a regular basis. A states that next month B will be travelling to Austria with a small group. A states that they will then have to talk German to the parents, who are not that good at English. A states that the Austrians will return to Norway.

GE355. *Turn 60.*
B states that it only applies to 'good morning' and those kinds of expressions. B remembers that, for instance, when they had their German exam, or German oral exam, or a mock exam, they learned many phrases, such as "excuse me for a little moment". However, B does not remember what it is.

GE356. *Turn 59.*
A asks in German if B has an example.

GE357. *Turn 58.*
B states learning good phrases and expressions.

GE358. *Turn 57.*
A states that one takes a room. One places furniture there and then one writes the name in English or German, or whatever.

GE359. *Turn 56.*
B refers to vocabulary.

GE360. *Turn 55.*
A confirms B's statement about the origin of Rex, stating that it is incredible what they may learn about the two cities by watching the series. Then we may learn about country and culture as well. A wonders if B has anything further on the list to be included.

GE361. *Turn 54.*
B states Austria and wonders if this is correct.

GE362. *Turn 53.*
A confirms that Derrick is in Munich. A asks about Rex.

GE363. *Turn 52.*
B states that Derrick is probably in Munich.

GE364. *Turn 51.*
A states that Rex has been of invaluable use and joy for learners of German for many years, not to mention Derrick. A states that Derrick goes way back. A asks if B has noticed that NRK[6] broadcasts it again now. A thinks that it is pathetic to watch. A asks if B knows where Rex comes from and where they

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[6] The Norwegian Broadcasting Corporation.

are. A asks where Derrick is. A asks what kind of city they are in when watching Derrick.

GE365. *Turn 50.*
B states sometimes, rather seldom. B states that everybody has the chance to watch the Internet.

GE366. *Turn 49.*
A asks if B sometimes listens to the news in German.

GE367. *Turn 48.*
B states that B does not watch those channels very much. B watches different series.

GE368. *Turn 47.*
A asks if B knows the name.

GE369. *Turn 46.*
B states that B watches different kinds of programmes.

GE370. *Turn 45.*
A asks how many have the possibility to watch German television, and wonders what B watches on those occasions.

GE371. *Turn 44.*
B states social media and TV.

GE372. *Turn 43.*
A asks if one will learn from the ones B is talking to, and B may pick up different expressions and those kind of things which B may be using.

GE373. *Turn 42.*
B mentions playing a specific kind of computer game. Then one may talk to the people one is playing with. These may, for instance, be German. B may talk to them while engaging in the activity and must then be able to explain. B becomes somewhat stressed, resulting in pressure on B. B learns a good deal from that.

GE374. *Turn 41.*
A asks what B is thinking about.

GE375. *Turn 40.*
B states that one may play games or engage in other kinds of activities while talking to the people one is playing with, using the target language. B needs to be active in order to learn the language properly.

GE376. *Turn 39.*
A states that it is not only about the language, since language and culture are connected. A states that B also knows something about issues such as Germany and geography. It makes it more interesting. A asks if there are any points which B has written down which they have not commented on yet.

GE377. *Turn 38.*
B thinks that it is important to have a special interest for the country where the language is spoken. B learns a good deal about Germany, and this knowledge creates an interest for the language.

GE378. *Turn 37.*
A asks if there may be something in the individual which makes him/her want to learn a foreign language, without worrying about what the teacher is like.

GE379. *Turn 36.*
B states that they had a very good teacher in the eighth grade, and then they learned a lot. However, in the ninth and tenth grades, they had another teacher and noticed a considerable difference. B states that it was much harder to learn the language because of the teacher. B states that this means that the teacher has a great influence. B states that one needs a good teacher

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Appendix 2A: Backwards induction of the German Case (GE)

in order to learn a language, otherwise B will not be motivated. B needs to understand this.

GE380. *Turn 35.*
A asks if B watched many movies in lower secondary school. A suggests that B learned a good deal.

GE381. *Turn 34.*
B answers having a good teacher for learning, since B then does that kind of thing. B states that in lower secondary school they had a teacher. B states that B concentrated on the teaching, something nobody else did.

GE382. *Turn 33.*
A asks about the exercise.

GE383. *Turn 32.*
B says that when B is in Germany, much more German is used. B states that B thinks more in German as well every once in a while. B mentions many new words.

GE384. *Turn 31.*
A asks if B learns anything from that.

GE385. *Turn 30.*
B states that B talks to them.

GE386. *Turn 29.*
A asks about B since B also has family in Germany.

GE387. *Turn 28.*
B answers yes and that B has talked German to cousins. B states that B does not think very much about it, for instance when writing. B states that they laugh a little at B sometimes.

GE388. *Turn 27.*
A asks if B has tried English.

GE389. *Turn 26.*
B answers German. B answers online chatting.

GE390. *Turn 25.*
A asks if B now has been thinking about German or about English and foreign languages in general terms.

GE391. *Turn 24.*
B states talking to other Germans and managing to remember.

GE392. *Turn 23.*
A asks about a given situation in, for instance, a railway station.

GE393. *Turn 22.*
B states exercise through talking German in different situations.

GE394. *Turn 21.*
A asks if there are other learning methods.

GE395. *Turn 20.*
B states that it is rather like dramatisation. B writes B's own piece, presenting it afterwards in front of the class.

GE396. *Turn 19.*
A asks if there are others who have made the same point.

GE397. *Turn 18.*
B says that B may vary the learning methods if B wants to learn, so that it does not get boring and monotonous in a way.

GE398. *Turn 17.*
A asks about the result of the group discussion.

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Appendix 2A: Backwards induction of the German Case (GE)

GE399. *Turn 16.*
B says that it is OK.

GE400. *Turn 15.*
A asks if reading a text and talking about it is OK.

GE401. *Turn 14.*
B states that it is not particularly difficult to understand.

GE402. *Turn 13.*
A states that English is fairly easy. A asks what it is like doing homework.
A asks B if there are difficult words when B reads a text.

GE403. *Turn 12.*
B answers both. B states that it is easier to read since the pronunciation
is a little special sometimes.

GE404. *Turn 11.*
A asks what B concentrated on then. A asks if B concentrated on listening or
reading.

GE405. *Turn 10.*
B says yes and states that B tries to translate. B states that in lower
secondary school they used to watch many German movies. B states that they
then had both German speech and Norwegian subtitles.

GE406. *Turn 9.*
A asks if B watches German movies.

GE407. *Turn 8.*
B states that B easily focuses on the text even if B tries not to do that.
It is difficult not to do it. B states that B tries to hear what they say in
English and then B translates it in B's head instead of watching the text.

GE408. *Turn 7.*
A acknowledges this confusion, stating that it is even possible to see that
the translation is wrong.

GE409. *Turn 6.*
B states that B manages to listen and that B prefers not having a Norwegian
text, since it gets confusing.

GE410. *Turn 5.*
A states that, for instance, such as expressed by B, talking to people who
speak the same language, and reading in that language without necessarily
thinking about grammar. A wonders how things are when B watches movies or
television in a foreign language, including English. A asks if B reads the
Norwegian subtitles, or if B manages to listen.

GE411. *Turn 4.*
B confirms this. B states that it is very important to learn new words. B
states that it is important to do things that make it fun to learn the new
language, so that it does not just become boring and stressful.

GE412. *Turn 3.*
A acknowledges reading a lot and asks if B thinks about the target language.

GE413. *Turn 2.*
B states reading a lot.

GE414. *Turn 1.*
A asks B what it takes to learn a foreign language. A informs about the
purpose of the research project, and tells B to make use of the principles
rehearsed beyond the classes, if this is possible. The focus will be on an
understanding of what language learning processes involve, as well as how one
can use language-learning strategies in order to become more autonomous in

Appendix 2A: Backwards induction of the German Case (GE)

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the way one learns. A also informs B about the topic for the next session,
which is how language learning takes place in order to create awareness of
the nature of language learning processes.
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Appendix 2B: Pragmatic Analysis of the German Case (GE)

1.	*Reasons for language choice* (GE1-GE26)	A asks if B has developed a deeper understanding of the reasons for B´s actions. A asks if B has become more aware of why B has chosen German in the first place. A mentions the importance of having a goal with the learning activity. A asks if B thinks it is a pity that B has not chosen French or Spanish. A claims that B was forced into a direction which B did not think much about when B was 7 years old. At that time, B could not do very much about the situation. A states that if B wants to study in Berlin, then it is useful to know German. B states that B has got many more impressions as a consequence of the focus on issues such as why B has chosen German. These impressions are related to learning German in terms of work, leisure, and travelling. B confirms that B could not have done very much about the situation when B was 7 years old. B states that B feels that B will have more use of German than Spanish and that German will dominate more. B confirms that it would be useful to know German if B wants to study in Berlin. B states that B always wanted to learn Spanish anyway, so it is a bit cool to be able to learn German knowing that B has enough stamina to learn Spanish as well. A (instigating, "B reflects on the reasons for B´s language choice ")
2.	*Identification of the usefulness of learning activities* (GE27-GE30)	A states that the point is to find one´s own learning style and what suits the individual best. This depends somewhat on the target one has for the learning process. It also depends on what one finds interesting, what one thinks is easy to work with, and ways which suit one best when learning German. A asks if B has discovered something special, or if something seems natural, if B has reacted in any way, or if B has developed a certain insight. A also asks if B has done something in a different way just because B received advice during these sessions, or if B has not done things differently. B states that most of what B has thought of is rather logical. B states that it is logical that one has to engage in rote learning in order to master a subject, it is logical that one has to practise it in order to learn it better, basically most of what they have been reviewing. B states that B has also seen the importance of how much one needs to learn through rote learning in order to achieve good results. A (asking, "B reflects on efficient practice for learning ")
3.	*Identification of cognitive learning strategies* (GE31-GE34)	A states that there are certain grammatical structures one has learned in English that one would like to transfer to German. A asks what it takes to learn German. A states that A could have opposed B´s claim that one needs an exceptional interest in grammar. B states that one needs an exceptional interest in grammar. B mentions German subtitles instead of Norwegian when watching movies. B states that if the movie is in English, one may use German subtitles. A (asking, "B identifies cognitive learning strategies")
4.	*Relevance of previous experience* (GE35-GE50)	A wonders if B has thought about making use of B´s own mother tongue during the year, Norwegian, or the learning of other languages, which is probably English at this point. A wonders how B can make use of this experience when studying German. A asks if B makes use of the fact that many words in German are similar to Norwegian words. A asks if B looks for words which are similar or if B takes the word which is the closest. A states that if B, for instance, meets a German person in town, then B may find support in Norwegian to a certain extent during a conversation. A asks what difference B perceives between English and German. A claims that many structures in English may be recognised in German. A confirms that English is a little Germanic. A states that many English words come from Latin. A

	states that if one uses a dictionary with English words, then one may see that they have different origins. A states that some words come from Anglo-Saxon.
	B states that many words in German are similar to Norwegian ones. B states that this is rather practical, because it is then possible to guess the meaning of the words. B says that B does not use this principle consciously when working with a German text. B states that B only looks for similar words when reading. B understands the meaning of a word since it is similar. B states that when writing, B can make a guess. B states that B tends to use a dictionary anyway. B confirms that B could have found support in Norwegian. B asks if it is true that English and German have two different roots. B wonders if English is Germanic. B states that English is not very Germanic. B states that English is European. B confirms that, when using a dictionary, it is possible to see that the words have different origins. A (explaining, "B reflects on B´s linguistic background as a source for learning German")
5. *Reasons for language choice* (GE51-GE78)	A asks if B really wants to learn German. A asks if choosing German in lower secondary school was something B wanted, or whether it was a coincidence. A asks if B had thought of the subject which was the easiest to learn of the three foreign languages and not the subject that would be the most useful. A asks if the parents' opinion is important when it comes to the language choice the learners make in lower secondary school. B confirms that it is important that B wants to learn German. B states that they had German in second grade in the Steiner school without having the option to decide. They then also had to choose German in upper secondary school. B states that they had no choice. B states that in that case B has talked German for many years. B states that B is German, so had to speak it anyway. B states that B was forced into choosing either Spanish, French or German. B states that B chose the language that B thought was the easiest one. B states that they got to know that Spanish is a language for holidays, whereas German is a business language, which makes German useful. B states that B preferred the business language to the holiday language. B states that B´s mother and father had studied German, which makes it easier. B confirms that the parents' opinion is important. B states that B had heard that the wisest thing to do was to take German. A (asking, "B reflects on the reasons for B´s language choice ")
6. *Practice opportunities* (GE79-GE84)	A asks what it takes to learn a language. A states that B has to be prepared for the next day´s learning activity based on "Kein Schnaps für Tamara". A confirms going to places where people talk the language one is trying to learn. B states that it is possible to learn a language if one simply enters a native tribe. B states that first of all one needs someone who can teach B the language, and also perhaps a book or a teacher. B states that B has to be exposed to the language on a regular basis by listening to German, reading German, and trying to talk German. B states that B has to carry out in practice what B has learned theoretically. B states that if B learns about some grammatical topics, then B first learns the theoretical part, and then B may read a text or watch a movie related to the topics one has learned about. B states that by going to places where they talk the language, B is trying to learn. B states that in that case, B is forced into talking, or it depends on whether people know English. B states that B has to consider the things B does not know properly, and then attempt to test them out. Thereafter, B has to look at them and learn them so that B can fill in the gaps.

		A (asking, "B reflects on practice opportunities")
7.	*Self assessment* (GE85-GE88)	A states that the wheel is a tool which can be used to develop insight into B´s learning process, and that it is closely related to the instruction programme B has been exposed to. A tells B to be honest in order to find out what B already knows. A asks if B has ever engaged in self-assessment activities. B states that it is something B has not been involved in before and that self-assessment is difficult. B asks what it means to understand the main content of a certain matter. B states that prior to tests the book is used. A (explaining, "B reflects on self-assessment activities")
8.	*The role of mistakes* (GE89-GE90)	A introduces the topic of this session as the role of mistakes. B states that B tries to understand what B has done wrong. B tries to avoid making the same mistakes again through a comparison with previous tests. B also says that B checks what spoiled the good grade. B says that when B gets a bad grade, B does not want to look at it at once. B takes out the test at an earlier stage. B states that B looks more at it later, something that makes it easier. B states that making mistakes does not destroy anything. B states that the most important thing is to make sure that others understand what B is saying, but that some mistakes may disturb communication. B states that listening to the immigrants makes B understand that B learns more and more. B states that children learn to talk as they go along. A (prompting, "B reflects on the role of mistakes")
9.	*Preparation of a learning activity* (GE91-GE100)	A asks what B has to look for and tells B to analyse in order to find other elements, such as prepositions. A states that it is important to go about the task in the right way, and that B has to find out the things B does not remember and what B needs to solve the task. A states that B has to use a grammatical overview. A asks what B thinks about the task at hand. A asks if there is anything B should have known more about. A states that it is important to practise looking up in the right places. B states that the topic of the task is translation. B states that knowledge about general grammar is important, such as the tenses. B states that it is important to be able to analyse. B states that general grammar is important, as is vocabulary. B refers to going to the grocery store and buying warm rolls as an example. B states that in that case B has to find out what kind of words B can use. B also says that it is important to rehearse for a specific approach what B knows from before. B answers that B does not know all the words, and that this fact influences the solving of the task. A (prompting, "B reflects on the preparation of a learning activity")
10.	*Purpose of a learning activity* (GE101-GE108)	A explains that it is always a good idea to have a purpose when doing something, especially if this purpose is related to some goals. A reminds B about the fact that B had been discussing goals in the previous session, and that today´s topic could be related to last session´s discussion of topics. A states that the exercise introduces the genitive case, and that this topic is introduced for the first time. A states that structures with "von" are rather oral. A states that the genitive case varies the language to a further extent. A states that the purpose is important. A states that there is one situation where the genitive is necessary. A states that some prepositions always take the genitive, and in those cases the genitive is required, not "von".

	B says that the genitive case is used in order to be able to get by in Germany. B states that it is important to raise it to a developed level. B replies that this forms the basis for a deeper understanding of the language, and that it is perhaps not that important for the time being. B states that it is easier to formulate sentences when one knows the genitive case. B states that the German language becomes more proper. B states that B does not use the genitive that much. B states that B uses most "von" and that it is OK to use this form. However, with the genitive case, one develops a larger vocabulary. B uses "The man´s car" as an example. A (prompting, "B defines the usefulness of the genitive case")
11. Goals for the learning process (GE109-GE120)	A explains that the background to the project is the European Council´s guidelines for language teaching in Europe and the connection of these guidelines to policies of European integration. A explains that according to political theories, patterns of conflict in Europe can partly be determined by understanding language barriers in Europe. A claims that levels of conflict may be reduced by enhancing cultural and linguistic awareness and knowledge among people, since understanding other´s perspectives and being able to have a dialogue with others is positive for the reduction of conflict. In international crises keeping a dialogue open and making sure that people speak the same language is important for conflict solving. A asks about the objectives for reading and writing skills. A asks what B does in order to reach B´s goals. B states that B has now gathered some experience in the matter, and that this experience can be used to understand the purpose of the programme even better. B states that B´s objective is to be able to understand most of a conversation with a native speaker. B states being able to understand what is necessary to work with German later on. B states that the goal is not necessarily to get a job where German skills are important, but if such a situation should come about, the objective is to have sufficient skills to hold the post. B states that the objective is to be able to read literature in German and also to be able to read newspapers and magazines. B states that the goal is to be able to understand texts for homework. B states that understanding signs and posters is an important goal. B states that reading technical material seems too advanced. B replies that B had tried to read German books. B states that B is going to Berlin very soon, and that instead of taking a taxi, the goal is to take the subway on as many occasions as possible in order to be able to read signs and information in German to get to one's destination. B states that being understood as a tourist in the country is important, and also to be able to ask specifically about tourist attractions. B states that the objective is to be able to live in a German-speaking country and, for instance, to study there. B states that being able to write well enough to study abroad is a goal. B states that B wants to study abroad, and that B needs writing skills to achieve this aim. A (explaining, "B reflects on the goals for the learning process")
12. Organisation of a learning activity (GE121-GE138)	A asks if B has heard about the word *organisation*. A states that one has to organise in order to do things properly. A asks if B has thought about how to become organised. A tells B to find out about the instructions A has prepared for B´s forthcoming learning activities. A tells B to think about how B can become organised to do this, and that B should find a strategy in order to learn what is stated therein. A states that the homework for the next day consists of learning expressions from a text B has just read. A states that B should work with grammar in the form of adjective conjugations related to the text. A states that the two parts do not have very much in common, and A asks how B would go about the task. A asks what kind of pictures one should look at. A asks if B uses the strategy "browsing through the book

	looking at the pictures one comes across". A asks what B should do if B is to write an exercise in German. A asks if the task mentioned by B was difficult or easy. A suggests that B could run while thinking about the conjugation of adjectives after a working session. A asks if the best thing would be to run before or after doing homework. A writes a memo-technical pattern for the learning of the adjective ending in German, asking if B could place the cases correctly in the grid. B states that B would read the words and then study the conjugation of adjectives. B states that B would study the rules first and then look at the task afterwards. B states that B should first learn the new words and then simply start doing the task. B suggests that one should look at the paradigm first. B states that it is a good idea to look at the pictures prior to the working session. B replies that it is a good idea to browse through the book looking at the pictures B comes across. B replies that B has heard that it is supposed to be a good method of getting prepared for the learning session. B states that B has to think about the grammatical errors B tends to make. B states that B has to read a lot of German. B states that B has to read first and then make an effort to really understand the subject matter. B replies that it was a rather easy task. B states that the adjective was not an easy part. B suggests that B could record endings before going to bed and then listen to them. B states that the best thing is probably to run first since it could be difficult to run afterwards because of the time schedule at home with dinner, etc. B comments on the fact that running is a good way of dissolving tensions in relation to a language learning activity. A (prompting, "B reflects on the organisation of a learning activity")
13. Assessment of the SBI programme (GE139-GE148)	A informs B about the content and structure of the national curriculum. A tells B to think through the process of learning the language so far. A asks how much B has been working with language learning. A emphasises the purpose of the task in relation to the general programme, i.e. that B is expected to discuss to what extent the programme has helped B towards understanding what B can do in order to understand language learning and what B can do to achieve the goals stated in the curriculum. A asks how B can look for sources. A asks if B feels that anything is missing. B states that B has been working with communication. B states that B had been writing texts. B states that B had been working with the alphabet and the signs of the language. B states that they have expressed their own opinions and emotions. B answers that B has been working more with these aspects now than in lower secondary school. B states that one has to work continuously, focusing attention on the lessons and taking the initiative. B replies that it is possible to read about memo-technics and find out about learning strategies. B states that if B gets a test back, it is important to analyse errors. B states that it is important to listen to what the learners tell you to do and to be able to take more responsibility oneself. B states that during the time with this programme in class, B has seen more of the necessity to do something one's own. Previously, B had not cared that much about what B could do independently of what the teacher tells B to do. B states that B understands the difference between theory and practice better. B states that B can learn more about vocabulary learning. A (prompting, "B reflects on the usefulness of the SBI programme")
14. Proceduralisation of oral skills (GE149-GE158)	A asks if B remembers that last week B had started to work on a text about being an exchange student in Norway and which words they remembered from this work. A asks if B remembers other words of the same kind and if B thinks B can make a contribution. A asks if B can express what it feels like to talk German. A asks if B sometimes chooses not to say anything, and what

	we can do to amend this situation. A asks if B thinks it is OK to make mistakes. A asks how B feels when B talks. A states that B's comment is an example of this session's strategy in terms of listening to others speak instead of speaking oneself, and that this is a method B can use to learn. A asks if B has ever stopped speaking the foreign language, since B did not know how to express oneself. A applies the concepts of declarative and procedural knowledge to this strategy. A uses examples of how the strategy can be learned from a declarative point of view in terms of being able to state what the strategy is all about and then applying it in real life by being able to delay speech to focus on what is being said from a procedural point of view. B remembers the word *Austauschschüler* (exchange student). B mentions the word *das Erlebnis* (the experience). B answers that B feels insecure and stressed since B feels that B gets it wrong no matter what B does. B states that it feels OK when B speaks to B's father, because then B does not feel embarrassed, but it is worse when B is in Germany. B replies that it is OK if we simply move on, but that it may be difficult to break the ice. B states that it feels strange, and that B finds it difficult to find the right words. B states that it depends on the setting. B states that B does not feel like trying, since B is afraid that they will simply rattle on. B has tried to talk German in Turkey, and B felt more comfortable there. B states that it is great fun when B knows the language well, and that it is a drag if B is not able to say very much. B states that it is important to learn new words, and also to learn how to use these words. B states that *Rathaus* is a funny word in German. B relates an episode in Germany where B had been with her parents. B had attended a dinner, and B had been listening in on the other guests on that occasion in order to grasp some useful words and expressions. A (prompting, "B reflects on the proceduralisation of oral skills")
15. Preparation of a learning activity (GE158/159-GE160)	A asks if B remembers which topic had been introduced[1]. A asks if B knows what B needs to know when working with relative pronouns. A gives a summary of last session's topics, focusing on the introduction to general learning psychology and its consequences for language learning psychology in the form of the dichotomy between declarative and procedural knowledge. A gives a summary of the basic language learning strategies that had been mentioned: affective, social, cognitive and metacognitive learning strategies. A mentions the terms metacognition and metacognitive learning strategies, and these were defined as knowledge about one's own knowledge, knowledge about the learning process and one's own progress and the strategies used to make use of this potential to promote B's own language learning process. A tells B to look up the conjugation paradigm for the relative pronoun and A relates this to the conjugation of the definite article. A tells B to focus on the relative pronoun, and to think about gender and finding cases by analysing the sentences. A defines this exercise as an example of metacognition. B states that B has to learn the conjugation paradigm. B discusses which form of the relative pronoun is important, and B mentions that it is important to analyse the sentences in order to find the right pronoun. A (defining, "B reflects on preparatory issues prior to a learning activity")
16. Definition of a learning activity (GE160/161-GE168)	A states that the session is going to be part of the preparation for an upcoming full-day test. A writes on the blackboard: Why are we working with this text/translation? What do I have to learn/check up on/know in order to translate it? Have I worked with similar material before? A explains the

[1] A had decided to use the topic *relative pronouns* for this session, a topic which had been introduced a week prior to the session.

Appendix 2B: Pragmatic Analysis of the German Case (GE)

	difference between *als* and *wenn*. A tells B to identify the subordinate clause and to define the word order for the subordinate clause. The verb conjugated according to person must be placed at the end of the clause. A comments on the importance of analysing the clause for correct translation. A comments on the use of an adjective derived from a noun. B answers with learning the words and the grammar. B answers that subordinate clauses in German is the topic. B states clauses introduced by *dass* (that) called adverbial subordinate clauses. B states translation Norwegian-German. B answers that one has to know subjunctions/subordinating conjunctions, such as *dass*, *wenn*, *weil*. B states that one has to know the word order – the verb towards the end, the verb conjugated according to the subject towards the end. B states analysis. B states that this is not particular for subordinate clauses. B asks about the difference between *als* and *wenn*. B writes the first sentence on the blackboard: *Ich Weiss, dass Peter heute krank ist*[2]. B writes the second sentence on the blackboard: *Ich glaube, dass Anna morgen kommt*[3]. B discusses the use of *morgen* vs *Morgen*[4]. B translates another two sentences in relation to the theory about subordinate clauses: *Wenn ich in Bonn bin, besuche ich Bekannte*[5]. B analyses the sentence in order to translate it correctly. A (explaining, "B reflects on the characteristics of subordinate clauses in German")
17. Definition of practice opportunities (GE169-GE186)	A asks who has been to a German-speaking country in the near or late past. A asks if B has been to a place where B had to use the German language. A wonders, with the benefit of hindsight, if there were many words B did not know. A asks if there are things B feels B should have known. A asks if B had looked things up when B came home. A states that one needs a very particular interest. A states that it not wanting to learn dishes is also a kind of consciousness, since they are farfetched and special. One determines what one wants to spend one's energy on. One registers that if there are many special meat dishes in Switzerland, one does not necessarily want to learn them all. This is also a way to be aware of one's own learning. One determines what one wants to learn. A asks if B had learned the word *Ecke*[6]. A states that B will never forget this word. B states that B has been to Berlin. B states that B has been to a café, but not a store. B confirms that B has been to a place where B had to use the German language, and that this went rather well. B states that B had bought sandwiches, and that this had worked. B states that there were some words B did not know. B states that there were a couple of dishes, names of different hams, which were a bit farfetched for B. B states that B should have known more words for things, such as food. B states that B had not looked things up when B came home. B remembers a few things that got stuck in the memory in that situation, when the woman pointed and said that this is that. B states that B remembers this. B states that B learned something in the situation. B states that B was in Switzerland. B had been in many kinds of situations. B states that it had been worst in a restaurant. B states that it is somewhat difficult to remember dishes. B states that when B got stuck, B got help from the person next to B, a person who knew more German. B states that B has not been to Germany. B states that B had been to Germany some time ago, but there were no situations where B just had to talk. B asked people who

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[2] I know that Peter is sick today.

[3] I think that Anna will be arriving tomorrow.

[4] Tomorrow vs. morning.

[5] When I am in Bonn, I visit acquaintances.

[6] Corner.

	passed by where a store was. People thought that B talked English, so they answered in English. B states that things went OK and they understood each other. B states that B had been in such a situation on a train in England where somebody next to B was talking. B thinks that B heard the word "Ecke", "um die Ecke"[7] or something like that. B had asked "Bist du Deutsch?"[8] The other had said 'yes'. This was three years ago, so B did not know very much German at the time. B says no. These people should put something in the corner, so they placed a suitcase in the corner. B remembers that B had been to an old people's home in Schönbrunn when B was younger. B had then lost her way and had to ask many old people. These people did not speak any English. B asked about the road. This is a situation where B simply had to know. At the time, B knew more German than now in a way. B's father talked German to B at the time. B states that he does not do that anymore. B states that B has been to a bakery in Berlin. B bought a loaf of bread and got the type B wanted. A (prompting, "B reflects on past practice opportunities ")
18. *Preparation of cognitive practice opportunities* (GE187-GE200)	A mentions the concept of cognitive learning strategies in terms of understanding, perception and memory. A states that during this session, they are going to talk about the metacognitive learning strategies. A states that this means talking about knowledge about one's own learning and what we can do in order to improve this learning and this process. A asks about B's contribution. A asks what kind of situations B had dealt with. A asks about the planning of the activity and if this was difficult. A asks about Merkel in Paris and what would be the strategy to achieve this encounter. A asks what would be important in the situation when B is to talk to her. A mentions talking to a person who B does not know at all and who is of a certain importance. A asks what one has to remember then. A states not being a good Norwegian, saying "du"[9]. B states that they had dealt with a bakery in Berlin. B states that they had mentioned bakery goods and discussing immigration politics with Angela Merkel in Versailles. B states that this is perhaps more difficult. B states discussing nature, being in Switzerland, and shopping in Germany. B states having an intellectual conversation about chocolate and buying a cinema ticket. B states going to places where B knows about chocolate and clothes' stores in Munich. B states that B should go to a clothes' store in Berlin. B states that the sentence B needs is related to clothing: currency, size, colours, etc. B states asking dad or family what B is to do and what it is possible to ask about in addition to general normal sentences. B states that B may listen to a Linguaphone course. B states a place that is not so busy, so that people working in the store have time for B. B thought about colors, patterns, size, price and that kind of things. B states thinking through what kind of situations may occur and what kinds of sentences may be useful in the relevant situation. B thinks that it is important not to stress too much. B states that B forgets a lot if B stresses. B states that it is better to have a note with words on in case one forgets. B states that it is no good to make an all-out effort from time to time. B states that it is better to be proactive, practising the sentences B wants if B knows what B wants to rehearse. Then B knows that it is related to clothes. B can begin beforehand and B has a note with certain words. B states that B should have written a manuscript in order to think properly through the situation. B states that B should have a good vocabulary. B states using the right personal pronoun. B states noticing certain words B does not know. B may write them down if possible, bring them back home, and look the words up.

[7] Around the corner.
[8] Are you German?
[9] The Norwegian informal *you*.

	A (prompting, "B reflects on the preparation of cognitive practice opportunities")
19. *Definition of an affective learning strategy* (GE201-GE202)	A asks about the affective learning strategies. A states that they have talked about reducing stress in the learning process. B wonders if it was about watching movies, for instance, and listening to music. A (asking, "B defines the nature of affective learning strategies")
20. *Definition of a social learning strategy* (GE203-GE204)	A states that it is good for B to know these concepts. A writes these concepts on the blackboard, saying that these are the two forms of knowledge, theoretical and practical. A states that A wants to write some kinds of learning strategies they have talked about. A asks what these mean (cognitive, social and affective). A asks if B remembers anything at all in terms of the difference between them. B states that the social part is when B uses the language in conversations. A (defining, "B reflects on the characteristics of social learning strategies")
21. *Difference between declarative and procedural knowledge* (GE205-GE206)	A repeats declarative and procedural knowledge. A asks if B feels that B understands these concepts. A asks if it is possible to express these concepts with other, easier words. B states that declarative is theory and procedural is practice. A (asking, "B defines the difference between declarative and procedural knowledge")
22. *Proceduralisation of affective learning strategies* (GE207-GE216)	A asks about B's preferred affective learning strategy. A asks if listening to music is of any help, or if B just sits there after a while simply listening to the music and forgetting what the activity was all about. A states that both training first and training afterwards has been mentioned. A asks if one should read that book in German, and whether a CD with German text would have got B on the right track or whether it would have been distracting. A wonders if calm Mozart or Beethoven could have been OK. B states that B tends to do something which B enjoys doing after having worked a good deal, e.g. football training, watching TV, or something else. B then feels that B has a source of motivation in a way. B states that, when working with homework, B knows that B does not have to work only with the homework. B states that there is something nice waiting to look forward to. B states that B does not use that many affective learning strategies, except listening to music. B does not know if this is relevant. B states that when working with mathematics, B tends to listen to music because that helps. B states that when reading or getting deeper into something, the music does not work. B states that it is easy to turn on the music and have it on, although it is not much help. B feels that it helps in mathematics. B states that if B is going to work with homework for a long time, it helps to run first. B feels that B thinks more clearly if B has trained first. B states that, in terms of music, the music has to be instrumental. B states that if one has texts when trying to read something, then one will easily listen to the text instead of starting to read. B states that one would listen to what they are singing. B states that reading a book and listening to a CD would have been too much at the same time. B states that perhaps calm Mozart or Beethoven could have been OK.

	A (prompting, "B reflects on the proceduralisation of affective learning strategies")
23. *Proceduralisation of social learning strategies* (GE217-GE222)	A asks if B has ever done anything in order to rehearse the language in interaction with others. A asks if B would have done learning activities, such as on the Internet in German. A wonders if it is correct that most people are aware of the fact that one does not know that much and that people are good at moderating things and talking a bit slower. B states that B has not done that much. B states that they read a good deal in school. B states that they read in pairs and the other tried things out as much as possible. They listened and tried to correct the other person. B states that B has used a good deal of chatting and games on the Internet. B states that when B started to learn English at a younger age, B used this knowledge as a basis for playing on the Internet. On those occasions, B talked quite a good deal. B wanted to make him/herself understood and to understand what others were saying. B had forced him/herself into learning it. B states that this was a good way to learn. B states that B could not have done this now, but at a later stage. B states that B had used it with German tourists when B worked in an amusement park. In school, it is possible to talk with the learner next to B. B states that many of B's family in Austria only speak German. There is no other option than talking German to them. B states that it is a mixture of Bosnian and German. B states ordering food and drinks and getting by on one's own when being abroad. B states that B had to talk quite a good deal of German in Switzerland. However, most people know English there. B states that on one occasion in Turkey they had been better at talking German than English. B had tried to talk German to them. However, it had turned out to be difficult after all, although B at least tried. Once B's family had been in Germany, and then B had tried to talk German. It had not gone that well. B states that it is a good idea to travel to countries where they talk their mother tongue and where there are many German tourists, so that they have to learn German. They then talk more easily and they understand that they have to talk slower. B states that if B goes to Germany, things may tend to go somewhat fast. B states that B has to go to a place where they only talk German and nothing else. It is easy to switch over to English since this is a language that both parties understand. A (prompting, "B reflects on the proceduralisation of social learning strategies")
24. *Proceduralisation of oral skills* (GE223-GE232)	A states that they have talked about theory and how they can try this out in practice. A states that when B gives us the preparation with the accusative, we have then learned it by heart. We then try to use it in practice afterwards. A asks if it is efficient to hear a German text being read aloud, for instance by playing a CD. A tells B to think about the book A had thought about letting B read. A asks how B went about the task. A states that it is possible to use English as well. B states that B plays a game to improve pronunciation. B states that B played Internet games. B states that when watching movies, it is all about perceiving individual words one understands and making the connections in terms of what happens in the movie, and also pictures, if it is a book. B mentions vocabulary tests in order to learn new words. B states that if B watches a German movie, B may see it several times, have German subtitles, and then try to understand the language. B states that B also has to engage in rote learning. B states that the basics are easier learned if B engages in rote learning and tries it out afterwards. It is then easier to understand. B states reading things aloud. Then B is corrected and gets to know how the different words are pronounced. B states that it is efficient to hear a German text being read aloud, for instance by playing a CD. B says that B has to engage in rote

	learning and read it over and over again. B states that B had gone quickly through the book and then B looks at it afterwards. B goes through it quickly in order to understand the main characteristics. B states that B had not quite understood the thing at the back of the book, the part in German where it said what the book was all about. When B started to read, B had to look it up on the Internet in English in order to understand what was in the book. B states that it helped a good deal. B understood much more. B states that B felt that B had read the book without focusing that much on vocabulary. B had tried to understand what the book was about. A (prompting, "B reflects on the proceduralisation of oral skills")
25. *Practical use of declarative and procedural knowledge* (GE233-GE244)	A asks if B remembers what they did last Friday. A asks what kind of songs they had been singing. A asks what kind of grammar and what kind of topic. A confirms it was prepositions. First, some people mentioned the prepositions, and then they tried to sing them again, and to see how it is possible to use these prepositions. A states that this is something B has learned from these German lessons. A asks what they talked about during these lessons. A confirms it was ways to learn and practical rehearsal. A states some theory first; some of them contributed with some theory and then they tried things out in practice. This is what they tried to talk about. A asks if they remember the expressions they used, in addition to the nice words for theory and practice. A asks if they wrote them down anywhere. A states that some of them mentioned a word with a D. A confirms declarative. B states that they have been singing songs. B answers grammar. B answers accusative and dative, and the prepositions. B states ways to learn and practical rehearsal. B states declarative. B states P for procedural. A (asking, "B reflects on practical use of declarative and procedural knowledge")
26. *Proceduralisation of grammatical skills* (GE245-GE256)	A asks how to put grammatical skills into practice. A says that one does not need very much to be understood. A states that that B has now produced information about how to systematise the different fields in German one has to learn something about. A states that in the following session they will get back an essay. B can then see how they have practised language and this will show if they have to go back to the declarative form of knowledge, to brush up on the declarative knowledge in order to move to the procedural form. This is complicated with German, since there are so many rules that have to be used at the same time. One thus has to practise constantly. The more one writes, the better. A states that the point about learning the concepts of the perfect tense and accusative is that it will be possible to look up conjugation patterns in the list. A states that this is why we use these concepts, not to make it more difficult for B. It makes it easier to get declarative knowledge when B knows what it consists of. A wonders how conscious B has been in terms of looking at conjugation patterns for the perfect tense when B has written tasks and essays. A wonders if B has ever thought explicitly about this, or whether B does it just because A tells B to do so. A wonders if B has ever thought about the importance or the necessity of knowing 'perfect' as a concept, and also of getting conjugation patterns from a list where it says "perfect" as a title. A wonders if B wrote spontaneously when B wrote B's essay, or if B ever looked up conjugation patterns for this and that in order to create a particular sentence. A asks how B knew what an irregular verb was to start with. A wonders if B remembers this, or what has made B aware of the fact that something was irregular. A states that they talked about the difference between regular and irregular verbs. A states that one needs certain grammatical principles. What B has said is at least to check the concord between subject and verb. A states that the word is also important. One has to remember what is special for German. With prepositions, it is easy to

	choose the wrong case. The better declarative knowledge one has, the easier it is. A asks if the concepts belonging to the cases is something that has been useful during the time B has studied German, or if it made matters more confusing. A wonders what B thinks about the use of these declarative concepts. B states travelling to a place in Germany where they do not talk English, so that B has to talk German. B states that if B has to do it, it would be possible. B states using hands and feet. B had been in Croatia during the summer holiday and had tried to use a dictionary in order to look up certain basic words. B had learned some words so that B was able to communicate. B states that the same principle could have been applied to German. B had been on an exchange programme in Germany, and the mother in the host family spoke a particular dialect that was difficult to understand. They did not speak English, and they had to use body language sometimes. B states that when B was unsure if a verb was regular or irregular, this person checked the word in the dictionary. B thus learned which ending was relevant. B answers that there are many regular and irregular verbs one already knows. If one does not know a verb, one finds it in the dictionary. Then one knows the ending by using one's declarative knowledge. B states that B tries to use the declarative knowledge B has when writing a text, but much is done using intuition as well. However, B feels that the most important thing is to get the message across, not the degree of grammatical mistakes in the text. If B were to write a proper text, B would have used a language B knows well, for instance Norwegian or English. B would have rather chosen German for letters and private issues. B states that the most important thing is the message, not the grammar. B states that cases are not vital in order to get the message across. It does not matter if one writes *ein* or *einen*, as long as one gets the message across. B states that B spent a lot of time in lower secondary school understanding what nominative, accusative and dative meant. B did not understand these concepts, and the teacher did not say that it was subject, direct object, etc. A (prompting, "B reflects on the proceduralisation of grammatical skills")
27. *Construction of theoretical declarative knowledge* (GE257-GE264)	A tells B to think in terms of perfect and wonders how this has been. A wonders if it went well and if the theory is still there. A wonders about prepositions. A asks how it is possible to construct one's theoretical knowledge. A says that practice is a necessity. A asks where one has to be in order to learn grammatical rules. A wonders if one has to go far. A states that it is fun for the practical part to attend language courses. A asks where it is possible to learn grammatical rules. A suggests back in the textbook. B says that B feels that B has moved beyond the purely theoretical stage and that B goes back to the basic principles in order to develop knowledge further into procedural knowledge. It is like a curve that goes higher and higher. B states that B constructs knowledge as a consequence of trying out the same knowledge over and over again. B states that B has to practise, otherwise B will have to read it over and over again. If B does not use it, it is not stored in the mind. B states that if we are to remember these rules when we reach the age of 50, we must have been in Germany and talked. We have to practise with regular intervals. B states TV, at school, and finding summaries on the Internet. A (asking, "B reflects on the construction of theoretical declarative knowledge")

Appendix 2B: Pragmatic Analysis of the German Case (GE)

28. Proceduralisation of declarative knowledge (GE265-GE276)	A states that they are both Germanic languages. A asks if there are other things which occur to B. A asks if B remembers the difference between declarative and procedural knowledge. A states that declarative is the theoretical material we have to learn, while procedural is the practical part. A asks if B remembers any examples of declarative and procedural knowledge in terms of the general items they discussed last time, such as cycling, walking, and waffles made without a recipe. A wonders if B needs theoretical knowledge in order to cycle, or only procedural knowledge. A states that B learns how to walk by watching others walk. A asks about B's mother tongue. A wonders if that is similar to walking. A wonders if we see others do the same. A asks if they are comparable. A wonders if German is something B has to focus upon consciously because B does not see others do the same. A states that they are going to work with German to find out about declarative and procedural knowledge. A states that they have lately worked with the preterite tense and the use of auxiliaries, and they have talked about prepositions. A wonders how this fits into the topics of this programme. A wonders how B can go about these matters. When B goes home to rehearse the auxiliaries *sein haben*, what is it then? A states that if B is into rote learning in order to learn to say the rules, we are dealing with the theoretical part. If B says it after having rehearsed several times, it is the practical part, namely procedural knowledge. A tells B to think about the topics they have had this autumn. A tells B to find out what they have worked with in terms of theoretical knowledge and how they have tried to use it in practice. A tells B to use as many examples as occur to them. A asks B if B has had any kind of declarative knowledge thus far this term. A asks how B has tried to transform the declarative knowledge into procedural knowledge. A asks what they needed when they wrote an essay. A states that when writing essays, all these basic skills need to be in place. A asks if they had done anything in particular with the different topics to rehearse them.

B says that it is the same as the difference between theoretical and practical knowledge. B states that B learns to walk by watching others walk. B states that declarative issues may be important at an early stage of the learning process. B states strong verbs, intransitive verbs, perfect tense and auxiliaries, in addition to the conjugation of auxiliaries in general terms, and prepositions. B states that they have written an essay. B says that they had written down sentences and tasks. B states that they had listened to CDs to learn pronunciation. B states that B learns pronunciation so that B learns how to pronounce things in Germany. They focus on theory and practice when reading texts, in addition to tasks, to see if anything from theory can be transferred to practice.

A (prompting, "B reflects on the proceduralisation of declarative knowledge") |
| *29. Importance of grammatical knowledge (GE277-GE286)* | A asks what B remembers from last time. A asks what the thing was with waffles made without a recipe. A states that if A had put forward 100 different ingredients and asked B to make waffles, B would have found the right ingredients. A states that B would not have made anything else. A then asks how we could compare the making of waffles with the learning of German. A asks if B sees any parallels between German produced without a recipe and what is not German produced without recipe. A states that this is equal to making waffles when having 100 ingredients in front of B. B must know which ingredients to pick if B wants to make waffles. A asks what it is that B needs in order to learn German, as with the case of the waffles. A asks what B needs to learn in relation to the basic recipe for these waffles. The waffles are supposed to develop into real waffles as time goes by, not simply waffles made without a recipe. A asks what we have talked about and asks what B has to do. A tells B to say just what crosses B's mind. A asks what the right ingredients are in terms of German. A suggests pronunciation. A |

	mentions pain, i.e. that it hurts to learn German. A states different words. A asks what B can say about the difference between words in German and Norwegian in terms of words. A asks if German is a difficult language when it comes to the words. B replies with practical and theoretical forms of learning. B says waffles made without a recipe. B says to make waffles spontaneously, but with knowledge about how this is done. B states that B is to learn German and not French. B states that B has to learn grammar in order to know what it is all about. B states that B has to know what the basic differences are compared to other languages. B states that B needs to find the right ingredients. B says that there are many similar words. B asks why there are many similar words. B says that it is because the two languages have the same origin. A (asking, "B reflects on the importance of grammatical knowledge")
30. *Proceduralisation of knowledge* (GE287-GE299)	A wonders if B remembers how B went about the activity. A asks how B had got everything into the mouth. A tells B to think back when B learned to eat ice cream. A wonders how B did it. Perhaps someone gave B a spoon, a bowl, and showed B how to eat. A asks what B does now. A guesses that B takes a spoon automatically now. A guesses that B learned it quickly. A wonders if there are other things B has learned during B's life, things that have taken a certain amount of time. A says that the easiest thing was to get up and walk. That kind of activity is something we have to learn. A asks if B remembers when B learned to walk. A wonders if B has seen pictures from that time. A compares this to the time when A had small kids. A reports that one followed them closely with their arms. One does not do that anymore. The child has to get up on its own, when it feels it is right. A asks about waffles made without a recipe. A states that when B makes waffles without a recipe, the process still results in waffles. A asks why this happens. A says that B knows that B does not have to use potatoes. A states that B knows these things, and B gets waffles even if B has made them without a recipe. The result may vary, but B gets waffles. A states that B may include many things in something, and still get the same result, but with a different taste. A uses their German tuition as an example. When it comes to the perfect tense of the verbs, A wonders where they found themselves, i.e. in the declarative part or in the procedural part. A states that B has perhaps moved a little into the procedural part. A states that when it comes to playing games, cycling etc., A wonders if B has to know the rules and how to perform them. A states that dancing and breathing are procedural, as well as swimming and floating. A states that crawling requires more theory. A states that, during this session, they talked about the fact that something is learned as a child, something as an adult, and that this depends on the point in life. A states that all these issues will also come to the surface when learning a new language. B learns Norwegian as B's mother tongue, English after a while at an early stage in life, and German and French later. A states that all this depends on what B has learned before in life, B's point in life, interest in the subject, etc. B states that B did not get it all into the mouth in the first place; most of it came outside. B answers cycling and swimming, talking and reading. B states that it took a long time before B learned to talk. B states that B knows more or less what ingredients to use, but not exactly how much. B states that they are still in the declarative part at an early stage. B, who has a partly German background, states that it would not have been possible to go straight to the procedural part, upon which B says that B learns something in theory, and then moves on to the practical part, etc. B states that when learning English things, were more confusing when learning the theory. A (prompting, "B reflects on the proceduralisation of knowledge")

31. The nature of learning (GE300-GE319)	A asks what learning is. A comments that what B does not know is something B is more afraid of. A states that B knows something, and then B adds a little more. A uses boxes that are added to each other with the answer in the formula in the biggest box. A states that A wanted to teach B two expressions they could jot down somewhere, or at least save them in the right place. A writes declarative and procedural knowledge on the blackboard and asks what they have done now and what these are. A states that it has to do with the process. A states that it is when B is told that that is the way it is. A states that we have a simple way to explain this in terms of boiling eggs. If A says how to boil hard eggs, A can write down water, pot, boil the water, and put the eggs into the water. A states that A lets the water boil for about ten minutes to get really hard eggs. When A follows that recipe, A makes use of declarative knowledge. However, when A actually does things, A makes use of the procedural part. It is when A actually carries out the process that A acquires knowledge. A asks if B baked anything last weekend. A asks what B baked. A asks if B was so skilled at it that B could delve straight into the practical part, or whether B had to study the theory first. A says that B then goes straight into the practical part since the declarative part has been acquired and learning has taken place. The theoretical part has thus entered the right place in B's mental system. B takes it out and uses it. A asks if B remembers it and if it went well. A asks B if B had learned to eat ice cream or cakes at any point, or if this was automatic. A wonders why B does it automatically if nobody has taught B how to eat this food. A states that it seems to be a habit. B knows how to do it and it comes automatically. A asks how B eats ice cream. A tells B to think back 15 years in time and whether someone had put a bowl of ice cream in front of B. B states that it is about acquiring new knowledge and skills. B says that it is a process that carries on throughout B's whole life. When B gets older, B gets wise through gaining more knowledge. B states that it is a step-wise addition of information that continues throughout B's whole life. All parts of the information are equally important, just like bricks. B states that learning is when B has received or understood knowledge or information that B can repeat and use. B states that it is knowledge based on B's own experiences. B states that it is desired or undesired exposure to useful or non-useful information. B states that enhanced knowledge yields enhanced understanding. For instance, in the religion subject, B learns about other religions, and B is then more willing to accept other religions. B understands to a certain extent what these religions are about. That is why it is important to learn about them. B states that knowledge or learning is adaptation. The more knowledge B acquires, the more new things B may learn. If B knows two languages, it will be easier in a way to learn a third one. B states that B does not know what these concepts mean, but that procedural knowledge is possibly what happens when B learns something new gradually, when something is constructed. B learns something simple and can then somehow construct this into a holistic understanding. B learns plus and minus and then learns to use it with lines. B states that it can be compared to the difference between theory and practice. B states that B grabs the cooking book and finds the recipe for apple pie. It is thus about theory, i.e. how much to put into the apple pie. One then starts following the recipe and indulging in the practical part. B says muffins and brownies. B states that it was the practical part. B asks what one may call it when B makes dinner in the way B did. B went straight into making it since B remembered what this declarative knowledge was all about, but before B had to read the recipe. B says yes. B says that the only thing B did during the weekend was to eat ice cream. B replies that this was something B had done since B was little. B confirms that it is something automatic. B eats it with a spoon and in a bowl. A (prompting, "B reflects on the nature of learning")

Appendix 2B: Pragmatic Analysis of the German Case (GE)

32. The importance of German (GE320-GE330)	A asks why it is important for Norwegians to learn German when people know English. A asks whereabouts in Europe. A asks where B gets in touch with Germans. A repeats in camping sites and asks how they get to Norway. A states in caravans that they have filled up with food and drink, fishing rods, freezers, and those kinds of things. However, it may be interesting talking to them and one does not need that many words either. A says *Elch*[10], *der Elch*. A mentions that traffic signs tend to get lost along the road. A asks if this was new to B or if these were things B had thought about previously. B states that there are several German-speaking countries. B confirms Europe and mentions Germany, Switzerland and Austria. B claims that there are many German tourists in Norway. B states that B gets in touch with German tourists along the coast and on camping sites. B states that they come to Norway by car. B mentions moose (Elch). A (prompting, "B reflects on the importance of German")
33. Similarities between Norwegian and German (GE331-GE346)	A asks if there is something specific about learning German in comparison with English. A states that B has been through that process. First B had several years with only English, and then they started to study German in addition to English. A states that A has written three words on the blackboard and asks how these words are read in German. A states that if B reads in Norwegian, it becomes different, but at the moment we see that this is quite understandable. A asks what it is about German that makes it resemble Norwegian. A states that A does not think about articles then. A asks what A might be thinking about. A states that the pronunciation is almost the same. A states that compared to English and French, German is terribly difficult, but that German is OK. A states that they are from the same language family. We have a really big advantage when learning German because we know so many of these words from before. A states that it is much more difficult for an English person to learn German. A asks if B had reached any particular conclusion in terms of German. A states that the grammar which they often find difficult is grammar they may also make use of, for instance, in Norwegian. If B is to write proper Norwegian, this is useful knowledge. There are the cases. A states that A thought it was great fun to learn German since there were so many rules. A states that when knowing the rules, A knew the language, but this was not the case since there were always exceptions to the rules. A states that there is no rule without exceptions, but usually if one knows a rule, then one knows that rule, even though it may be difficult. A asks what happens when B hears something in German. A asks if B corrects him/herself. A asks if B pays attention to this. B reads *Tante*[11], *Onkel*[12]. B states that the words are very similar to Norwegian. B states that they are Germanic. B states that they are probably much closer. B states that the grammar is more difficult in terms of analysis. B states that there are rules. B states that one hears much more English than German. B states that German is a fairly big language. A (asking, "B reflects on the similarities between Norwegian and German")
34. Practice opportunities (GE347-GE354)	A confirms that this is important. A claims that they do this at the school on a regular basis. A states that next month B will be travelling to Austria with a small group. A states that they will then have to talk German to the parents who are not that good at English. A states that the Austrians will return to Norway. A states that A does not think that the most important thing is to learn the gender, but it is important to learn the words. A asks if it is not

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[10] Moose.
[11] Aunt.
[12] Uncle.

	possible to use the word because one does not know the gender. A says yes. A states that there is a difference between talking and writing. A asks what is the most important between talking and writing. B states that in German especially, it is a car or something like that. B states that very B often learns a word and then one later remembers what kind of gender the word has. B cannot then use the word because B does not remember the gender. B states that it depends on the context. People would normally understand you if it is a normal conversation. B states that the most important thing is to be able to extend B's vocabulary in order to make oneself understood. B states that the most important thing is to be able to express oneself orally. A (prompting, "B reflects on practice opportunities")
35. The acquisition of oral skills (GE355-GE375)	A asks if one will learn from those one is talking to, and if one can pick up different expressions and the like that they may be using. A asks how many people have the possibility to watch German television, and wonders what B watches on those occasions. A asks if B sometimes listens to the news in German. A states that Rex has been of invaluable use and pleasure for learners of German for many years, not to mention Derrick, who goes way back in time. A asks if B has noticed that NRK is currently showing the series as repeats. A thinks that it is pathetic to watch. A asks if B knows where Rex comes from and where it is set. A asks where Derrick takes place. A asks what kind of city they are in when watching Derrick. A confirms that Derrick is set in Munich. A asks about Rex. A confirms B's statement about the origin of Rex, stating that it is incredible what they may learn about the two cities by watching the series. One may thus gain information about country and culture as well. A wonders if B has any further information on the list to be included. A states that one takes a room. One places furniture there and then one writes the name in English, German or whatever. A asks in German if B can provide an example. B states that B may play games or engage in other kinds of activities while talking to the people B is playing with, using the target language. B needs to be somewhat active in order to learn it properly. B states playing a specific kind of computer game. B may then talk to the people B is playing with. These may be, for instance, German. B may talk to them while engaging in the activity. B must be able to explain. B becomes quite stressed, resulting in pressure on B. B learns quite a good deal from that. B states social media and TV. B states that B watches different kinds of programmes. B states that B does not watch those channels very much. B states that B watches different series sometimes, rather seldom. Everybody has the chance to watch the Internet. B states that Derrick is probably based in Munich. B states Austria in terms of Rex, wondering if this is correct. B states learning vocabulary and good phrases and expressions. B states that it is only good morning and those kinds of things. B remembers, for instance, that when they had their German exam, German oral exam, or a mock exam, they learned many phrases, such as "excuse me for a moment", but B does not remember what it is. A (prompting, "B reflects on the acquisition of oral skills")
36. Motivational issues (GE376-GE381)	A asks if B watched many movies in lower secondary school. A suggests that B learned a good deal. A asks if there may be something in the individual that makes him or her want to learn a foreign language, without worrying about what the teacher is like. A states that it is not only about the languages, since language and culture are connected. A states that B also knows a bit about Germany, geography, and the like. It makes it more interesting. A asks if there are any points that B has written down which we have not commented on yet.

	B answers the importance of having a good teacher. Then B does things like that. In lower secondary school, B had a teacher. B states that B concentrated on the teaching, something nobody else did. B states that they had a teacher in the eighth grade who was very good, and they learned a lot. However, they had another teacher in the ninth and tenth grade. They noticed a considerable difference. B states that it was much harder to learn the material because of the teacher. B states that this means that the teacher has a great influence. B states that B needs a good teacher in order to learn the language, otherwise B will lose motivation. One needs to understand this. B thinks that it is important to have a special interest for the country where the language is spoken. One learns a good deal about Germany, and this knowledge creates an interest for the language. A (prompting, "B reflects on motivational issues")
37. Practice opportunities (GE382-GE398)	A asks if there are other learning methods. A asks about a given situation in, for instance, a railway station. A asks if B has been thinking about German, English, or foreign languages in general. A asks if B has tried online chatting in English. A asks what about B, since B also has family in Germany. A asks if B learns anything from talking to family members in Germany. B says that B may vary the learning methods if B wants to learn, so that it does not become boring and monotonous. B states that it is rather like dramatisation. B writes B's own piece and B presents it in front of the class. B states exercises through talking German in different situations. B states talking to other Germans and managing to remember. B answers German. B answers online chatting. B answers 'yes' and that B has talked German to cousins. B states that B does not think very much about it when, for instance, writing. They laugh a bit at B sometimes. B states that B talks to them. B states that when B is in Germany, much more German is used. B states that B thinks more in German as well every once in a while. B mentions many new words. A (prompting, "B reflects on practice opportunities")
38. Cognitive strategies (GE399-GE414)	A asks what it takes to learn a foreign language. A informs B about the purpose of the research project and informs B to make use of the principles if possible beyond the classes. The focus will be on an understanding of the language learning processes, as well as how B can use language-learning strategies in order to become more autonomous in the way B learns. A also informs B about the topic for the next session, which is how language learning takes place in order to create awareness in terms of the nature of language learning processes. A acknowledges reading a lot and asks if B thinks about the target language. A states talking to people who speak the same language and reading material in that language without necessarily thinking about grammar. A wonders how things are when B watches movies or television in a foreign language, including English. A asks if B reads the Norwegian subtitles, or if B manages to listen. A states that it is even possible to see that the translation is wrong. A asks if B watches German movies. A asks what B concentrated on when B watched German movies with Norwegian subtitles in lower secondary school. A wonders if B concentrated on listening or reading. A states that English is fairly easy. A asks what it is like doing homework. A asks B if there are difficult words when B reads a text. A asks if reading a text and talking about it is OK. B states reading a lot. B confirms that B refers to the target language. B states that it is very important to learn new words. B states that it is important to do things that make it fun to learn the new language, so that it does not just become boring and stressful. B states that B manages to listen and that B

	prefers not having a Norwegian text, since it becomes confusing. B states that one easily focuses on the text, even if one tries not to do that. It is difficult not to do it. B states that B tries to hear what they say in English and B then translates it into B's head instead of watching the text. B confirms that B watches German movies and states that B tries to translate. B states that they used to watch many German movies in lower secondary school. B states that they then had both German speech and Norwegian subtitles. B answers that B focuses on both listening and reading. B states that it is easier to read since the pronunciation is a bit special sometimes. B states that it is not particularly difficult to understand. B confirms that reading a text and talking about it is OK. A (prompting, "B reflects on cognitive strategies")

Appendix 3A: Backwards induction of the French Case (FR)

<u>Session 16</u>

FR1. *Turn 724.*
A asks if there are other comments. A states that if there are no other comments, the camera will be turned off.

FR2. *Turn 723.*
B answers "yes".

FR3. *Turn 722.*
A acknowledges the fact that B has become aware that in certain situations B does as B always has done because this works best. At the same time, in some situations, for instance in situations of speech production, B can possibly consider doing things in other ways because B has the knowledge to do so. A also asks B if this is a correct interpretation of what B has said.

FR4. *Turn 721.*
B states that when doing homework in whatever subject, B does not have the energy to sit down and think through how B is to think in order to do the homework. B prefers to get things done, and B then thinks automatically as the work unfolds. Nevertheless, B thinks that when the situation occurs that B has to talk French, strategies need to be employed in that particular situation. B feels that the topic of these sessions should rather be used in those situations.

FR5. *Turn 720.*
A acknowledges B's remark and elicits further comments.

FR6. *Turn 719.*
B states that the issues are at the back of one's mind, even if one is not consciously aware of them. They are at the back of one's mind, and then one thinks that one has to do things in this or that way in order to achieve certain results.

FR7. *Turn 718.*
A states that what B says is really very important, because the point is that the curriculum states that the learners have to be aware and choose their own strategies. They are to identify what works best on an individual basis. If one thinks that a certain activity takes too long and one does not do it because it works best in another way, then one does it and one chooses that option because one has a choice. One does it that way since it suits one best to do it that way. One thinks that a certain way suits one best, so then one can take what one needs, or one can put it aside. A states that this is the whole point, which is also stated in the curriculum, namely that the learner is to be able to choose relevant working methods. One has the tool box, and sometimes it is like this and sometimes like that. Nevertheless, the repertoire is there, and then one may choose the best method for oneself . The point about finding one's own learning style is to find out what suits one best at the end of the day. A elicits more comments about the same topic.

FR8. *Turn 717.*
B states that much of this has to do with issues one can arrive at through one's own thought processes, but one has to be aware of the fact that one does not have to do things in exactly this or that way. If it does not work, then one can do it in a slightly different manner.

FR9. *Turn 716.*
A says whenever B wants.

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Appendix 3A: Backwards induction of the French Case (FR)

FR10. *Turn 715.*
B says yes.

FR11. *Turn 714.*
A acknowledges that B considers it to be a tool box from which to pick the tools one wishes.

FR12. *Turn 713.*
B states that what B had found out was that B had developed a strong motivation to learn French as a consequence of this programme, since B notices that B has a rather big tool box with means that can be used to make learning somewhat easier.

FR13. *Turn 712.*
A states that this is brilliant.

FR14. *Turn 711.*
B says yes.

FR15. *Turn 710.*
A says that B has rather captured it intuitively in terms of a specific way of doing things, and then B does it this way.

FR16. *Turn 709.*
B says that B thinks that many of these techniques took too long to be used for every task. B states that this is why B did not bother to go through the metacognitive learning techniques for each homework.

FR17. *Turn 708.*
A says that A has some closing remarks. The 16 sessions that have been dedicated to activities related to becoming more aware about language learning have been implemented throughout the whole year. A assumes that B has gained an impression of the activities that have been used in one way or another, and that B would not have gained this impression if this programme had not been followed. A therefore asks if B has had any awakening experiences in relation to B's own previous experiences, own insight, if B has done homework in a different way than would have been the case in other circumstances, and if B has developed a plan in terms of why B learns French so that it can be used in the future. In this way, it is related to goal-setting, so that B becomes more aware, something which B can envisage. B may have changed some attitudes during this year, a change that would not have occurred without this separate form of instruction.

FR18. *Turn 707.*
A says OK.

FR19. *Turn 706.*
B says no, because most of it has been said already.

FR20. *Turn 705.*
A asks if there are more comments.

FR21. *Turn 704.*
B states that there are no further comments, and that motivation was very important for them.

FR22. *Turn 703.*
A says that Latin words in English are words which one would probably find in Spanish. A also asks if there are more comments.

2

Appendix 3A: Backwards induction of the French Case (FR)

FR23. *Turn 702.*
B says yes.

FR24. *Turn 701.*
A states that these kinds of words are often rather advanced ones.

FR25. *Turn 700.*
B says that it is possible to try to learn the words that are somehow similar to English words. There are some similar words there, since about half of the English words are derived from French.

FR26. *Turn 699.*
A says that A has tried to make the learners read out loud every session, or if not every session throughout the whole year, at least to have this as a goal. A also asks if there are any further comments.

FR27. *Turn 698.*
B states that it is more fun to work in groups than sitting alone at home engaging in rote learning.

FR28. *Turn 697.*
A says yes.

FR29. *Turn 696.*
B states that they only practise pronunciation.

FR30. *Turn 695.*
A says yes.

FR31. *Turn 694.*
B states that they have practised this and that they have also written down examples of oral practice.

FR32. *Turn 693.*
A states that these two languages have some features in common, even though they differ in some ways in terms of grammar and vocabulary. A claims that the most important aspect is that the learners hear English every day almost automatically. This way of getting practice opportunities is important, and this is why A emphasises the importance of seeking practice opportunities in French. Practice opportunities may be TV, movies, music, advertising, magazines, and advanced books are also recommended at a later stage. It is possible to go through a whole summer without hearing a word of French. A states that in Norway it is impossible to spend a day without hearing English, unless one is hiding in a tent in the mountains. A asks for more comments, issues which have not been mentioned and which may be of importance.

FR33. *Turn 692.*
B states Germanic language family.

FR34. *Turn 691.*
A states Germanic.

FR35. *Turn 690.*
B says the same.

FR36. *Turn 689.*
A claims that it is the same language group.

FR37. *Turn 688.*
B claims that English is more similar to Norwegian than French.

3

Appendix 3A: Backwards induction of the French Case (FR)

FR38. *Turn 687.*
A asks how B learned English. A feels that having studied maths and natural sciences, A feels that A did not learn English in school, but in other ways.

FR39. *Turn 686.*
B says that if B has travelled abroad a little during childhood, then English is most probably the language spoken when B ever tried to talk abroad.

FR40. *Turn 685.*
A refers to experiments with an early language start. A also asks if there are other causes why learners start so late with French.

FR41. *Turn 684.*
B says that learners could have started to learn English at an earlier stage. The younger one is, the easier it is to absorb information, especially in languages, so one could have started with a foreign language earlier.

FR42. *Turn 683.*
A asks if there are other opinions in this respect. A asks why people in Norway are much better at English than French, referring to those who are actually taking French.

FR43. *Turn 682.*
B states that one reason is that learners are provided with input in English via, for instance, social media. B had thought that Facebook and Twitter could change the language into French.

FR44. *Turn 681.*
A tells B to state why.

FR45. *Turn 680.*
B states that they had thought about looking at why they had become so much better at English than French.

FR46. *Turn 679.*
A says that it is important to have fun. A says that next year, when the learners hopefully reach a higher level, they will probably use other material as well. The library will be used for access to reading French books, and they will go to the French cultural centre, where they have comics, music and different material. A has noticed that many of those who learn French well, those who get the best grades, are learners who work with role play or try to do things on their own. A states that they do not have many hours at their disposal per week, three hours per week if it is a full week, and sessions may often be cancelled. B mentions that continuous input is important. A asks if B has any further comments about important issues which were discussed in the group.

FR47. *Turn 678.*
B says in front of a larger audience. It is often Norwegian, English and French. It may be something else as well, and then B tries to muddle through the French ones as well. If there are things one does not understand, then B simply compares with the others as well. B states that it is just a minor detail, but it is rather fun.

FR48. *Turn 677.*
A says yes.

4

Appendix 3A: Backwards induction of the French Case (FR)

FR49. *Turn 676.*
B says that there are also informative texts.

FR50. *Turn 675.*
A says OK.

FR51. *Turn 674.*
B says that it does not necessarily have to be a museum in France, but it is often in museums.

FR52. *Turn 673.*
A asks if B is in France.

FR53. *Turn 672.*
B says that it is when B does not understand everything.

FR54. *Turn 671.*
A says yes.

FR55. *Turn 670.*
B says that if B is in a museum or a similar place, then B often tries to read the French texts.

FR56. *Turn 669.*
A says that it is easier to get in.

FR57. *Turn 668.*
B says yes.

FR58. *Turn 667.*
A states yes, or on the Internet.

FR59. *Turn 666.*
B says that it has already been said, but a good idea is to watch a movie, listen to music, or read something. B also says that finding a pen friend could be a good idea as well.

FR60. *Turn 665.*
A states doing what one is told, that the teacher develops a scheme that the learner follows and then puts trust in the teacher. A asks if B had said a little extra and asks what the learners can do themselves beyond the issues the teacher prepares for.

FR61. *Turn 664.*
B states that the goal is to work on a regular basis, do what one is told, and make that extra effort without concentrating one's work just before a test.

FR62. *Turn 663.*
A hopes the same. A states that there are some challenges related to Spanish, since it is much easier to start with the oral part right away. A claims that they have based their written language on the spoken language. A also states that they have worked quite a bit with pronunciation, and this is a huge task in French, because there is often a great discrepancy between pronunciation and written language. Their goal next year includes the written language. A states that the written language has to be at the core if they are to manage this. A asks if there are any other comments. A asks how B has worked this year, and how B feels that B has worked in order to reach B's good level in French.

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Appendix 3A: Backwards induction of the French Case (FR)

FR63. *Turn 662.*
B says instead of the opposite.

FR64. *Turn 661.*
A says yes.

FR65. *Turn 660.*
B says to go down that road.

FR66. *Turn 659.*
A says yes.

FR67. *Turn 658.*
B says that it is easier.

FR68. *Turn 657.*
A says yes.

FR69. *Turn 656.*
B says that B thinks so, that is the differences which B sees. B feels that
B has a good focus on grammar, but in terms of some of the Spanish classes,
B feels that they talk a lot, and then B also sees that they are able to
talk much more than B can. At the same time, it seems that they can write
much more than they can. B also thinks that it is beneficial to allow
talking to develop over time, after one has learned to write.

FR70. *Turn 655.*
A mentions the difference between communicating and oral language
correctness. A states that they have also said that, this aspect is not
that important in terms of oral language correctness as long as one
understands it. A comments on written language.

FR71. *Turn 654.*
B says that the French understand if one does not manage to conjugate
correctly.

FR72. *Turn 653.*
A says no and that one hardly hears them when one talks.

FR73. *Turn 652.*
B says that B does not think that grammar is just as important for talking
as for writing, i.e. in terms of issues such as conjugations and concord.

FR74. *Turn 651.*
A says yes, and that they have talked about the fact that practising over
and over again is a key in foreign languages. It is not enough just to get
started with some grammar and words. One has to practise the most common
words, those which appear the most, so that they will be absorbed. A asks
if there are other issues. A wonders if grammar is that important at all. A
says that A tries to put emphasis on grammar, since A feels that it is
important to review those issues properly. A asks how it is possible to
work in order to learn grammar. A states that B has seen some ways to do
things during the year, and asks if B has any ideas about this issue.

FR75. *Turn 650.*
B says that B there is not always focus on the fact that a certain issue
has to be remembered, but B thinks that it is OK to get some input at
least.

FR76. *Turn 649.*
A says yes.

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Appendix 3A: Backwards induction of the French Case (FR)

FR77. *Turn 648.*
B says that it is OK to practise to build up a good vocabulary, which means that if B has someone who knows more French than B, then B can ask how to say things. B says that B does this a good deal. B asks what a certain thing is in French even if B, of course, soon forgets much of it.

FR78. *Turn 647.*
A says yes, but that words are something on a list, although it also important to use them in the sentence. This means that a series of words is not that important, but that we are able to write as well. Thus, vocabulary is important, since it is the content, and words may be looked up. We have aids in the exam. Oral practice is something we get with French people if that is a goal, and then we cannot look up words all the time - we need a basic vocabulary.

FR79. *Turn 646.*
B says issues such as music.

FR80. *Turn 645.*
A says yes.

FR81. *Turn 644.*
B says rote learning. B also says that B would also have watched movies and things like that. It is important to gain input from other places than only the books used in the subject.

FR82. *Turn 643.*
A says that they should first focus on words, asking how B can go about learning words.

FR83. *Turn 642.*
B says that B notices this when B starts to think in French in a way, in that B recalls words and that B is able to put names on things and talk a bit about oneself in French.

FR84. *Turn 641.*
A says yes and asks how B can see that. B also asks how B can notice if B has learned something.

FR85. *Turn 640.*
B states that B has to be very aware about how to learn. B needs a strategy and B has to be as efficient as possible. B also says that B has to work as fast as possible. It is motivating to see that B learns as B moves along.

FR86. *Turn 639.*
A asks if one learns in relation to grammar. A wonders if one may quickly verify if one has understood. One will quickly reveal if one knows all the forms or not, but A states that A agrees that writing is important, and that they will be doing more of that next year. A states that next year they will be writing in the past tense as well. A also tells B to reflect more over other issues that are important to learn, and tells B to reflect over what they have said earlier this year as well. A asks what is important if one has the motivation and clear goals and one wants to learn French. A asks what it takes to write more and to write sentences and face challenges. To express oneself in the language is important and A has tried to work with that all the time in sentences. A asks for more comments.

FR87. *Turn 638.*
B says that no, B learns things, how to use words fairly rapidly.

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Appendix 3A: Backwards induction of the French Case (FR)

FR88. *Turn 637.*
A asks what the point is with these.

FR89. *Turn 636.*
B says yes.

FR90. *Turn 635.*
A states that one uses, for instance, some of these fill-in-the-blanks today.

FR91. *Turn 634.*
B states that it is fairly easy, but that when B sees that B has suddenly commented on four to five pages of text, then B feels that B knows French somewhat better than B perhaps believes.

FR92. *Turn 633.*
A says yes.

FR93. *Turn 632.*
B states that B believes that it is very important that B checks out on an individual basis what B knows every once in a while. B also states that writing an essay, writing for a presentation, or using the language independently of the fill-in-the-blanks in the book, is very important in B's view. B states that when doing these fill-in-the-blanks, B thinks that B does not know that much French. It is not difficult to put in a word even if everything turns out to be wrong.

FR94. *Turn 631.*
A says yes and asks about other issues that were brought up. A asks what is important in order to learn a language. A asks how to work in terms of motivation, and then to see goals if one wants to learn French. A states that if that is the main focus, then it is either about the grades, or one wishes to acquire a beautiful language, or one wants to travel to France and know the language so as to talk to people down there.

FR95. *Turn 630.*
B says yes.

FR96. *Turn 629.*
A says yes, and that A hopes that B will be better next year, and later on as well. A also says that it seems that B has chosen the right thing.

FR97. *Turn 628.*
B says thank you.

FR98. *Turn 627.*
A says that B has become good at French.

FR99. *Turn 626.*
B says that it has not been decided for B to know French in particular. B states that B's starting point was simply to know another language than English.

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Appendix 3A: Backwards induction of the French Case (FR)

FR100. *Turn 625.*
A says yes.

FR101. *Turn 624.*
B states that B has said earlier that B had applied for Spanish in the
first place.

FR102. *Turn 623.*
A elicits information from B.

FR103. *Turn 622.*
B says yes.

FR104. *Turn 621.*
A asks if this is true.

FR105. *Turn 620.*
B says oh yes.

FR106. *Turn 619.*
A says that B had said something about the French language in relation to
Spanish in terms of Spanish being a more beautiful language.

FR107. *Turn 618.*
B says that there are many similarities as well. This is the way it is in
many places. Even if B reads a sentence where B does not understand all the
words, B still manages to understand what it is about.

FR108. *Turn 617.*
A says that B speaks Spanish fluently and wonders if Spanish is B's mother
tongue. A also says that on one occasion, A had asked B what B thought of
French in relation to Spanish.

FR109. *Turn 616.*
B says that then B may talk to people and use less English.

FR110. *Turn 615.*
A says yes.

FR111. *Turn 614.*
B says yes, B works mostly in order to be able to travel to France once and
possibly to live there.

FR112. *Turn 613.*
A says OK and asks if there were other issues B found in terms of what it
takes to learn a language if one is motivated and feels like learning. It
may be an excuse that next year is not the last year of the subject, but
the grade B gets next year will be the one on B's certificate. The grade
may contribute towards getting admission to different study programmes
later in life, if the grades are the motivating factor. A asks if there are
other factors, apart from grades, which may be motivating. A also asks if
it is just the grades B is working for.

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Appendix 3A: Backwards induction of the French Case (FR)

FR113. *Turn 612.*
B says yes, yes of course.

FR114. *Turn 611.*
A says that it is possible to learn not only the language and to hear a
language, but also part of a culture.

FR115. *Turn 610.*
B says yes.

FR116. *Turn 609.*
A confirms that there are many opportunities in French to take a year after
upper secondary school.

FR117. *Turn 608.*
B says that it would have been nice to have at least the possibility for B
to travel to France once a year. B does not know how much it would have
been, but perhaps a year, or it could have been a full-time study.

FR118. *Turn 607.*
A says yes.

FR119. *Turn 606.*
B wonders in order to learn French.

FR120. *Turn 605.*
A says that this is an important issue in primary school at present. A
refers to the fact that B had mentioned the issue about the goal to learn
to speak French fluently. A wonders how and why B is to find a goal which
motivates towards working in order to learn a language such as French. A
asks what motivates B.

FR121. *Turn 604.*
B says yes, brilliant.

FR122. *Turn 603.*
A says that often, when working long-term with another subject, one uses
part of the brain as a numeric part, and then it may be useful to have a
break and work a little with languages for instance. A states that it is
also possible to use another part of the brain in order to charge the brain
to let the numeric part rest a bit. A wonders if there is competition with
other subjects, since grades are very motivating.

FR123. *Turn 602.*
B says that one works with all the subjects, but of course if one has to
submit two kinds of written work, and one of them is a subject B is taking
in its final year and the other one is French, then B thinks that most
people would automatically work in order to finish the most important
subject, since one has an extra year to work with French.

FR124. *Turn 601.*
A elicits comments from B.

FR125. *Turn 600.*
B says no, not really.

FR126. *Turn 599.*
A says yes and asks if B feels that French has a lower priority this year
since it is not the final year of the subject.

Appendix 3A: Backwards induction of the French Case (FR)

FR127. *Turn 598.*
B says that it is a school subject compared to other subjects B has in B's
final year.

FR128. *Turn 597.*
A asks what this means and what it competes with.

FR129. *Turn 596.*
B says that one needs enough time to do it. B states that one needs time so
that it does not only become stressful.

FR130. *Turn 595.*
A says yes and OK, and elicits more information from B.

FR131. *Turn 594.*
B states being able to talk fluently should be the goal.

FR132. *Turn 593.*
A asks what the goal of the French language is.

FR133. *Turn 592.*
B states that B does not know. B also says that things have to fall into
their natural place, or one has to set a goal.

FR134. *Turn 591.*
A asks what about French, which is not completely as global as
(incomprehensible). A wonders what it takes to get motivated in that
subject.

FR135. *Turn 590.*
B states that it is a goal.

FR136. *Turn 589.*
A says yes.

FR137. *Turn 588.*
B says yes and that it is nice to be able to express oneself globally.

FR138. *Turn 587.*
A states that then there is English.

FR139. *Turn 586.*
B says yes.

FR140. *Turn 585.*
A states that in terms of Norwegian, it is good enough, one has to know
that in order to (incomprehensible) languages.

FR141. *Turn 584.*
B states that one needs an interest. B states that one has to know; one is,
for instance, to enter Norway as a foreigner. One has to want to learn
Norwegian in order to get a job, for instance, or in school.

FR142. *Turn 583.*
A says yes and asks what it takes to become motivated.

FR143. *Turn 582.*
B says motivation.

FR144. *Turn 581.*

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Appendix 3A: Backwards induction of the French Case (FR)

A says yes.

FR145. *Turn 580.*
B says that the first thing B wants to say is motivation, which is the first step. B has to know that B wants to achieve this and B needs a goal for the effort.

FR146. *Turn 579.*
A says that they will return to where they started sometime last autumn, and that was with two questions. A states that at that point it was related to the experience B had from previous education. Now they also include what has happened during this year, i.e. the sessions they have had with Hans Erik. A states that A will be writing the questions on the blackboard, and they will then form the basis for B sitting in groups and discussing them for a quarter of an hour. They will then address it in a plenary session and it will be recorded during the session, both in the groups and in the plenary session. The first question is a general one about what it takes to learn a language. Then there is a general question in terms of language learning. A does not remember whether they also talked about Norwegian or English and experiences with a foreign language in general. And when it says languages, one must also be permitted to talk about learning Norwegian as well, with experiences back to one's childhood, when one learnt the language as a mother tongue compared to learning it as a foreign language, as we call it. The language they have worked with, which is French, and then question 2 is what they also had last autumn, what it takes to learn French, which is a foreign language. Some features will be shared, some will perhaps be special for French as a foreign language, and now for a quarter of an hour B will be talking together to find out what B arrives at, and then discuss it in a plenary session. A states that languages are important, both one's mother tongue and foreign languages. English and French may be very important for B.

Session 15

FR147. *Turn 578.*
B says that it had provided a good overview, but that it was difficult to answer a clear yes or no to the questions. B also says that some of the fields should have been divided into sub-fields, since it was difficult to answer either yes or no to the question, especially since some parts needed to be nuanced even more.

FR148. *Turn 577.*
A says that they had almost finished and wonders if they were satisfied with the wheel. A says that B could bring them along the following Thursday as well so that B could continue assessing. The grid could be a good basis for work in the time to come. A comments on the importance of being able to assess one's own progress, and that this is a way to create opportunities for knowledge and insight into the learning process. This insight may be used to achieve the goals that were mentioned in previous sessions. After the working session, A asks how this self-assessment method had worked.

FR149. *Turn 576.*
B discusses in groups.

FR150. *Turn 575.*
A emphasises the fact that language learning basically consists of four parts, and that B is still at a basic level in the process. A explains the purpose of the wheel. A says that an important part of the language learning process is to be able to evaluate one's progress and fulfil one's plans. A relates this to factors such as goals, something which has been discussed in previous sessions. B was to analyse B's own progress and shade the wheel according to B's understanding of B's own progress.

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Appendix 3A: Backwards induction of the French Case (FR)

FR151. *Turn 574.*
B says that it is frightening to learn a new language. This person still makes waffles without any recipe. The errors should rather disappear as B goes along. B says that it is not necessary to know it perfectly. B says that when B was once in Mexico, B had spoken to some English-Canadians B. They had told B when B made mistakes. B states that they listened to each other.

FR152. *Turn 573.*
A comments that one starts to unravel the whole thing, and then one discovers that one learns more. A states that when A lived in France, A went to offices when A needed something, instead of calling, since A wanted to look at the facial expressions at the same time.

FR153. *Turn 572.*
B says that if one recognises some words, it is easier to understand.

FR154. *Turn 571.*
A says that the first pages of a book are often the most important ones. It is important to get started. A suggests that a good idea would be to read Harry Potter in French. A then wonders about the radio.

FR155. *Turn 570.*
B says that when reading, when there is a sentence one does not understand, one looks for the meaning before and after this sentence. B says that it is possible to look at the facial expressions, whether one is sad or glad.

FR156. *Turn 569.*
A says that communicating is important, to get the message across.

FR157. *Turn 568.*
B says that it is nice that the teacher does not correct them too much.

FR158. *Turn 567.*
A says that the first time A went to France, A felt like a red light in A's head. A states that one learns as time passes. After several times, one does not make that many errors any more.

FR159. *Turn 566.*
B says that it is more difficult with oral speech.

FR160. *Turn 565.*
A summarises this as B thinking that B thinks B is something. As a teacher one often does not say that much. And when correcting, it may be too much with too much red ink.

FR161. *Turn 564.*
B replies that if B stands in front of the class, for instance. B says that when talking, one has to think through "le" and "les". If one buys something and uses the wrong word, one gets more all of a sudden. B says that B often thinks through what B says, and then others have to correct what B says. B says that B finds it difficult to correct oneself, since B does not know that much. B says that if one corrects somebody else, it may seem that one feels superior to the other.

FR162. *Turn 563.*
A asks what kind of situations these could be.

FR163. *Turn 562.*
B says that when one talks, it is possible to correct oneself. When one wants to tell someone something, one may go back and say it again.

FR164. *Turn 561.*

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Appendix 3A: Backwards induction of the French Case (FR)

A says that B may look at it again in order to avoid making the same mistakes again. A suggests that if one sees a lot of red ink, it is a good idea to try to understand what the mistakes are all about. Another important question is to try to correct one's own errors.

FR165. *Turn 560.*
B says that this person may have a look at it when becoming old.

FR166. *Turn 559.*
A asks if this person uses it as a basis for further work.

FR167. *Turn 558.*
B says that this person hides it in the folder.

FR168. *Turn 557.*
A asks what they do with the test.

FR169. *Turn 556.*
B says that B feels that it has something to do with the subject. It is easier with subjects that focus on rules, such as mathematics and French. It is more difficult with, for instance, Geography.

FR170. *Turn 555.*
A says that if A goes through something before a test, it does not have that much effect. It is better to do this afterwards when one is more receptive.

FR171. *Turn 554.*
B says that when B writes something B is insecure about, it is possible to check afterwards to find out what is correct. After the test, B verifies.

FR172. *Turn 553.*
A replies that A tries to give them back within a week.

FR173. *Turn 552.*
B says that B goes through and looks at the mistakes. B rewrites sentences. B says that if B sees that there is a good deal of red ink, B does not have the energy to go through it. Less red ink means more attention to the mistakes. B tells A to use different colours, and to vary the colours. B says that if B has felt that things have gone nicely, it is a pity when B sees what the misunderstandings have all been about. It is very important when B receives the test back. In mathematics, the tests are returned quickly. It is important to get it back quickly. One month is too long.

FR174. *Turn 551.*
A asks what is the first thing B looks at.

FR175. *Turn 550.*
B says that B looks through the mistakes.

FR176. *Turn 549.*
A says that they were going to talk about the opposite compared with the previous session. A says that it was about learning from one's mistakes. Some people make a mistake several times, some learn, and some learn from others as in other aspects of life. A says A calls the test "learning tests". One wants to do most things correctly to start with, but one occasionally makes mistakes. A says in French "On va terminer ensemble"[1]. A asks what B does when B gets something back.

Session 13

A says that the first thing that would happen would be that B would be fetched by car. A wonders what B would have been asked about first. A wonders what

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[1] We are going to finish together.

Appendix 3A: Backwards induction of the French Case (FR)

is most important. A wonders what kind of questions they normally ask to start with.

FR177. *Turn 548.*
B suggests "Have you had a nice trip?"

FR178. *Turn 547.*
A asks if B knows how this is said in French. One way of saying this would be "Le voyage, c'est bien passé?" A states that perhaps they would also ask if B had to get up early as well. A says that it is possible to practise these comments in advance. B could present something about B and B's family, or use pictures from Stavanger. Something important to think about is that B may be paralysed if B has not prepared well. It is important to overcome the first difficult part. Sometimes this can be done through role plays and, by doing this, it is possible to talk about things for which one is prepared. A mentions the rules pertaining to the use of *bonjour* and *bonsoir*, since not using the correct phrase may seem strange on certain occasions. A uses an example from some learners who had used *bonjour* when it was undoubtedly evening, and this had caused some giggling on that occasion. A's experience had been that it is important to get started, and that it is important to prepare for the situation. The tension is important.

FR179. *Turn 546.*
B says that B would have explained a little about B. B would also have asked questions to the hosts about the same issues, and B would have prepared these questions in advance.

FR180. *Turn 545.*
A asks how B would behave when there.

FR181. *Turn 544.*
B says that B can write down phrases.

FR182. *Turn 543.*
A replies that with the actual level in French, it is possible to read. B may, for instance, read Harry Potter. A mentions basic reading strategies. A also says that reading film reviews in advance is a useful method to get an idea about what the movie is about. A asks B to think about a possible trip to Vichy in the third grade. A asks B to think about what B can do in advance in order to prepare a visit in a family. A wonders what B can do if B is to spend time alone in the family.

FR183. *Turn 542.*
B says that reading about Coco Chanel in French would be a good idea.

FR184. *Turn 541.*
A says that A believes that French people work there, and that they speak French. A asks what B thought about the movie. A asks in French: Qu'est-ce qu'on va faire pour se préparer?[2] A wonders what it would be OK to learn something about, and what would be interesting.

FR185. *Turn 540.*
B says that B wants to make sure that they actually speak French there.

FR186. *Turn 539.*
A says that it is much better if B can say things in French. All learners should have to speak French as their goal.

FR187. *Turn 538.*
B asks if one should speak French only.

FR188. *Turn 537.*
A provides B with some examples of how to ask about the price in French. A then asks if B has more ideas. A says that A hopes that it would be possible

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[2] What shall we do to get prepared?

to go to the café before the summer vacation. A asks B if B looks forward to it.

FR189. *Turn 536.*
B says that expressions such as asking how much something costs are important.

FR190. *Turn 535.*
A asks what kind of expressions.

FR191. *Turn 534.*
B says that asking for the price is a useful topic.

FR192. *Turn 533.*
A asks what kind of expressions.

FR193. *Turn 532.*
B says that B needs expressions, not only reading and engaging in rote learning.

FR194. *Turn 531.*
A says that they had been discussing ordering in restaurants and cafés.

FR195. *Turn 530.*
B says that it could be possible to study two relevant chapters in the text-book that deal with relevant topics.

FR196. *Turn 529.*
A says that preparing and testing a role-play prior to the visit could be useful.

FR197. *Turn 528.*
B proposes that working with a role-play first could be a useful method.

FR198. *Turn 527.*
A summarises this as the concepts B needs for what they sell in the café.

FR199. *Turn 526.*
B responds that it is important to start with the basics, such as finding out what B needs. In the case of the visit to the café, this would imply learning the words for ingredients, food, etc. In the case of the movie, this preparatory work would include having a look at certain topics, history, etc.

FR200. *Turn 525.*
A asks B what B could do in order to plan the above-mentioned language activities. A says that, irrespective of whether it is a visit to a café or watching a movie, we may think through what we can do to get the most out of it. Those who excel in French do things on their own. In school, much time is lost through different activities that come about, so B has to spend time on B's own practising the language if B wants to achieve good results. That is why A wants to discuss with B what B could do before going to the Café Français. A askes in French: "Est-ce que tout le monde connaît le Café Français?"[3] A requests B to work in small groups or pairs, discussing how B can plan the visit to the café, and watching the movie to get the most out of it. A says that today they will talk more about how to learn. A says that it is necessary to do something active. A mentions the fact that they had talked about eating at a French café. A says that if B used this situation for preparation, today's strategy can be applied in a setting they had already discussed. In this way, the visit to the café will be more beneficial. They had also planned to watch a movie. A says that they would also look at how to prepare this forthcoming language activity. The café they had planned to visit is the Café Français in the centre of Stavanger. A reviews the main aspects of this session's learning strategy, i.e. the importance of planning a forthcoming language activity carefully. A outlines the basic principle of identifying the topic, then analysing one's own resources in order to discover

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[3] Does everybody know the Café Français?

Appendix 3A: Backwards induction of the French Case (FR)


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points that can be improved, then trying to learn new words and expressions
in order to fill these gaps, and finally identifying instruments that can be
used as support while carrying out the activity. A uses the forthcoming visit
to the Café Français as an example; when planning a visit to this café, it
is important to identify the topic, for instance in terms of knowing that it
is not a furniture shop they will be visiting, and therefore words relating
to this field will not be of any relevance.
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Session 12
A summarises the importance of being aware of one's purpose when doing
something, and that it may be useful every once in a while to ask oneself
about the reason for doing something.
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FR201. *Turn 524.*
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B says that one learns by listening to the language in the environment. B
states that the Danish visitors had not been that keen to learn something
here. B says that B had seen clear differences, and that B thought that they
would get something out of it. B says that if one knows what one wants to
say on a trip, it is easier to learn. B says that when they came to our family
here, it was difficult to understand. This was the same experience as in
Switzerland. One has to take one's time. B says that B's father has been to
this place in Denmark and gathered some pictures from the place.
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FR202. *Turn 523.*
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A asks if B had thought about the learning potential of such a trip.
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FR203. *Turn 522.*
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B says that the purpose of this trip is to enhance understanding between
Scandinavians. B says that it is difficult to understand the pedagogical
nature about going to Denmark. B says that they are going to consider the
differences between Danish and Norwegian in a project. B says that B is keen
on going on holiday. B says that they will not be learning anything by going
to Denmark. B says that it had been a very social experience having them
visiting on a previous occasion.
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FR204. *Turn 521.*
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A says that they were going to talk about a forthcoming trip to Denmark. This
trip is part of a cooperation between the school and a school in Denmark,
and they had already had visitors from Denmark. A wants to use this trip as
an example of how cultural understanding can be developed, and B would go to
France at a later stage. Because of this trip to France in the future, A
wants to illustrate how a trip abroad can be used for learning purposes.
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FR205. *Turn 520.*
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B says that B would be working with a role-play next year. B has not started
to rehearse yet. B says that the big difference between French and other
subjects is that one is less confident about what one wants to say.
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FR206. *Turn 519.*
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A says that they would be working with "civilization" next year.
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FR207. *Turn 518.*
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B replies that the goal was important for B, and B says that what has already
been studied is important for B.
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FR208. *Turn 517.*
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A asks if B focused on what B had already studied when writing and preparing
something, or if B rather focused on the goal of what B was preparing.
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FR209. *Turn 516.*

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Appendix 3A: Backwards induction of the French Case (FR)

B says that presentations are something B learns a good deal from. B has to talk, B has to get prepared, B gets questions, and B listens to others. B says that B is very fond of making something on one's own. It is useful to be able to present it without restraint. It is important to force oneself into seeing how sentences are built up. B says that when presenting something orally, B has to understand what the others say. B must be able to match circumstances to something that happens. B says that B has to build up a vocabulary. B says that what they had now was a presentation, whereas in lower secondary school they had had plays.

FR210. *Turn 515.*
A says that they were going to talk about the purpose of what they were doing for the time being.

FR211. *Turn 514.*
B works a little in small groups, discussing the purpose of the presentations.

FR212. *Turn 513.*
A says that it means having a goal for learning. To be able to understand French. The ones who take this seriously will get a richer life. A says that it is important to be able to think about what we do. A emphasises the importance of defining the purpose of what we are doing, and that this has to be seen in light of what we discussed in the previous session in terms of goals. A says that they are working with some presentations in French, and that they are going to use these as examples. A reminds B of the fact that they had had homework with verbs yesterday. A asks B about the purpose of the homework. A asks B to think about the goals discussed in the previous session and to consider if the presentations fit into these topics in any way.

FR213. *Turn 512.*
B says that it means being aware of how B learns in order to be most effective.

FR214. *Turn 511.*
A asks what it means to have a strategy.

FR215. *Turn 510.*
B says that it means having goals.

FR216. *Turn 509.*
A says that we are going to talk about metacognitive learning strategies again. A asks B if B could explain the meaning of the concept "metacognitive learning strategies".

Session 11
A again emphasises the importance of being aware of one's goals for the purpose of defining the road towards learning.

FR217. *Turn 508.*
B says that the book has a good deal of focus on colloquial written language.

FR218. *Turn 507.*
A asks whether B had done anything particular, and if B had written a card to Geneva. A points out that again it is important to set individual goals.

FR219. *Turn 506.*
B says that B had been on Facebook and that B had found some French people online.

FR220. *Turn 505.*
A says that this is organised in some schools.

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Appendix 3A: Backwards induction of the French Case (FR)

FR221. *Turn 504.*
B says that having a pen friend would have been nice.

FR222. *Turn 503.*
A says that A had seen friends who come together to practise French together.
A then asks about writing skills.

FR223. *Turn 502.*
B says that on one occasion in lower secondary school they were only supposed
to speak French, but that B did not have sufficient vocabulary to do so.

FR224. *Turn 501.*
A asks about speech production. A wonders what they can do to be better
communicators and what is required. A states that what is being done in school
is not enough. A wonders if B had done anything specific towards that end,
apart from being present during the sessions and doing homework.

FR225. *Turn 500.*
B replies that B does not know whether B wants to read a lot of technical
material. B says that B wants to be able to read French literature in French.

FR226. *Turn 499.*
A asks if B has further comments on reading. A asks B what B wants in this
respect.

FR227. *Turn 498.*
B replies that B understood signs.

FR228. *Turn 497.*
A asks B about signs in Geneva.

FR229. *Turn 496.*
B replies that B had not read. B was in France a couple of years ago with a
friend. B bought a children's book.

FR230. *Turn 495.*
A asks if B knew the name of some authors.

FR231. *Turn 494.*
B says that it would be nice to be able to read literature, but possibly
difficult to achieve. B says that what B had seen so far of poetry and
literature had been incredible. The language is consistent with the desire
to express oneself poetically. B states that B has developed the urge to read
literature in French.

FR232. *Turn 493.*
A asks about reading and if B had intended to be able to read technical
material and books.

FR233. *Turn 492.*
B reports about a stay in France. B had talked in the family about leisure
time, school, etc.

FR234. *Turn 491.*
A mentions tourism.

FR235. *Turn 490.*
B says that B sometimes stops if there are words in class. B says that the
goal is to understand most of what is being said. Today B understands some
words.

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Appendix 3A: Backwards induction of the French Case (FR)

FR236. *Turn 489.*
A asks what B thought about listening. A raises the issue about the foreign channels, and says that it is sometimes possible to watch French movies, and sometimes with an African accent.

FR237. *Turn 488.*
B says that B thinks that B possibly learns something that may be useful in the future.

FR238. *Turn 487.*
A explains the rationale behind fill-in exercises.

FR239. *Turn 486.*
B replies that it depends on the situation. Fill-in exercises are easily completed, whereas bigger projects require more focus on what has to be learned.

FR240. *Turn 485.*
A emphasises the importance of knowing about the objectives of one's actions and that this is also important when it comes to language learning. A says that it is important to have goals set for teaching and strategies for achieving these goals. It is important to know what B wants to learn and what kind of objectives B has. A explains how the learners were going to use the sheets that were to be distributed. A says that they were going to work with a project, and B should relate this session's activity to this project as much as possible. A tells B to work in small groups, discussing the questions outlined. A says that the different groups should present what they had been discussing. A mentions awareness and asks if B thinks much about the fact that B is heading towards a goal, if B wants to learn French at a certain level.

FR241. *Turn 484.*
B answers that this is about planning and knowing about one's own learning process.

FR242. *Turn 483.*
A writes "metacognitive learning strategies" on the blackboard. A asks if B remembers what this was all about.

Session 10

FR243. *Turn 482.*
B says that there is a good study room and library, but that the air in the classrooms is bad sometimes, and that the classrooms may be cold.

FR244. *Turn 481.*
A asks about the learning environment at the school.

FR245. *Turn 480.*
B says that B learns more from simply reading than writing. B says that B learns better by working directly with the text.

FR246. *Turn 479.*
A comments on notes and a verbal report book. A asks how many of B actually write systematic verbal reports.

FR247. *Turn 478.*
B says that B has no systematic way of doing this. B says that it depends on how one plans things. B says that one should not talk in too advanced a manner

Appendix 3A: Backwards induction of the French Case (FR)

when giving presentations. B says that it is important to think through the kinds of questions that could be asked and to be better prepared.

FR248. *Turn 477.*
A says that experiencing success in this way is a good feeling.

FR249. *Turn 476.*
B states that B's experience had been that teaching others had been beneficial for B's own learning.

FR250. *Turn 475.*
A says that it was A's experience that one learns a good deal from teaching others.

FR251. *Turn 474.*
B says that it is important to be able to have something to reach for, and this is a consequence of working together with someone better than oneself.

FR252. *Turn 473.*
A asks if there is any use in working with someone who is weaker than oneself.

FR253. *Turn 472.*
B replies that it can be an advantage to work with a learner who is weaker than oneself, since this will be more demanding and B will be presented in a better light. B states that there is a big difference between lower secondary school and upper secondary school. In upper secondary school, there is less difference between the pupils, since they are more at the same level. In lower secondary school, there was much more difference between the levels of the pupils. Working together is a good way of getting experience. B says that it is also good to work together with someone who is better than B.

FR254. *Turn 471.*
A asks if it is worthwhile working with others.

FR255. *Turn 470.*
B replies that it is important to start early and organise things well. If one is to present something in Norwegian classes, it is important to distribute the work on the different topics. B says that it is important to think about what one is doing. B says that if there is any difference in the learners' level, it will have consequences for the individual learner. B states that one has to accept the fact that things are done in different ways by different people.

FR256. *Turn 469.*
A asks what B felt was important when doing project work.

FR257. *Turn 468.*
B says that it is important to communicate, to make agreements, and to make sure that all the learners involved work on the same topic. B says that it is useful to spend time efficiently in school to avoid things having to be done just before the test.

FR258. *Turn 467.*
A asks if anyone writes down things word by word, or if they try to create sentences with words. A also asks how it is possible to work together on a project. A wonders how is it possible to avoid lack of justice.

FR259. *Turn 466.*
B says that B did the same as the others; B uses rote learning to learn new words.

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Appendix 3A: Backwards induction of the French Case (FR)

FR260. *Turn 465.*
A asks if B had any other comments regarding preparation work.

FR261. *Turn 464.*
B replies that B does not do this to a large extent, but that it is done in B's own way. B writes down the things B does not understand the meaning of. B also figures out whether B would be able to say this in French, and then tries to write it down in French.

FR262. *Turn 463.*
A asks what the learner felt about this. A mentions that they had talked about writing down words. A asks what kind of words B usually writes down.

FR263. *Turn 462.*
B says that B rehearses grammar, looks at the text, and does the exercises.

FR264. *Turn 461.*
A confirms that it is important to work on a regular basis and to do homework all the time. A wonders if B had more ideas regarding preparation work.

FR265. *Turn 460.*
B says that it is important to work on a regular basis and to do the exercises beforehand.

FR266. *Turn 459.*
A suggests that visiting friends could be a good way to seek practice opportunities and that this could provide opportunities to study for a test together. A states that the plan later on is to talk more about writing vocabulary.

FR267. *Turn 458.*
B says that they have to learn the rules, practise the text, and then revise the whole thing once again. B says that it is possible to read out the text for the others to translate. B says that B's mother knows some French and that she feels like helping out every once in a while. On these occasions, she reads out a Norwegian text, and B translates it for practice.

FR268. *Turn 457.*
A asks how B can prepare for a forthcoming test.

FR269. *Turn 456.*
B works in pairs, discussing the first three items on the list of suggestions for implementing today's metacognitive learning strategy.

FR270. *Turn 455.*
A asks about the physical environment and conditions and if B could think of any issues B would raise in that respect. A tells B to focus on A, B and C, but that it would be possible to talk about other items as well in case B feels this would be relevant. A tells B to get organised in small groups for the discussion of the items. A comments on the specific nature of today's strategy, i.e. organising one's work and/or making sure that the learning environment is good. B needs to practise the use of aids. A then refers to task B (preparing project work), and says that this will be presented in French. A also comments on the learning of vocabulary and that it is important to spend time on how one works with vocabulary. A remarks that they were going to try without it this time, but that they were going to use it later.

FR271. *Turn 454.*
B asks if the use of aids is allowed when taking tests at school.

FR272. *Turn 453.*

Appendix 3A: Backwards induction of the French Case (FR)

A replies that they had been working with the 'passé compose' and the use of *être* and *avoir*[4] in this respect.

FR273. *Turn 452.*
B asks what kind of grammar they had to study prior to the test.

FR274. *Turn 451.*
A distributes the tasks presented in the last part of the description of today's session. A also asks how B prepared.

Session 9

FR275. *Turn 450.*
B says that it is not good if the conscious use of language learning strategies becomes demotivating. B felt that what needs to be done is pretty obvious and logical, so spending time on determining language learning strategies prior to a task is a waste of time and is demotivating. B found that SBI should be directly and specifically related to the teaching as such. B says that B does not spend time on thinking about what has to be learned.

FR276. *Turn 449.*
A refers to theory in the field in the sense that the debate around SBI is exactly whether it is worthwhile spending time on it, since it takes away time from actually working with the language. Nevertheless, the theory claims that spending time on SBI could be a useful way of enhancing learning outcomes in the subject, and that this would compensate for the time spent on SBI. Political guidelines in the field (the curriculum) state that metacognition is important for Norwegian foreign language learners.

FR277. *Turn 448.*
B says that, in a group of two learners, B had discussed that too much focus on learning strategies may spoil the joy of learning. It may be strenuous to focus too much on it. Some of it comes naturally, and it may not be that useful to focus only on how to learn things. B says that B had reflected more on what B had done with language learning previously. It was useful to become more aware of it. B states that they have talked about what they have done previously. B says that some strategies are good. B says that learning a language implies working with what is interesting to B, such as reading a good book in English. B states that B had worked a lot with Paris and learned a lot from it. Reading poems may be useful and structural understanding is important.

FR278. *Turn 447.*
A starts the session by once more defining the concepts of metacognition and language learning according to the curriculum. This implies explaining the relationship between the main area *language learning* and the other two areas, i.e. *communication* and *language, culture and society*. A tells them to work with the task individually, and then discuss it together afterwards.

Session 8
A refers to the dichotomy between declarative and procedural knowledge on this strategy: declarative knowledge is when one is able to state that delayed speech is a method that can be used to focus upon certain aspects of the language spoken by others in order to focus attention. Procedural knowledge is the ability to actually do this in a given and relevant situation. A plays the recorded text A talked about in the first part of the session.

FR279. *Turn 446.*

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[4] To be and to have.

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Appendix 3A: Backwards induction of the French Case (FR)

B states that B has family in Bolivia and says that when B goes to Bolivia
it takes B a week to get into the language, although B actually uses some
sentences before B reaches that stage. B has had the same experience in
Portugal even though B does not speak Portuguese as such. Nevertheless, B
understands some Portuguese and needs some time to adapt when going to
Portugal. B states that B is bilingual, but did not define her second
language. B says that B is completely bilingual and does not need any time
to adapt to circumstances when in the other country.

FR280. *Turn 445.*
A encourages B to come forward with B's example.

FR281. *Turn 444.*
B states that, when in Finland, B always needs some time to adapt to the
Finnish language before B dares to use it. B reports that B has family in
Finland, and B asks if it would be relevant to mention an episode from this
experience, even though it is not taken from a French setting.

FR282. *Turn 443.*
A mentions that actually talking is a way of increasing motivation in the
subject, especially since one feels the need for learning more. A asks if B
has ever been in a situation where B had decided that B would solely focus
on active listening in order to learn more. A mentions the fact that watching
movies could be a method, as well as listening to the radio. When doing that,
a strategy is to decide in advance what to focus upon and then use this
situation as an exercise. A comments that this method can be used as training,
so that real life situations with native interlocutors can be more beneficial
to B. Even if watching a movie or listening to the radio does not mean that
B is engaged in a dialogue, it still may be used as an exercise to practise
listening skills in many ways.

FR283. *Turn 442.*
B explains that B had once had a visit from French teachers at their school.
On that occasion, they had not been allowed to talk English, and the teachers
had been understanding in the way they had approached the Norwegian learners.
B relates that during the summer holiday B and B's family had travelled to
Nice on the spur of the moment. They had experienced some practical problems,
and B had to cope with these difficulties in French. She actually managed to
construct some simple sentences in French to sort things out.

FR284. *Turn 441.*
A suggests to B that B perhaps felt more satisfied with having tried, as
opposed to a situation where B had not spoken at all because of B's uncertainty
in the language.

FR285. *Turn 440.*
B agrees that it had been great fun to cope in the situation in French, and
B felt that B had learned a lot from actually trying.

FR286. *Turn 439.*
A says that A would end this session with a recording taken from the text
book in order to let B listen to a text as an exercise. A explains that the
principle is for B to focus on what is being said and to try to grasp some
aspects of the language as a way of exemplifying this learning strategy. A
comments on the fact that there might be poor English teachers in France. In
this respect, A mentions the fact that learning strategies could be an issue
here. If people deliberately choose to use delayed speech as a method in
order to focus on what is being said, this may be considered to be a learning
strategy people can use in order to enhance learning. Nevertheless, if this
is simply an excuse and a pretext for not speaking out of fear, it is not a
metacognitive learning strategy according to our definition of the concept.

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Appendix 3A: Backwards induction of the French Case (FR)

So if French people do not speak English, but simply write it well, the discussion would be whether delayed speech can be used as an excuse for 40 years of not daring to speak. Delayed speech is a learning strategy if it is used for a certain amount of time and with a purpose. The same would apply in a classroom setting: it would not be possible to call it a learning strategy if learners choose not to speak in class simply because they fear making mistakes and making fools of themselves, or if they simply want to withdraw from participation.

FR287. *Turn 438.*
B relates this theory to French people's lack of ability to speak English.

FR288. *Turn 437.*
A comments that a child would scream and not be able to talk during the first phase. A presents the theory on delayed speech production. A says that most people would agree that this is not the right method to use, but when comparing this theory with how children develop their speech, it may be possible to see a connection. A wonders what B thinks about this issue. B has already been engaged in speaking the language since B started learning it, so B might have some ideas.

FR289. *Turn 436.*
B replies that B hears the language in the environment and picks up what is possible.

FR290. *Turn 435.*
A asks B how B goes about learning B's mother tongue.

Session 7

FR291. *Turn 434.*
B suggests the use of the right accent in *Grèce*[5] and *Norvège*[6] and *norvégienne*[7], the spelling of *touristes*[8] vs *tourists*[9], some preposition issues and the pronunciation of the /s/ in *ils habitent*[10]. B also mentions the semantic use of *rencontrer*[11]. When discussing the pair *Elle habite à Oslo. C'est en Norvège*[12], this exercise also generated a discussion of whether it would be possible to use *il y a* instead of *c'est* in *C'est en Norvège*.

FR292. *Turn 433.*
A points out which part of the sentence was particularly relevant according to the introduction to the exercise, i.e. *nationality*, *close past* and *time expressions*.

FR293. *Turn 432.*
B works in pairs translating the Norwegian sentences into French.

FR294. *Turn 431.*
A summarises the autumn term and introduces this session's task. A states that the task B will work with is a translation based on a text B had been working with recently. A tells B to relate the main topics of this translation to today's session. A writes some key words on the blackboard to take into

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[5] Greece.
[6] Norway.
[7] Norwegian (f).
[8] Tourists (f).
[9] Tourists (m).
[10] They live.
[11] To meet.
[12] She lives in Oslo. It is in Norway.

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Appendix 3A: Backwards induction of the French Case (FR)

account: *nationality*, *close past* and *time expressions*. A tells B to pay special attention to these factors.

<u>Session 6</u>
A says that the task is in a book, 1. Grade French. A states that this says something about the vocabulary, and sorts things out in advance. A tells B to think about where a given text is taken from.

FR295. *Turn 430.*
B answers "know the words" in terms of text 2. B mentions remembering the passé composé, and knowing how to formulate words in French.

FR296. *Turn 429.*
A sums up the significance of metacognition for learning and gives more results. A suggests using B's own resources and getting more out of the tasks. A suggests making the activity more active. A compares this process with a spell checker at the PC. A emphasises the conscious relationship to the activity and the responsibility for B's own learning.

FR297. *Turn 428.*
B answers "know the words".

FR298. *Turn 427.*
A wonders about vocabulary in terms of Text 1.

FR299. *Turn 426.*
B answers the participle.

FR300. *Turn 425.*
A asks "what else?".

FR301. *Turn 424.*
B answers "Know how to conjugate *avoir*[13]".

FR302. *Turn 423.*
A mentions knowing what passé compose is and wonders what we have to know.

FR303. *Turn 422.*
B answers "Knowing passé compose and auxiliary verbs (conjugation according to person)".

FR304. *Turn 421.*
A confirms this and wonders what we need to do the task.

FR305. *Turn 420.*
B answers that it is easier to fill-in the words. B states that there is often one rule that needs to be practised.

FR306. *Turn 419.*
A wonders what B associates with fill-in the blanks tasks.

FR307. *Turn 418.*
B answers "Question words".

FR308. *Turn 417.*
A asks B: "What else?"

FR309. *Turn 416.*

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[13] To have.

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Appendix 3A: Backwards induction of the French Case (FR)

B answers conjugations, provided that there are familiar words and expressions.

FR310. *Turn 415.*
A remarks that more skills are required when answering questions,. A wonders how we can use associations.

FR311. *Turn 414.*
B answers "understand the text". B suggests the use of free texts with the passé compose and not only fill-in the blanks.

FR312. *Turn 413.*
A remarks automatised knowledge, and that practice creates perfection. A wonders about a text.

FR313. *Turn 412.*
B answers "Learn the passé compose, maintain previous knowledge. Get it into the fingers".

FR314. *Turn 411.*
A relates declarative/procedural knowledge to the above-mentioned task. A says that metacognition is used in order to make learning more efficient, and that they will be working with a total of 11 metacognitive learning strategies during the year. A writes on the blackboard: Why do we carry out an activity/task? What do we need in order to accomplish the activity? Association/use previous knowledge.

FR315. *Turn 410.*
B discusses what metacognition is all about.

FR316. *Turn 409.*
A says "Repetition of metacognition".

FR317. *Turn 408.*
B answers that they had constructed a situation, and focused on the strategies that could be used in practical situations.

FR318. *Turn 407.*
A states two exercises with practical, daily language, and the passé compose, in addition to one fill-in-the-blanks, and one answer to the questions. A states that this is homework for the following day. A asks what they did last time and why.

Session 5[14]
A acknowledges that what kind of mistakes one makes depends on the situation, and whether it went OK or not OK. The best thing is to get home with a feeling that one managed to say something. It is then possible to use this for further enhancement of knowledge. One did not come home without CD's. If things fail, the question one may ask oneself is: What did I do that made the situation fail? A says that we have now worked with metacognition in practice. First, we started with the declarative part, the theory of what it is, and then we worked with the procedural part in terms of how metacognition can be praictised.

FR319. *Turn 406.*
B says that it depends on what happens when B does it. B states that when B has difficulties explaining something to another person who does not

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[14] The other teacher present.

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Appendix 3A: Backwards induction of the French Case (FR)

understand, B has to find out what kind of mistakes B made. B may also ask A.

FR320. *Turn 405.*
A says that it is a good strategy to say that: "I am Norwegian and I am learning French". French people think it is very nice that foreigners learn French. A mentions the fact that it is possible and useful to learn some standard phrases that can be used in all situations, for example if you cannot find the way, if you want cheap CD's, or if you want to play *boule*. A asks B what B would do afterwards to get the most out of what B has done.

FR321. *Turn 404.*
B says that it is important not to stress because one then easily forgets things. B states that it is important to take time to make mistakes and correct oneself. B says that B would have smiled properly and said that B is from Norway.

FR322. *Turn 403.*
A says that this may be easier when you simply want to pay for something. It would have been different if B had to ask for something.

FR323. *Turn 402.*
B relates that B had once been in France with a friend, and they had imagined a whole conversation with the person at the counter. It ended up with B just saying "hello" and how much it cost. B paid and then left.

FR324. *Turn 401.*
A says that there are good places down south. A tells B to remember that if B goes to Paris, it may be difficult to find people to play *boule* with.

FR325. *Turn 400.*
B remembers a book in the tenth grade with a lot of *boule* included, and with several cities listed.

FR326. *Turn 399.*
A says that B is then not in Paris.

FR327. *Turn 398.*
B says that B would simply have gone up to the people playing *boule* and said "Bonjour".

FR328. *Turn 397.*
A says that the best thing to do in normal conversations is to give people a note where it says exactly what people have to answer. This would have been very easy. Perhaps it does not work that well in practical life. B is now in France and is inside this CD store. A wonders what B does when B has to prepare. A states that B has prepared in the ways B has stated, and then B is inside the store. A wonders what happens.

FR329. *Turn 396.*
B says that B would have had someone ask questions to make B answer unprepared.

FR330. *Turn 395.*
A asks if B would have played out dialogues with people.

FR331. *Turn 394.*
B says that if B analyses some dialogues, B would also have people ask questions.

FR332. *Turn 393.*
A says that cooperation makes B better.

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Appendix 3A: Backwards induction of the French Case (FR)

FR333. *Turn 392.*
B says that B can find some other learners to play *boule* with during the breaks.

FR334. *Turn 391.*
A says that if B imagines a dialogue, B imagines whole sentences. If B has many words, it is not always easy for B to know how to use them. However, it is easier if B has sentences.

FR335. *Turn 390.*
B would also have read through the textbook, in which there are many good expressions.

FR336. *Turn 389.*
A asks if B would have created a fictive dialogue.

FR337. *Turn 388.*
B says that it is also possible to imagine a conversation with the other person and then talk to oneself, pretending that B talks to the other person.

FR338. *Turn 387.*
A says that it is OK to have the cultural understanding that some words are useful to know, but it is not always easy to use them. A states that school French and everyday French are two different aspects.

FR339. *Turn 386.*
B says that it is possible to watch movies. B says that people use words in some American movies that are not used on an everyday basis, such as *fuck*. In everyday life, people would have reacted if someone had mentioned such a word.

FR340. *Turn 385.*
A asks how B would have solved this. A asks where B would have gone to get help.

FR341. *Turn 384.*
B says learning words and expressions they use, since the book presents a good deal of formal material. This refers to oral language and pronunciation.

FR342. *Turn 383.*
A asks B where B would have gone to talk about everyday words and expressions. A says that there is a difference between being visual or auditive in terms of preferences. A asks about other activities prior to the trip.

FR343. *Turn 382.*
B suggests the acquisition of words, expressions and phrases that can be used to get to know people when playing *boule*. It is also useful to learn some general words and expressions in order to be able to talk normally. B states that the Internet, e.g. You tube, is a useful tool to find relevant linguistic material.

FR344. *Turn 381.*
A suggests getting some cultural insight. A says it is a good idea to use music to think about how people may say it in France.

FR345. *Turn 380.*
B says that B has to learn how to buy something when going to a store. Basic courtesy also comes in handy. B states that B learns this in the textbook. B also refers to looking for some French music shops on the Internet in order

Appendix 3A: Backwards induction of the French Case (FR)

to see if there are expressions that are much used. B also suggests exchange rates, and how expensive things are in France.

FR346. *Turn 379.*
A says that the most important thing is to find something B wants to learn. A asks what B wants to do before B leaves.

FR347. *Turn 378.*
B says that B would also look for CD's in a store. B would have found a bakery. B says that B would have asked about the way. B says that B would like to play *boule* with French people. B says looking for cheap CD's. B says a café and clothes store in Paris.

FR348. *Turn 377.*
A says that understanding is a combination of declarative and procedural knowledge, or applied understanding. A tells B to apply this at a specific level. A tells B to imagine that B is in France and that B has to use strategies to get out of these situations. B has to think in cultural terms, that Paris is different from the countryside. B is to use the cultural aspect. B is to think what B finds interesting according to B's competence and level in order to develop these aspects.

FR349. *Turn 376.*
B wonders if it is wrong to write "understanding" as a definition of procedural knowledge.

FR350. *Turn 375.*
A says that one understands the causal relationships. A agrees with this, that it is rather procedural. A says that sports is the best example, because B sees it easily. When B studies theory pertaining to sports, one learns declarative knowledge. A states that B normally runs around. This is procedural knowledge in terms of engaging in activities and actually using one's body, not sitting down with the books, but actually carrying it out. A describes this as the difference between the two.

FR351. *Turn 374.*
B says that even if you have learned all the years of the battles of WWII, it does not mean that you understand why these battles happened. B thinks that the procedural part is understanding the connections.

FR352. *Turn 373.*
A says that if B thinks about the construction of sentences, then this is declarative knowledge in terms of the subject first and then the verb. That is declarative knowledge, knowledge about the facts. However, it is still knowledge B needs in order to be able to talk.

FR353. *Turn 372.*
B suggests normal facts, such as rote learning of years.

FR354. *Turn 371.*
A replies that declarative is knowledge about facts.

FR355. *Turn 370.*
B asks if declarative is about understanding.

FR356. *Turn 369.*
A says rather practical knowledge, the practice.

FR357. *Turn 368.*
B says that the procedural part is about understanding.

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FR358. *Turn 367.*
A states that one may have tools to use when learning on one's own. The topic of the last session was cognition. A asks if B can remember what cognition was. Cognition is about issues in the brain. It is about understanding, memory and perception. Cognition is an abstract concept. Today we are going to talk about metacognition. "Meta" is Greek and means either "next to" or "beyond". A asks if B has heard about metacognition before. Metacognition is a very important feature of the *LK06* curriculum, according to which we are working. Metacognition is about learning about one's own learning – to know something about the learning processes, and to be able to use this information to become better learners. In terms of language learning, it means to know about how to learn languages and to use this knowledge to become better language learners. In the first part of the *LK06* curriculum, metacognition is an important aspect in terms of language learning, i.e. to be able to learn how to learn. B is lucky to be a part of this, since it is a rather new concept with much focus on it in the modern curricula. The idea is that learners who know about how to learn, become better learners. B will become better and will get better grades. A asks if B remembers the difference between declarative and procedural knowledge. These are two rather important concepts when working with metacognition. A asks B if anyone remembers what declarative knowledge means. A defines the two concepts as two opposites, with declarative knowledge being knowledge about facts, and procedural knowledge about procedures. Declarative knowledge may be grammar, for instance how to conjugate *to be* in the present tense – knowledge about facts that one possesses. However, being able to use it in a sentence, e.g. being able to say: "I am a girl" or "I am Norwegian", is procedural knowledge. Then you use the knowledge you have. Research shows that one needs both. There was previously an important focus on declarative knowledge, i.e. grammar, etc. Now practical knowledge about the rules is becoming more important. One needs both, just as equations in mathematics. Both parts are equally important.

FR359. *Turn 366.*
B states that it is in order to use these methods.

FR360. *Turn 365.*
A states that we have a reason for doing this.

FR361. *Turn 364.*
B responds that it easier to learn something new. B becomes more aware about learning.

FR362. *Turn 363.*
A states that so far B has worked with an introduction to learning psychology and learning strategies. A states that important questions have been: Why do we learn this? What is the usefulness of what we are doing? Why have we learned about learning strategies? Why have we learned about these methods?

Session 4

FR363. *Turn 362.*
B says that working out is a good way of having a break. It is easier to continue working after a workout session. If one gets inspiration beforehand in terms of a movie or French music that one likes, it may provide motivation to learn, one understands more, and it may be a reward for having achieved something good, not only in school.

FR364. *Turn 361.*
A says yes and that they are going to do more of that. Before Christmas, they are going to rest a little and go back to the texts. A states that the

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Appendix 3A: Backwards induction of the French Case (FR)

learning curve in this language is not always forwards. Sometimes one may
feel that one is going backwards, and that in the second grade one may feel
that French was easier in the first grade.

FR365. *Turn 360.*
B says that when B has had a hard time reading a text, B can read something
B has read before, a text that has been reviewed a long time ago. B can then
see that B understands everything, which is a good feeling.

FR366. *Turn 359.*
A says that this is a good idea they can consider before Christmas. A states
that they will remember that.

FR367. *Turn 358.*
B makes a cake with a French recipe.

FR368. *Turn 357.*
A says yes. A states that B then wants to show that B has worked in front of
another person. It is not something just for yourself. That is what languages
are all about, to be able to communicate with others in writing or orally. A
wonders if there is anything B can do here in Stavanger in order to seek
practice opportunities in terms of social strategies. A states that B only
hears French on these lessons, that is unless B takes the initiative on B's
own. A mentions affective strategies.

FR369. *Turn 356.*
B says that when B has the A B scheme, when B reads aloud to others, then it
is very nice because B corrects others and finds similarities and mistakes.
B learns a good deal from that.

FR370. *Turn 355.*
A says that if B wants to learn to swim, B has to be thrown into the ocean.
B then either survives and learns how to swim, or the opposite happens.

FR371. *Turn 354.*
B says that they received a visit from some French teachers in lower secondary
school. On that occasion, some of the learners showed the visitors around.
They spoke only French and had to communicate.

FR372. *Turn 353.*
A says that this is one of the major challenges when comparing French and
Spanish, where they have a pronunciation that is more directly related to how
the words are written, and also German, which is easier to pronounce even if
they have some intricacies as well. The Rogaland dialect is an asset because
of the open vowels and the uvular R's and simple L'. However, in French there
is a discrepancy between the pronunciation and the written language. A states
that they have some challenges there which they meet little by little. A
mentions social strategies as learning strategies.

FR373. *Turn 352.*
B says that after reading texts in the book, it is useful to use the
expressions there. It is then easier to learn them. In terms of pronunciation,
it is useful to read the text several times, and to think through what kind
of pronunciation rules one knows between each reading. One then discovers
one's performance and it becomes more and more correct.

FR374. *Turn 351.*
A says that A recommended yesterday that, when having problems with numbers,
one could write years on a sheet of paper as B had done. B now seems more
confident about numbers. That is one way of doing things, namely get to
understand one's weaknesses, use feedback to learn from one's mistakes, remove

the mistakes, and become more confident. This is the learners' own responsibility and is a good strategy. A wonders if there are more comments about cognitive strategies.

FR375. *Turn 350.*
B says that this is very much related to what B usually does in the sessions. If they have a new verb form, an irregular verb, they repeat that form by using fill-in-the blanks, or they write sentences in order to use the verb in different forms. B also states that B looks up items in a dictionary that B sees but does not understand, thereby trying to learn them. B states that when B writes long texts or simply sentences, B tries to challenge oneself and try new things, perusing in the book to see if there are things B can use. B thinks this is a good learning method.

FR376. *Turn 349.*
A says that it is basically French, but that it is possible to mention other languages as well. A states that they are going to see if B has understood these concepts, that B is able to systematise them. In the next session, they will talk more about theoretical explanations of learning strategies. In the last session before Christmas and the rest of the spring, they will work with one strategy at a time. Quite specifically, B will learn declaratively that when I am to learn X, I have to do this and that. They will practise this in the sessions, or in connection with homework or other things B is doing. They will work with 11 strategies, and the same principle as with language learning. They need to be able to state what the learning strategy is all about declaratively and B needs to be able to use the strategy in practice, that is procedurally. In that event, it would apply to homework, or a book B may have read in school connected to these sessions on learning strategies. B would then have a theoretical background in language learning that would constitute the basis for specific work with specific learning strategies and practice related to these during the spring semester. They will establish a link between the declarative and the procedural aspects of language learning strategies. They will use these concepts and become more aware of different learning strategies related to what they are doing. A states that they have explained what cognitive means.

FR377. *Turn 348.*
B asks if it is only French, or also other languages.

FR378. *Turn 347.*
A says learning, and that they talked about recipes. It is then actually doing it. In French, it must be to learn things, grammar and vocabulary, and then the procedural aspect that they are able to communicate in French. This is what they practise every lesson, whether you know it or not. Today they will also work with three other concepts. They will talk about the so-called strategies, namely ways to proceed. They will talk about cognitive (writes cognitive on the blackboard), which they call "cognitive learning strategies", many nice words. The subject has to do with pedagogy and psychology. B may come across the word later as well. Writes "learning strategies" on the blackboard. One is called cognitive, one is called social, a concept B may have heard before. They will return to these concepts. Let's write these three down first. They will look at similarities and differences. Then they have the so-called affective, affection. When one learns a language, there are many ways to learn the procedural and the declarative. Anything you do in order to achieve learning is a strategy, since you do something in order to achieve something else. Many different strategies may be used, but they have used three today that B will become further acquainted with. Today they will systematise the strategies B has come up with so far, even if B will not learn anything completely new today since this has been the topic of previous lessons. Cognitive strategies are used in order to understand something, understand grammatical rules or words. These are the strategies B

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uses to understand grammar and words. These are cognitive strategies, and cognitive has to do with cognition, and cognition has to do with understanding, i.e. that one perceives something, acquires something, learns something. It is thus about understanding, perceiving something, rules in the language or words. Everything B does to learn or understand words and rules is a cognitive strategy. One of the goals of grammar teaching is to understand the overall structures of grammar. It is also to see similarities between words, as they often talk about words that they recognise from English. This is a way to understand what may appear to be chaos. Social strategies are used in order to learn the language in interaction with others. B may ask the teacher for help, B may go to a school adviser to get help, or B talks to a friend or travels to the country in order to speak the language. All of the strategies and methods B uses to practise the language are social strategies. Affective strategies have to do with affections, that is emotions and attitudes in relation to something. If a watch has sentimental[15] value, it is because it means a lot to that person for some reason, not that it has great economic value. So everything B does to cope with stress and frustration in the language learning process, for example if B gets stressed because of some homework, goes out for a walk and returns fresher, then B has used an affective learning strategy, B has done something specific in order to cope with the stress. Alternatively, B may decide to watch an interesting movie after working with homework as a future reward for something B has done in the language learning process. In that case, B has also used an affective learning strategy. If B really feels like learning a language, such as French, it is an affective force, but not a strategy, since it is about motivation. If B uses it to give oneself a good feeling, it may be considered an affective learning strategy. The point is to be able to talk about the learning process, which is why B has to learn these foreign words.

FR379. *Turn 346.*
B says that procedural is what B can use automatically, and that B can do it.

FR380. *Turn 345.*
A writes procedural on the blackboard, procedural learning. A wonders if B can explain what the difference is between the two.

FR381. *Turn 344.*
B says declarative and procedural learning, or information or knowledge.

FR382. *Turn 343.*
A says that B is to work with the task. B is going to fill in and state what B thinks about the topics they have been dealing with so far. This includes the two concepts they have been dealing with. A wonders if B remembers these concepts now, the different kinds of learning that they have been talking about.

Session 3
A says in terms of the –*ent* ending, they learned that rather early. When they started with the first verbs in the present tense and the conjugation of them, B was made aware about it. B was also made aware that that they know that it takes a long time to go from declarative knowledge to 100% procedural knowledge in lower secondary school, which B sees straight away. First B has to recognise that it is a verb in the present tense, that it is an –e verb. They also see that there are many things to work with in French. Everything takes time in terms of expanding B's vocabulary, expressions, especially French expressions, grammar, and many topics they have to deal with. However, they should have looked at it, even if they do not have to look at everything

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[15] In Norwegian the word used in this expression is «affeksjon», i.e. a word related to affective.

Appendix 3A: Backwards induction of the French Case (FR)

for so long that they feel completely confident. The same goes for pronunciation. In French, this is a special challenge. They have three more sessions before Christmas with this instruction programme, talking about how to learn languages. The curriculum states that the learners are to be aware about this. In these sessions, they talk about these issues, and what is being said is used to drive the scheme forward. Today B has talked much about the strategies B has to learn vocabulary, grammar etc., what B can specifically do prior to a language learning activity, homework, or whatever. Next time they will talk more about learning strategies. They will systematise them and see what strategies they can use. Some of them have to do with understanding, while some may need to go to the sources to practise the language. They will systematise them, and they gain knowledge in terms of their repertoire to find a suitable strategy for a task or a practice opportunity. They will subsequently expand on these strategies and consider specific advice when working towards Christmas and further on during the spring. Each time they will have one new strategy and then they will look at what B can do in order to understand what that strategy tells B to do, session by session. They thus move towards learning specific learning strategies, with specific strategies for different topics. The goal is for B to have a repertoire of things B can do next summer in order to help oneself towards becoming better at French.

FR383. *Turn 342.*
B says that a good strategy is to talk and then to be corrected, because it is then easier to remember. B discovers basic pronunciation mistakes. In addition, there are important rules that need to be learned, such as the –*ent* ending in the third person plural. It is not logical, but it simply has to be learned and remembered. It then becomes automatic.

FR384. *Turn 341.*
A says yes. A also says that in terms of French pronunciation, it is not enough with just once. For instance, the fact that the –*ent* ending in the third person plural is silent.

FR385. *Turn 340.*
B says that it is much easier then.

FR386. *Turn 339.*
A asks if B feels that things become easier then.

FR387. *Turn 338.*
B says that they had repeated after A.

FR388. *Turn 337.*
A asks what they had done in the previous session.

FR389. *Turn 336.*
B says that what they have done so far is to learn the rules for pronunciation. B then has to talk on B's own. It helps to talk oneself, for instance in smaller groups, since it makes people feel more confident.

FR390. *Turn 335.*
A says that yes, they have had *faire*[16]. They have had *venir*[17]. They have not spent an hour on each verb. They present them and later discover them in texts. A states that B will feel the need to use them. B should have registered that these verbs have a special conjugation, that they are not regular verbs – –*ir* verbs as well, as we will see. A wonders about pronunciation. A wonders about learning the rules and about declarative and procedural knowledge. A

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[16] Do.
[17] Come.

Appendix 3A: Backwards induction of the French Case (FR)

wonders what they say about best ways to learn this. The great challenge in French is the discrepancy between the written language and the pronunciation of many verbs. B thus has to take into account these special features related to pronunciation.

FR391. *Turn 334.*
B says that *faire* is a verb they know.

FR392. *Turn 333.*
A confirms *aller*[18]. They thus now get the feeling of passive knowledge. If B had seen this verb, B would have recognised it straight away. However, it is all about getting it to the fore after two weeks of break. They have looked at some verbs. A states that B will see the irregular verbs a good deal in the texts. They are irregular because they are much used. That is why they have acquired these special forms.

FR393. *Turn 332.*
B says *aller*.

FR394. *Turn 331.*
A says *vouloir/pouvoir*[19]. A wonders if they have looked at these verbs. A mentions modal auxiliaries and states that they are important. A wonders if they have looked at other important verbs before the autumn holiday.

FR395. *Turn 330.*
B says *vouloir/pouvoir*.

FR396. *Turn 329.*
A confirms that *être*[20] was the verb for today. A states that it is an irregular verb.

FR397. *Turn 328.*
B says *être*.

FR398. *Turn 327.*
A confirms that it is an –e. If there is an –e in the third person when B sees a verb in a text and the subject is third person singular, a boy or a girl, and the verbs ends in an –e, B can then conjugate that verb. It is regular in the present tense, and also in all other tenses. Thus, it is important to see the patterns, also in grammar, not only learn each verb individually. A wonders if there are other verbs than the two verbs and the –e verbs. A wonders if B remembers any of them.

FR399. *Turn 326.*
B says an –e.

FR400. *Turn 325.*
A wonders what the ending is in the third person singular of an *er*-verb.

FR401. *Turn 324.*
B says that B looks at how it is conjugated.

FR402. *Turn 323.*
A says that it is important, as they say here that we look at the forms and then they have some quick exercises, just to try them out. They talked about *er*-verbs. More than 90% of all the verbs are regular and are conjugated in that way. If B knows one *er*-verb, B may conjugate them all. If one takes away

[18] Go.
[19] Want/can.
[20] Be.

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the *er*-ending, then B has the stem, and can conjugate them all. This is also the goal. They will work a good deal with verbs and they will learn to see the patterns. When B sees a verb B has not seen before, but B sees that it is an *er*-verb, how does B notice that if B finds it in a text, for instance conjugated in the third person present tense? A wonders how B notices if it is an *er*-verb.

FR403. *Turn 322.*
B says that there is much rote learning in terms of grammar, and that there are many rules. However, it is important to write texts afterwards, fill them into dialogues, and talk about and use them in tasks.

FR404. *Turn 321.*
A says that they become acquainted with them through usage and through texts.

FR405. *Turn 320.*
B says that these do not easily stick in the mind.

FR406. *Turn 319.*
A says that they have looked at some irregular verbs, the most common irregular verbs.

FR407. *Turn 318.*
B says that B has to learn the irregular verbs by heart.

FR408. *Turn 317.*
A says that if B knows *er*-verbs, B knows over 90% of all the verbs.

FR409. *Turn 316.*
B says that B only knows verbal paradigms of *être*. And the rules of –*er* verbs. But B is not good at verbs.

FR410. *Turn 315.*
A says that it is what B has available when B talks or that B does not have to look up, perhaps only in order to check the orthography, but B knows the word. A asks about passive vocabulary. That is also something that B has learned. If B reads a text, B understands more than B would be able to reproduce and use procedurally, because B knows what it means when B sees it in a text, in a certain context. A wonders if B has more to say about vocabulary, learning, use, and declarative and procedural knowledge. A mentions learning and use of grammar, declarative and procedural knowledge. Skills.

FR411. *Turn 314.*
B says that active is what B uses oneself, whereas passive is what B understands if B sees the word.

FR412. *Turn 313.*
A says that B is not the only one who has done this. Then they encounter the problem of things they have not rehearsed. In that case, B uses things from lower secondary school, or B tries to find B's way. They have talked about the learning of vocabulary. When they work with new texts, they create word lists, they need oral practice, they have to learn the words, they cannot simply look them up in dictionaries all the time. They need to have them present, they need to be able to talk. They often talk about the difference between passive and active vocabulary. A wonders what B associates with this difference. A wonders what passive and active vocabulary mean.

FR413. *Turn 312.*

Appendix 3A: Backwards induction of the French Case (FR)

B refers to the text B had written about Lars Lillo Steenberg. B does not talk about the colour of the house, what kind of family members he has, how many cats he has, and so on.

FR414. *Turn 311.*
A says that the tasks they have been working with so far are related to the first chapter, that is talking about oneself, talking about hobbies, and also representing another person than oneself. There are thus many words and expressions involved in what they have been working on. B may later use word lists in a different way, more freely than B has done so far.

FR415. *Turn 310.*
B says that B has a document and that B scrolls down this page. B says that when writing texts in French, B has the need to express oneself properly in order to avoid being ordinary. As a consequence, B wants to learn new words so that B can better express what B wants to say. When B is writing a text, B uses items that B does not know beforehand, and B feels that B learns a good deal from this. B feels that B gets new words to use by reading texts and looking up.

FR416. *Turn 309.*
A asks if this can be done on a computer. A asks if B looks at this afterwards.

FR417. *Turn 308.*
B says that B may take notes and think through the situation.

FR418. *Turn 307.*
A wonders if B just looks the words up and then closes the book afterwards.

FR419. *Turn 306.*
B says read texts and look up the words B does not know.

FR420. *Turn 305.*
A confirms waffles made without a recipe, and they transformed this into French spoken without a recipe. Many of them may still be on that level. B has to use the knowledge B has, even if B is not a hundred percent confident. But it is important to use the knowledge they have. They all make mistakes, also French people. Sometimes even French people do not have the perfect recipe when they talk. They will talk about their language and this aspect. A states that what A has written on the blackboard are things they have been working with so far this autumn. Much is repetition, as they have recognised that it is important to repeat things. They talk about learning in terms of declarative and procedural knowledge, use, methods, vocabulary. They have talked about how B can learn words and that they are accessible when they need to be used and to speak the language, also grammar in general terms. They can have a look at what they have worked most with, which is regular and irregular verbs, conjugation forms. For the time being, they are only working with the present tense. You may also work with pronunciation. They can concentrate on these three aspects. Grammar is more than just verbs. This is the main focus now. The verbs are the motor in the language. The other words in the sentence relate to the verbs. In a text, B has to know the verbs. This is particularly important when they start to look at other tenses. When doing so, they have to be able to recognise the tenses in the different verb forms. Work in groups, discuss experiences and opinions and also proposals in terms of other ways of doing things, if B has prior experiences B wants to use. Vocabulary, grammar and pronunciation. Use a sheet of paper to write down their results. B may use the books, think through what they have done, experience beyond the linguistic aspects, what have they learned in theory, and what have they learned in practice. They have not learned economic vocabulary, so they do not have to use this. See what they have learned within the different areas. Passive and active vocabulary. Learning of declarative

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knowledge. And the procedural, which is the use of these words. A wonders what B has experienced, what ideas B has about how this learning process should take place. A wonders what the best way is to learn words and expressions.

FR421. *Turn 304.*
B says waffles made without a recipe.

FR422. *Turn 303.*
A says that they used a concept for that. They are not quite sure about the recipe, but they make something.

FR423. *Turn 302.*
B says yes, and that if B know parts of the recipe.

FR424. *Turn 301.*
A asks whether the declarative knowledge is the recipe.

FR425. *Turn 300.*
B says that waffles made without a recipe are when B knows more or less how to make waffles without using a recipe, when B knows more or less what to put into the batter. B can then make something that resembles waffles.

FR426. *Turn 299.*
A asks what they had said about making waffles. They used these pictures as a metaphor for learning. Not only languages, but also other things.

FR427. *Turn 298.*
B says that they had talked about waffles made without a recipe.

FR428. *Turn 297.*
A says that this is how our memory works. It is not enough to say things once – things need to be practised. The first thing was declarative. A wonders if B remembers. A writes declarative knowledge on the blackboard. They talk about knowledge and they talk about learning. Procedural. A writes procedural knowledge on the blackboard. A wonders if B remembers the difference between these two foreign words when B sees them. A wonders what they reveal about different forms of knowledge and learning. Declarative – theory – learning. The other one is about practice – or use. B has to learn things and B has to use them. The main goal is to be able to communicate in written and oral French. They are working with two phases in this learning process. A wonders if B remembers what they talked about during that lesson. A wonders what they say in terms of the difference between the two of them.

FR429. *Turn 296.*
B says that B does not remember.

FR430. *Turn 295.*
A says that they are going to see if B remembers anything from last time. There were two concepts, very nice Latin concepts. A wonders if B remembers these concepts related to learning. A states that one of them was about learning things, and the second one was about the use of this knowledge. A states that the last thing they did was that B was to repeat. It was written on the blackboard.

Session 2
A reads aloud the two words with the group. (Declarative and procedural knowledge). A says that they have reflected around learning as a concept.

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Next time they are going to talk about French specifically, using what they have reviewed about French.

FR431. *Turn 294.*
B says that if B has to do something specific in five years, it is easier to remember if B has done something physically than in terms of knowledge. If B plays the guitar, B will remember the song in five years because it becomes automatic since B has learned it.

FR432. *Turn 293.*
A asks if B gets the point. After five years without using them, the brain must reactivate the dance. A states that A is now into a field that A is not a specialist in, but A may use A's own experience.

FR433. *Turn 292.*
B says that it could be, but B is not sure. B states that B has done that dance for several months, so it may be.

FR434. *Turn 291.*
A says that according to what B is saying, it is easier to do this backwards than for a fellow learner who did not have this star achievement. However, this is only something A claims. A does not believe that any knowledge is useless, but that it can disappear from our active access. A uses the example of a learner who dances in Sandnes. B might be able to do it when asleep; B knows the steps and B does it every night. A wonders what would have happened if A had asked B in five years if B can do two minutes of that dance.

FR435. *Turn 290.*
B says that B does not think so, but that it takes a lot of time to learn it again.

FR436. *Turn 289.*
A says that when the family was together, B had the show. B has not learned from the beginning yet.

FR437. *Turn 288.*
B says that B thinks that B did it backwards.

FR438. *Turn 287.*
A says that that was perhaps one of B's star achievements. A wonders if B did it many times.

FR439. *Turn 286.*
B says that B was about three.

FR440. *Turn 285.*
A wonders how old B was.

FR441. *Turn 284.*
B says that when B was young in kindergarten, B could say everything backwards by heart, and B found out that B could do this in the tenth grade. B's mother told B. But B is not able to say it now, and B has to spend much time trying to find back to it.

FR442. *Turn 283.*
A says that it becomes more passive; they do not have access to it. The mind puts away things they do not use. And there is something they have easy access to if they use it. They will come back to that.

FR443. *Turn 282.*

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B says that if B has been able to use knowledge, really been able to use it, then B will not forget it. B thinks that it is easy to forget facts and that kind of knowledge, but it is different if B has used things.

FR444. *Turn 281.*
A says especially if B has seen the connections, such as grammar.

FR445. *Turn 280.*
B says that if B was once really good at something, which B was able to use properly, then B will not forget it. B thinks that B can easily pick it up again.

FR446. *Turn 279.*
A says that A would claim that learning grammar is about learning the structures of the language. After they have finished French here, many will perhaps not use French for quite a few years, and not hear French either. If B gets a job in 20 years in which B has to use French or buy a house in France, those who have had studied French and acquired some understanding, and reached a fair level in terms of declarative or procedural knowledge when B was 17 or 18 years, will have the skills again more quickly. A believes that all they learn, all they experience, is stored somewhere in the brain. They may not have access to everything, but they have to activate and process things, something they will return to later on. A says that the question is if B starts from scratch, B might feel that B starts all over again.

FR447. *Turn 278.*
B says that procedural knowledge is something B can lose over time if B does not maintain it. Then it is not procedural, and then B has to learn it again. B would then start from scratch and have to learn it again.

FR448. *Turn 277.*
A says that this is very important. It is the same as learning verbs declaratively. B then tries to make it procedural in a communicative setting, which is our goal. Sometimes B makes mistakes. A states that that is why A calls all their tests "learning tests". A provides B with feedback in terms of things B has to become more confident about and have a closer look at. A thinks that it is not possible to go through life without making mistakes. A states that it is important to learn from mistakes, not only in foreign languages.

FR449. *Turn 276.*
B says that in terms of putting up a tent, B would probably not manage that the first time B tries. If B sees that it does not work and takes it down again, this is also a kind of learning. B learns from B's own mistakes.

FR450. *Turn 275.*
A says that there is a certain injustice in that respect. Some people are good at mathematics, but not that good at relating to other people. They just sit there alone with their numerical knowledge. Some people are not that good at mathematics, but they have a brain that has led to them having many friends and warmth.

FR451. *Turn 274.*
B says that not everybody needs the same amount.

FR452. *Turn 273.*
A says that some people learn things faster than others. But that they have to work a bit. Everyone needs to gain some declarative knowledge in order to be able to do things procedurally.

FR453. *Turn 272.*

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B says no.

FR454. *Turn 271.*
A says that some claim that the intelligent ones know it all by heart. A wonders if B believes that.

FR455. *Turn 270.*
B says that they know things without having learned them. Perhaps that is also the case for B. B states that this is why some people learn faster than others and why some people grasp things faster than others because of their instinct.

FR456. *Turn 269.*
A says that some people claim that. A states that A does not say that.

FR457. *Turn 268.*
B acknowledges what A said about the animals having a kind of instinct to learn things.

FR458. *Turn 267.*
A says that we can wait with that.

FR459. *Turn 266.*
B states the concept of logic as such.

FR460. *Turn 265.*
A asks if B thinks in terms of philosophical logic or that we consider the fact that one thing leads to another.

FR461. *Turn 264.*
B says that the place of logic in all this remains a bit vague.

FR462. *Turn 263.*
A says that A thinks that one learns a good deal through playing, through different kinds of games, for instance when girls play with children and dolls. Boys play with technology. This becomes very gender-biased. A states that one learns much in terms of how things work together, which can be transferred.

FR463. *Turn 262.*
B mentions the notion of putting up a tent. If B knows more or less what a tent should look like when assembled, then B would be able to imagine this without having put up a tent before.

FR464. *Turn 261.*
A says that they are all Indo-European. A states that Indian and Urdu have many traits in common.

FR465. *Turn 260.*
B says that B did not know that.

FR466. *Turn 259.*
A says that not everybody knows that Urdu is in the same large language family as French and Norwegian. A asks if B knew this.

FR467. *Turn 258.*
B says that B's mother-tongue Urdu resembles these languages, but that they do not resemble them so much that B is able to speak them, although B understands them.

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FR468. *Turn 257.*
A asks what kind of language this is.

FR469. *Turn 256.*
B says that when using the language (incomprehensible), there are languages that B understands without having learned. B states that B cannot speak them.

FR470. *Turn 255.*
A says that mathematics is interesting because B talks about applied mathematics in that subject and that B uses mathematics in a practical setting.

FR471. *Turn 254.*
B says that B may have done things before. If B gets a task in mathematics that B has never seen before, B has knowledge of mathematics, B uses the knowledge B already possesses, B uses the things B has learned before, so B has thus been through the acquisition process.

FR472. *Turn 253.*
A asks if nice words are interesting.

FR473. *Turn 252.*
B says that B cannot only have procedural knowledge.

FR474. *Turn 251.*
A says that they have other instincts that they are born with; they can do certain things straight away without having seen, for instance, that the mother gives milk.

FR475. *Turn 250.*
B says that they do not have any instinct in terms of how to assemble a tent.

FR476. *Turn 249.*
A says that A has experienced something similar when people have used Lego. One then learns how to assemble things. A states that A would use a concept that is mostly related to animals, but the question is that people also have instincts. Animals know from the day they are born what they have to do. During their first hour, they find their mother without having learned to do it. A wonders if we are animals. We have a human body.

FR477. *Turn 248.*
B says that it is possible to do something even if B has no pre-knowledge. If B has a tent that B places before someone and says "put it up", then that person will finally find out how to put it up. So it is possible to teach oneself.

FR478. *Turn 247.*
A says that this is how one learns one's mother tongue before we start school and before we have learned to read or anything else. We do not start with grammar, but most people are nevertheless able to talk. This is what distinguishes foreign languages, as we do not have this practice opportunity with them. We talked about that last time as well, how we can get more practice opportunities than just the two to three hours we get with French at school. It is not enough because we do not hear French unless we actively seek practice opportunities. This is different from one's mother tongue, which people talk all the time. B acquires it automatically, and A has read that the brain is most receptive around the age of two, receding after that.

FR479. *Turn 246.*

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A says that B has heard the words so many times that B knows how the words are supposed to be linked together and formed in certain contexts.

FR480. *Turn 245.*
B says yes, but that there is a good deal of grammar in Finnish, but that B does not know this grammar.

FR481. *Turn 244.*
A asks if B has ever heard it or learned it.

FR482. *Turn 243.*
B says that B does not hear it around B all the time, but that B is a little fluent in the language.

FR483. *Turn 242.*
A says that B learns it as a mother tongue if B hears it around B all the time.

FR484. *Turn 241.*
B says that B speaks Finnish, and nobody has ever told B any rules in Finnish. It is a bit like waffles made without a recipe. B says that B has Finnish family and that B has been to Finland.

FR485. *Turn 240.*
A asks what B thinks since B asks that question. A wonders if B thinks that it is possible.

FR486. *Turn 239.*
B says that without anyone telling B how to do things, B has to talk like this and that.

FR487. *Turn 238.*
A asks if B thought about something special.

FR488. *Turn 237.*
B asks if it is possible to have only procedural knowledge.

FR489. *Turn 236.*
A says that if B uses spray cream and marmalade on top of the powder waffles, it would also help. If B talks French and messes it up, if helps if B smiles.

FR490. *Turn 235.*
B says that if B, with a good deal of effort, makes imperfect waffles without a recipe, people would still say that it is a good effort. It is the same with French - if B tries, people would become more open even if B's French is not perfect, contains errors, and if B messes up the words.

FR491. *Turn 234.*
A says that B's procedural knowledge in Norwegian is very good.

FR492. *Turn 233.*
B compares waffles made without a recipe with French and says that B produces French with conjugation errors, but it becomes edible. B is able to communicate.

FR493. *Turn 232.*
A asks if B has been following the news about a Norwegian woman who went to France as a young girl as an au pair when she had finished upper secondary school in Oslo and who is now running for the presidential election. She may also have thought that she would never speak perfect French. Her pronunciation is still not perfect, but it is Eva Joly. She was only 16 and had so much to

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learn in life and so little basic knowledge in so many fields in terms of
life experiences, love and, last but not least, French. Talking about French
waffles.

FR494. *Turn 231.*
B says that B is pleased if B learns a lot of French.

FR495. *Turn 230.*
A says that B should not say that.

FR496. *Turn 229.*
B says that B feels that that is the most important point, since B feels that
B will probably never speak French perfectly.

FR497. *Turn 228.*
A says with money in one hand, and French spoken without a recipe, B could
have communicated.

FR498. *Turn 227.*
B says that B would not get a very good grade, but that B could have gotten
by in France.

FR499. *Turn 226.*
A asks what B thinks they would say if B comes up with French spoken without
a recipe.

FR500. *Turn 225.*
B says no, that is cheating. The thing with French is that it is not possible
to buy French in powder.

FR501. *Turn 224.*
A says, OK, not only resemble.

FR502. *Turn 223.*
B says that it has to taste and smell like waffles as well.

FR503. *Turn 222.*
A says that almost everything resembles waffles in a waffle iron.

FR504. *Turn 221.*
B thinks that it would have been real waffles. B asks if it is not enough to
know that it becomes something that resembles waffles. This is a metaphor for
learning French, when B manages to say what B wants.

FR505. *Turn 220.*
A asks if this would not have been waffles made without a recipe.

FR506. *Turn 219.*
B says that B feels that, that B could have done that.

FR507. *Turn 218.*
A says that this is interesting, and they talked about it when talking about
basic knowledge a minute ago. It can be there consciously for a while, and
then it disappears, at least part of it. A asks what B has to do in order to
maintain this knowledge. It is not enough to learn things once. We have to
learn things several times. A wonders if B has the necessary declarative
knowledge to go over to the grocery's and buy the ingredients needed to make
waffles. A wonders if B has that procedural knowledge.

FR508. *Turn 217.*
B says that B could have made something that would resemble waffles.

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FR509. *Turn 216.*
A says that things have to be easy.

FR510. *Turn 215.*
B says that a lot of powder is used. It tastes good and is much easier.

FR511. *Turn 214.*
A asks if B is good at making waffles.

FR512. *Turn 213.*
B confirms that declarative knowledge is not integrated.

FR513. *Turn 212.*
A asks if B even remembers how much water is added. B has to read this. A states that B's declarative knowledge is not integrated in this case.

FR514. *Turn 211.*
B says that B thinks that B made waffles once, but that B had used powder. B is thus only able to add water.

FR515. *Turn 210.*
A says that if someone had asked B to make waffles, B would have got the waffle iron and been told to fix the rest. A wonders if B has the necessary declarative knowledge to get started.

FR516. *Turn 209.*
B says that in terms of procedural knowledge and ingredients, it means that B is able to treat all the ingredients and what they can be used for, in which case the recipe is integrated in a way. B knows how to use milk, flour, sugar and so on in order to make waffles, because B knows how the different ingredients become what they become. B has done it before and B knows what happens.

FR517. *Turn 208.*
A says yes, it is declarative when B is able to inform, when B has knowledge about how B did it. Then it is declarative. Good. A wonders about waffles made without a recipe. When making waffles without a recipe, B does not follow a recipe, for example if A had told B to make waffles, and A had put 100 ingredients in front of B, different kinds of ingredients, and A had said, make waffles. A wonders if B had made potato dumplings, or if B had made waffles.

FR518. *Turn 207.*
B says declarative.

FR519. *Turn 206.*
A says that B does this when using the language according to what they have understood, which is the goal for our learning. It is procedural knowledge that B is able to use when communicating with someone in writing or orally. Declarative knowledge is the knowledge we acquire when learning new things, words, grammatical forms or syntax, or word order. Last time they forgot to look at the exercise with negation, where to put ne… and pas. These things have to be learned and B will transform it into procedural knowledge. A wonders about the following: when B's friends say 'mmm, what a delicious omelette, how did you make it? and B says 'I did this and that', did B use B's declarative or B's procedural knowledge when B tells B's friends how B did it?

FR520. *Turn 205.*

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B says that B had done this.

FR521. *Turn 204.*
A asks if B had walked into the kitchen alone and done this.

FR522. *Turn 203.*
B says eggs, and milk and salt and species and things B wants to put into it.

FR523. *Turn 202.*
A says yes, and the one takes…

FR524. *Turn 201.*
B says yes, omelette, and remembers that B had asked B's mother the first time B had made them.

FR525. *Turn 200.*
A says that when reading the recipe, knowledge about making food is acquired. In this way, B acquires declarative knowledge, what the ingredients are, how much there is of the different ingredients, and also how long the different parts will go to this and that. Based on this recipe, when B is able to make it, and especially without having to poke B's nose into the book, namely that it is knowledge B has acquired and learned, then B is able to do this. A wonders if there are any dishes B can make without recipe.

FR526. *Turn 199.*
B says that B first reads the recipe and then B makes the food while looking at the recipe.

FR527. *Turn 198.*
A asks how B goes about making food. A says that B is able to choose freely. A states that B may have friends visiting B.

FR528. *Turn 197.*
B says yes.

FR529. *Turn 196.*
A says to use them, to master it. When B has to make a sentence where B uses "faire", they do not have to go through the whole conjugation pattern. Sometimes during the first phase in second language learning, it is a good idea to have it at the back of one's mind or write it down if one is not sure. It is also possible to look it up if one is not certain about the kinds of verbs. A wonders if B can come up with examples where B acquires knowledge and then uses it. A states that they had an example and wonders if B is good at cooking.

FR530. *Turn 195.*
B says that this has to do with facts and understanding. B says that the declarative aspect is the facts, the clean facts, taken out of context. Procedural knowledge is apparently the understanding of how they are used. B has to understand it in order to use them.

FR531. *Turn 194.*
A says that B could have done that. "Tu" and "il"[21]. Procedural knowledge is when B is able to use it, use "faire", when B has to communicate, write to someone, or talk to someone in French. Through this declarative learning, which may be the first encounter with what a verb looks like, that we can use it. Declarative has to do with learning and procedural with use.

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[21] «You» and «he».

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FR532. *Turn 193.*
B says that B could have done that.

FR533. *Turn 192.*
A repeats procedure. B is going to use these two words in relation to learning
about learning. A says that in relation to language learning and the learning
of verbs, they have learned regular verbs, they have learned conjugation
patterns, they have learned many irregular verbs in the present tense, they
have looked at the structure of how these are conjugated in person, singular
and plural- this is declarative knowledge. A wonders if A had asked B to
conjugate "faire" in all the persons, whether could B have done that.

FR534. *Turn 191.*
B says procedure.

FR535. *Turn 190.*
A says "déclarer"[22]. Ask an English-speaking person where it is from. It is
from Latin. The other concept is procedural knowledge (writes this on the
blackboard). A asks if B has ever heard of anything that resembles
"procedural", for instance other words that start with "proc".

FR536. *Turn 189.*
B says "declare".

FR537. *Turn 188.*
A asks what this verb may be in French. It is an –er verb.

FR538. *Turn 187.*
B asks if it has anything to do with "avklare"[23].

FR539. *Turn 186.*
A says that this is different from exercises at home when things are written
down. A calls this internalization, that B is to get into contact with the
Frenchman or woman inside themselves and play roles. When they work with oral
exercises, the point is to accustom the speech organs to how the words are
pronounced. The goal is also to talk as much French as possible every session,
at least read aloud some French every session in order to avoid A doing all
the talking in front of the class. They try to achieve variation. They are
will use these concepts when talking about learning strategies later on. A
tells B to remember them and asks what it implies to know something, what it
implies to learn something. They will come back to this before Christmas,
specifically in terms of learning strategies and the learning of languages.
They will learn two concepts that taken from pedagogy or didactics, and they
will possibly learn more theoretical concepts later in their lives when B
starts studying. B will experience more specific scientific concepts. It is
about learning and teaching. They will use these basic concepts later on.
They will not learn many new concepts all the time, but they will learn a
few concepts as a part of this programme. They will use them later when they
have specific advice for language learning, so B has to know what the
difference is. They will have two-three hours of conversation around concepts
in the subject. They are both about knowledge. They will look at two different
kinds of knowledge. The first one is declarative. A wonders if B associates
something with the concept "declare", to declare something.

FR540. *Turn 185.*
B says that B feels that this is a good method. B says that it is often quick
oral pair exercises. This is a way to acquire automatization since B uses
the language. And also when B reads texts that B writes down, the things B

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[22] Declare.
[23] Clarify in Norwegian.

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does not understand, since B learns new words and acquires a larger vocabulary.

FR541. *Turn 184.*
A asks if B has experienced this.

FR542. *Turn 183.*
B answers that when they have written texts, A tries to make them look up from the sheet of paper and talk to the person they have written to in order to make the knowledge stick in the mind. They do this instead of simply reading aloud, because B does not learn from this method.

FR543. *Turn 182.*
A says using the knowledge B gets when learning words, grammar, etc.is the goal. These are two different sides of learning. In order to acquire something, they need knowledge. As they have said before, the goal is to be able to use the language automatically more and more so that it happens without thinking. A writes use and automatization. In order to do this, they must work with their knowledge. A wonders if B associates what they do in French as a way to build up knowledge to the extent that acquisition is achieved. A says that A uses methods that are integrated, and wonders if B sees that.

FR544. *Turn 181.*
B says that B was once in France. B knows how to speak basic French. However, using it in everyday life implies acquiring the knowledge B has.

FR545. *Turn 180.*
A asks what the difference is.

FR546. *Turn 179.*
B says that knowledge and acquisition are rather similar. Having knowledge about something, and using this knowledge, are different from each other.

FR547. *Turn 178.*
A says that the knowledge that B acquires there is now integrated into the basic knowledge. In the next phase, B will hopefully acquire new knowledge that is different from the first formula. This leads to new learning. They can continue in this way, which is the goal session after session, namely to add something new. They are now in a phase where they repeat things that they have touched upon in lower secondary school. For others, this may be completely new. They get different offers. They are also going to talk about two other concepts that have to do with language learning. They have been working with a concept called "knowledge". They are also going to talk about another concept called "acquisition". A asks whether there is any difference between these two concepts. A states that B has integrated knowledge, B has acquired knowledge. A wonders if there is anything in these concepts. A wonders what the difference between the two of them is. A wonders what the difference between having knowledge about and acquiring a skill is.

FR548. *Turn 177.*
B says that when learning something, B acquires basic knowledge.

FR549. *Turn 176.*
A says that they will come back to that in the next session. They will talk about learning vocabulary, how to write down words to learn them. When they have had a session that has ended up in learning, they get to the next session where they start off with basic knowledge 2. A asks what the difference is between the formula basic knowledge + new knowledge = learning and the second formula basic knowledge 2.

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FR550. *Turn 175.*
B says that B feels that B has learned a good deal, things that B did not know before, since they have learnt in different ways. That is why B did not know it before. It helped B to have worked with it before, but B feels that it is better now. B also says that what B has learned in lower secondary school varies, so B feels that B has learned many new things. It is mainly repetition. At the same time, B learns in new ways and at another level. Then things are refreshed in a new way. B also says that, even if they have learned about certain topics before, they have had new texts, so that they have learned many new words. Even if B has talked about B, my family and my house before, B has learned many new words now.

FR551. *Turn 174.*
A says that some of the things that should have been basic knowledge are not so because B has not been into it before.

FR552. *Turn 173.*
B says that it is repetition if they have gone through it in lower secondary school. But B wonders if there are certain things they have not gone through in lower secondary school. In that case, it is new knowledge.

FR553. *Turn 172.*
A asks why B says that B has acquired new knowledge of since they have worked within what should have been basic knowledge.

FR554. *Turn 171.*
B says that it is difficult to say, because B does not know if it is new knowledge, since B has heard it before. B says that B does not know everything, because there are many things that they practise and then forget. However, most of what they have practised so far is what B has heard before. B thinks B has new knowledge, because it is there. B also says that B has acquired a good deal of new knowledge during these months and weeks.

FR555. *Turn 170.*
A asks if B learned anything during the month.

FR556. *Turn 169.*
B says yes, to a certain extent.

FR557. *Turn 168.*
A asks if all they have had so far is something B feels B already knew.

FR558. *Turn 167.*
B says that they have now repeated everything. If they say that what they learned in lower secondary school is basic knowledge, if this is learned, then it is only brushing up the basic knowledge.

FR559. *Turn 166.*
A says that they will talk more about this later on.

FR560. *Turn 165.*
B says that the things B can use automatically would be classified as basic knowledge. New knowledge is something B has to concentrate on and integrate into B's mindset.

FR561. *Turn 164.*
A asks if this means that what they have practised during the month they have spent together is new knowledge.

FR562. *Turn 163.*
B says yes, most of it.

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FR563. *Turn 162.*
A says that B has acquired new knowledge, and this leads to B learning. When B started at this school, B had studied French for three years in lower secondary school. A asks how B would relate to what B had learned during these three years in this way. A asks if this is basic knowledge.

FR564. *Turn 161.*
B asks if B has acquired new knowledge.

FR565. *Turn 160.*
A says that B builds upon that. This extra piece is that B has learned something. A asks what it means if A asks B after a session if B has learned anything during that session. A asks what has happened if B says that B has learned something.

FR566. *Turn 159.*
B says new knowledge.

FR567. *Turn 158.*
A asks and then?

FR568. *Turn 157.*
B says that this knowledge is called basic knowledge.

FR569. *Turn 156.*
A asks what B calls what B knows from before.

FR570. *Turn 155.*
B says that they know things from before, so it is a matter of building upon that knowledge in some way. B uses what B knows in order to learn new things.

FR571. *Turn 154.*
A says that they are going to continue talking about learning in general terms, and they are also going to introduce B to some concepts that may seem somewhat abstract but that are used within the field of pedagogy, the subject about learning. Their goal is to become more aware of their learning through their activities, not only in French, but also in other subjects. This implies that thinking about how they learn, and that they are first and foremost going to use their subject, French, as a frame of reference. But B may also use references from other subjects, as they did last time, talking about the learning of Norwegian and English. They are going to use a formula with plusses and equals signs. They are going to look at some concepts that are not that difficult. B has to think about it and see how it relates to B's experiences in terms of learning French and learning other subjects. The first concept is that of "basic knowledge". B knows that a basis is the fundamental thing that B does. The concept they are going to add to this is "new knowledge". They will use an equal sign, and introduce a third concept, which is "learning". These are three concepts B will become familiar with, especially if B knows these words. A asks if there are any spontaneous comments. A asks if B feels that this can describe the way B learns things, for instance in French.

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A says that A knows that some of them also have parents who talk some French, or at least they claim to do so. It is also possible to organise a topic; the point is that B tries to construct situations in which the language is used, such as B has already described.

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Appendix 3A: Backwards induction of the French Case (FR)

A states that this is the moment to finish the session. A states that there are three minutes left on the tape, thus what they are going to do now that B has talked a bit about learning a language in terms of what it takes and what is difficult. During these sessions, they will receive specific advice about B learning a language, French, and then B can do this and that. B may seek practice opportunities for one thing and another. They will also work with specific learning strategies, that is what B may do according to B's own plan to become a little more active, or a little more independent in the way B learns a language. B attends school, which is one thing, but B may be inspired to assume responsibility for B's own learning as it is called. Thus, if B is on holiday abroad, B should seek specific practice opportunities, that is what B does in a particular situation. B may also want to watch a French movie on TV. The question is then what B does five minutes prior to this activity to get more out of the movie than just sitting there watching it in order to be aware, for instance, about this and that. A states furthermore that this is the topic they will develop further, that is B is going to learn more specifically what B can do in different situations in order to make the learning of French more efficient, also outside the school setting or when it comes to homework. A asks what B does with that particular piece of homework. Is it just a matter of getting it over and done with so that B avoids getting a mark in log, or what is it that takes away the concentration from the work with the homework? But there are many ways of viewing things in that situation, although they will only systematically go through some specific advice in terms of what B can do. During the year, they will then see if B has something, or, quite simply, what kind of use they have for the kind of tuition. A says that these are things they will talk about all the time as they go along, which is how and why they are doing what they are doing. A says that A tries to do this now as well, and asks if B has noticed this. A wonders why they do things the way they do. As B improves, there are sources B may seek. These include an FM-radio in French that is easily accessible and that is called RFI, Radio France International. A states that this radio may be a bit too difficult for B at the moment, but that B may have it on. Even if B does not understand very much of what is being said, B can have it on in the background. A says that A will return to this later on and that A had thought that they would have this opportunity as a backup. Nevertheless, many learners in the third grade listened very much to this station. They had it on their I-pod and listened not only to disco music, but also to the French language. A says that one develops one's linguistic intuition simply by listening to French.

FR572. *Turn 153.*
(Incomprehensible)

FR573. *Turn 152.*
A says that it is possible to create a role play with people in the class one goes to.

FR574. *Turn 151.*
B states that B can simply talk about issues that B finds interesting in order to talk to oneself as well.

FR575. *Turn 150.*
A says that A is tempted to give the advice that when B is sitting on the bus or the train in the morning, then try to name what B sees from the window. At this point, it does not need to be that advanced. B may think about what B is going to do. B may start with the future tense and think about what B is going to do tomorrow, that is just say it to oneself. A suggests the French sentences "Je mange"[24], "Je vais à l'école"[25].

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[24] I eat.

[25] I go to school.

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FR576. *Turn 149.*
B confirms this and says that it is surely the only way.

FR577. *Turn 148.*
A says yes.

FR578. *Turn 147.*
B says that B thinks about half of everything in English, so this goes automatically. It is not of the kind "Oh hello, my name is".

FR579. *Turn 146.*
A says no.

FR580. *Turn 145.*
B says that B has not finished with this yet.

FR581. *Turn 144.*
A asks why B finished.

FR582. *Turn 143.*
B asks if A asked for the reason why B finished doing it.

FR583. *Turn 142.*
A says that if A may say it as a French teacher, then it is a very good strategy that B creates situations, for instance, here among the learners. A says that A has seen several learners doing this. The best learners in a way create small role plays, where they have a topic and then try to use the French they have. In those situations, B has to look it up and then develop an active relationship to it. It is not easy for B to have a long stay in France. This stay may come later. At this school, there are several good offers for B on the French programme. There are several learners from last year who are in France. The language is part of the culture they will return to later. Thus, this is the advice to B, that B should (incomprehensible). A asks what happened since B had finished.

FR584. *Turn 141.*
B says that B thinks that B does not necessarily have to travel to France when B is 16. B does not need to travel to France in order to learn French. B may simply talk a bit on B's own. B says that B did this a lot when B was younger and was learning English, when B did B's make-up, took a shower, or was making food.

FR585. *Turn 140.*
A says yes.

FR586. *Turn 139.*
B confirms that B has been to France. B says that B got by using sign language, which is also possible.

FR587. *Turn 138.*
A states that B has seen that there are countries where it is important to know French in order to talk to people. A asks if B has ever been to France.

FR588. *Turn 137.*
B says that B has been there, but that was before B had started studying French, so B was not able to use it very much.

FR589. *Turn 136.*
A says yes and asks B if B has been to France and experienced that it is necessary.

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FR590. *Turn 135.*
B says that a point is to travel to France so that B can get the opportunity to use it in practice. Many French people do not know English, so then B has to use French, or French and body language, one may say. Thus, B thinks that using it in practice is incredibly important for B to develop fluent language.

FR591. *Turn 134.*
A asks if B has any ideas.

FR592. *Turn 133.*
B says no. B also says that it is a bit difficult to use French. B thinks that this is part of what makes it difficult, to say the least. B also states that it is possible to travel to France.

FR593. *Turn 132.*
A asks if B has other ideas about what to actively do in order to use the language, such as mentioned by people at the beginning of the session. Generally speaking, it is important to use the language. A asks how B may get to use it beyond the opportunities B gets during the sessions at the school, often only twice a week, sometimes three. A asks if B has any thoughts in relation to this.

FR594. *Turn 131.*
B says taking the initiative on B's own. If B really wants to learn French, then B has to work for it. It is possible to get a pen friend, which means then B has to use French.

FR595. *Turn 130.*
A says that B is going to have French for at least two years, and asks what ways B needs to work with the French language. They are going to return to French later on, but in order to become good at French, A hopes that B's goal is to become as good as possible in French. A wonders what B can do beyond what A tells B to do. They will watch movies and things like that, but A wonders if B has any further ideas.

FR596. *Turn 129.*
B says no.

FR597. *Turn 128.*
A asks if B knows the approach beforehand and asks if B wants to say something.

FR598. *Turn 127.*
B says yes.

FR599. *Turn 126.*
A confirms that B feels the advantage comes little by little as the grammar becomes more advanced.

FR600. *Turn 125.*
B says that the challenge for B is that there are many words and expressions that are similar in French and Spanish, so if two words are written almost the same way, then it may be that B writes Spanish instead of French.

FR601. *Turn 124.*
A says that a goal is to reach a bit higher and be able to talk about the family and oneself. A says that B has to learn many French words that are considered to be advanced in English, and extend the English vocabulary. Sometimes it is changed a little, but it is possible to recognise it. But now they have mentioned the fact about different language families. They have

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talked about Romance and Germanic. A also says that B might have noticed that they have a learner present who speaks another Romance language fluently. A asks B what is the big perceived challenge in relation to French.

FR602. *Turn 123.*
B confirms what B said, as B had done with English and French in terms of learning it when one knows English beforehand. B had felt that it was much easier to learn French since, having already learned English, B had learned those words first. B then thought that there are many words that are very similar to the French words. B says that B had made associations, and it is much easier in a way when B knows that there are many similarities. When B does not know this in French, then B may think what it is in English, and then B may twist it a little so that it fits into the French pronunciation. B feels that this is very useful.

FR603. *Turn 122.*
A asks for more comments by B.

FR604. *Turn 121.*
B says that French creates access to several languages. When B knows the different languages that are very different, it is easier to learn other languages. It is claimed that when one knows several languages, then one can easily learn more or less all the languages of the world. Then one has grasped the way one learns languages. So having an extra language that one knows is the key to the other language.

FR605. *Turn 120.*
A says that X was first.

FR606. *Turn 119.*
B mentions grammar in French. The French grammar and the English grammar are quite similar to each other. B says that B has often compared the two.

FR607. *Turn 118.*
A asks if B has thought about how this can happen.

FR608. *Turn 117.*
B says yes.

FR609. *Turn 116.*
A asks if B thinks that learning French can improve B's English and Norwegian as well.

FR610. *Turn 115.*
B says that B only had English and Norwegian in lower secondary school. B thinks that it could easily have become boring with only knowledge of two languages. So even if they would surely have learned them much better than they do, then this is also the challenge. It is a little exciting, even if the first year was perhaps a bit like no, I hate French in a way. When B started to understand things, they became much more enjoyable.

FR611. *Turn 114.*
A asks for more comments by B.

FR612. *Turn 113.*
B says yes and states that it becomes easier in a way just to know English. Nevertheless, it is important for many to know a third language.

FR613. *Turn 112.*

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A asks if B envisages a world where it is more important not simply to learn English in addition to one's mother tongue. A asks if it may be useful to know other languages.

FR614. *Turn 111.*
B says that at least English will be extremely significant in many jobs, especially if B is going to travel. B would then be completely dependent on that. It is all about being able to communicate with other people, and this is often an important part of many jobs. In terms of French, it is useful if B is working in France, or in a French-speaking country, or if B works, for instance, in a French company, an oil company. It is useful if B only has to communicate with French people from a general point of view. There are so many people who speak that language and it is an important language. There are many people and it is a big labour market. If B knows French, B has possibilities beyond the English market. So there are many possibilities.

FR615. *Turn 110.*
A says that A has some good stories in that respect, but A will not relate those stories now, since B is the one to talk. Based on what B says now, A wonders what kind of world B envisages - the world in which B is going to grow up in, live in, and work in. A asks how, what kind of importance languages will have there.

FR616. *Turn 109.*
B acknowledges what A has said about the necessity to seek more practice opportunities in French. B repeats what has been said in terms of English and Norwegian being languages B is exposed to in all possible ways. However, in terms of French, there is no established culture in this country. So B must seek French sources, for instance visit France. B needs to find B's way to the language on B's own. It is simply more dependent on B. When B learns to read Norwegian, B reads everything. B reads shampoo bottles, milk boxes, and reads signs. B states that B thinks that it has a lot to say for vocabulary as well. B says that B will never forget the word "oeuf" in French because this word was on a shampoo bottle they once had. And that word means "egg", just to mention an example. B does not learn it the same way just through short words.

FR617. *Turn 108.*
A asks for more comments.

FR618. *Turn 107.*
B states that B cannot always hear what they are singing.

FR619. *Turn 106.*
A says yes.

FR620. *Turn 105.*
B says that B understands his name.

FR621. *Turn 104.*
A asks if B hears the text there, if B understands anything of the text.

FR622. *Turn 103.*
B says that B used to live in France, and that B has some French music.

FR623. *Turn 102.*
A says yes.

FR624. *Turn 101.*
B says that B has read such a children's book once.

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FR625. *Turn 100.*
A says that they are going to talk a bit about some sources after a while, and asks B if B is able to read a book in French, and if B has ever tried this.

FR626. *Turn 99.*
B says that it is possible to find French artists or watch French movies and those kinds of things, since there are many in English – watch movies, listen to music, and read books. The same is possible with French, but B has to start smoothly. In the beginning, B perhaps understands a word or two, and then B constructs knowledge from there.

FR627. *Turn 98.*
A asks what this means for what B has to do if B wants to learn French in relation to Norwegian, which is B's mother tongue, and perhaps also English in this country we are living in. A wonders if the fact that B has to work in a different way has any implications for the learning of French. A says that A does not know, but continues to elicit information from B.

FR628. *Turn 97.*
B refers to the fact that B hears a lot of Norwegian and English during childhood and adolescence, while in terms of French, B states that B has spent a little time in France, but that B never gets to learn French as a child. In this way, French is a completely new language with completely new words that B has almost never heard before.

FR629. *Turn 96.*
A asks for more information.

FR630. *Turn 95.*
B says that in terms of learning French as a new language, after having learned Norwegian and English quite well, the issue is more about attitudes. B thinks that B gets by in the world B lives in now and survives with Norwegian and English so that it becomes more difficult to learn French knowing that B gets by at the end of the day. Nevertheless, B feels very much like learning it, because it is a new language. There are certain contrasts.

FR631. *Turn 94.*
A states that it probably makes it more difficult for us in some areas to learn languages, for instance, from another linguistic group.

FR632. *Turn 93.*
B says that French is supposed to be part of the Romance language family, whereas Norwegian and English are supposed to be Germanic. It is different because they are two different families.

FR633. *Turn 92.*
A confirms pronunciation and states that they have started to work with pronunciation. A also states that they are going to work more on that. The rules are easy to understand, as A has told B before.

FR634. *Turn 91.*
B says pronunciation.

FR635. *Turn 90.*
A asks if there is more input from that group. Otherwise, they may proceed to French, which differs a bit from the other two languages, as B might have noticed already. A asks in which way French differs for B compared to the learning of English and Norwegian. A asks B what the most important difference is.

FR636. *Turn 89.*
B says that B had arrived at the conclusion that it is possible to survive in Norway with almost only Norwegian. B also states that if B is to move out of Norway, then one needs other languages as well that B can use. B also says that those languages are important if B wants a job and education, or simply talking to people and managing to be in another country and buying food and getting hold of things, apart from using Norwegian. And learning another language provides B with even more opportunities.

FR637. *Turn 88.*
A replies that B may say it.

FR638. *Turn 87.*
B asks if B should say it.

FR639. *Turn 86.*
A says other languages.

FR640. *Turn 85.*
A says yes.

FR641. *Turn 84.*
B says that B thinks that they misunderstood each other a little in terms of what B was supposed to do. B had talked about why it is important to learn.

FR642. *Turn 83.*
A asks if this was perhaps what B also wanted to say. A also says that there is one group remaining whose input we have not heard yet. A says that many things have been said here. A asks if B had touched upon other things. A asks if there is something B wants to mention or repeat or emphasise the significance of.

FR643. *Turn 82.*
B says that B had agreed that B needs to be fairly proficient in English before starting to study French in order to avoid mixing the two languages. Nevertheless, they had agreed to a certain extent that already when attending lower secondary school, things had been rather difficult at that point. So if it had been a bit earlier in … if it had been late in primary school, perhaps, that B had started to learn it. But this presupposes that they had started to learn English at a really early stage. B had started to learn English at different stages. B started in the fourth grade and B had started in the first grade.

FR644. *Turn 81.*
A says that A had thought about the two who had mentioned this.

FR645. *Turn 80.*
B asks if A asks B now.

FR646. *Turn 79.*
A asks at what time, just to make a guess, at what time B thinks that it would be wise to start studying French in order to get the most out of it.

FR647. *Turn 78.*
B says that B thinks so, B has to start with English and then another one has to come later. B says that B thinks that it is too much to learn two languages when B is that small.

FR648. *Turn 77.*
A asks how early B is to start then, and wonders if B has talked about that. A emphasises that the question refers to having Norwegian first as a mother

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tongue and then English that A reckons that B is interested in learning. If they also include a third language, A asks if B would be able to manage three languages and learn the two languages at the same time that are not the mother tongue.

FR649. *Turn 76.*
B says that what B says not only refers to languages. But B learns to skate when B is little, and even if B does not practise it for some years, B still masters it when B tries, just like children's songs and those kinds of things. B does not sing them during the whole childhood and adolescence, but B still masters them. The things B learned as a child are mastered longer.

FR650. *Turn 75.*
A says yes.

FR651. *Turn 74.*
B says yes.

FR652. *Turn 73.*
A asks if B wants to comment on that.

FR653. *Turn 72.*
B states that B had discussed the idea that it is wise to start learning languages at a young age. B notices that B has had English for quite some time now and it is quite natural, but French, which is a language they started to study in lower secondary school, is something they have more difficulties with. B guesses that it may be partly due to age, so starting early may be good.

FR654. *Turn 71.*
A says yes.

FR655. *Turn 70.*
B says that they had been the whole group.

FR656. *Turn 69.*
A asks if B has some thoughts in addition to what has been said so far.

FR657. *Turn 68.*
B says that the more B acquires the subject B learns without language, the more words B learns, because of the more concepts B needs to use in order to master the subject.

FR658. *Turn 67.*
A says that A also thinks about the fact that when young, B writes simple sentences, and then B needs more subordinate clauses and constructs a more complicated period that corresponds with a more nuanced way of thinking.

FR659. *Turn 66.*
B says that B must not forget the words, but B thinks that this becomes more automatic after a while. B thinks that B discovers a new word all the time, be it on television, in the newspaper or in a book. Or that B feels that "oops", there should be a word for that. B thinks that it goes more automatically after a while and that B thinks that there are not that many words to read in a book.

FR660. *Turn 65.*
A says that B is at an age where B might develop more nuanced thoughts and feelings. As a consequence, B might develop a need for more nuanced language as well.

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FR661. *Turn 64.*
B says that it depends completely on what B wants to write. If B is to answer
a task in a learning book at home, then it depends completely on the subject.
B also says that it is always possible to become much better and to develop.
The point is really to explore B's own possibilities because B has the
language integrated, B has learned it. But B has to teach B how to use it in
the best possible way. And B does this by writing on B's own. And it is of
course difficult to get through such a process, but it is just a question of
getting started. It is not impossible in any way.

FR662. *Turn 63.*
A says yes.

FR663. *Turn 62.*
B asks if the question is about writing.

FR664. *Turn 61.*
A asks if B sometimes feels that it is difficult.

FR665. *Turn 60.*
B asks what A is referring to.

FR666. *Turn 59.*
A says yes and that in addition to perhaps reading books and newspapers,
writing as well, producing language. A asks B if B feels it is easy to write,
if it is easy to express oneself, for instance in the mother tongue Norwegian.

FR667. *Turn 58.*
B says that it is only a matter of reading and writing and especially the
two things B would have said.

FR668. *Turn 57.*
A asks if B can be even more active, even more precise.

FR669. *Turn 56.*
B says reading and writing.

FR670. *Turn 55.*
A asks what B has to do in order to improve. A refers to the fact that B has
mentioned reading newspapers and reading books.

FR671. *Turn 54.*
B says that B masters the language creatively as well to a certain extent. B
can always become a better writer and a better reader. There is always a lot
to learn in terms of how B can express oneself the best in writing – not only
knowing the language, but also being able to use it as creatively as possible,
and develop, for instance. B can always improve.

FR672. *Turn 53.*
A says yes and elicits more information from B.

FR673. *Turn 52.*
B says that in addition to words B thinks of in terms of deepening in a way,
that B is able to interpret what B reads. So B does not think, that is if B
thinks that B is supposed to learn something during the Norwegian lessons.
Then B would have preferred to give an interpretation, not that many words,
even if words are important.

FR674. *Turn 51.*
A says yes, there are many ways to say things, that is what B is saying.

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FR675. *Turn 50.*
B says that B then deletes the whole sentence and starts all over again. Then B manages to do things in a completely different way. B does not have the habit of mending things.

FR676. *Turn 49.*
A asks what B can do if B feels that the sentence becomes bad.

FR677. *Turn 48.*
B says that B experiences that B's vocabulary simply fails. B knows a word in English which simply fits perfectly, but then B does not have a clue in terms of what this word is in Norwegian.

FR678. *Turn 47.*
A asks if B has experienced that sometimes when B tries to express oneself, for instance in Norwegian or in English, and then in French as well, then in the latter there is a communication problem.

FR679. *Turn 46.*
B says that achieving better fluency in the language is very important. B thinks that this is achieved simply by being conscious when B writes – by, for instance, not using the same word over and over again and placing a full stop and comma in the nice places. Because even if it is not necessarily wrong, it may be that it does not fit that well or that another comma could also have been suitable. It is simply possible to develop fluency in the language simply by being conscious, just like watching TV in order to learn.

FR680. *Turn 45.*
A organises B's input.

FR681. *Turn 44.*
B says that what they have said, reading newspapers, books and different kinds of texts as well.

FR682. *Turn 43.*
A says a more precise language.

FR683. *Turn 42.*
B says that then B would say … .

FR684. *Turn 41.*
A asks what B does in order to develop, to achieve that, in order to develop better fluency.

FR685. *Turn 40.*
B says that yes, everybody probably knows the basic ones. It is a matter of developing, such as learning more words, more advanced sentences, that is a good language, good fluency. The things B can always develop.

FR686. *Turn 39.*
A says yes and elicits more information from B.

FR687. *Turn 38.*
B says that B cannot, B does not think that everybody, there are some learners here who are able to explain all the words in the dictionary, advanced words, make the language more advanced. B also says that if B reads a new word in television and sees a new word, then B may, if B wonders about something, for instance, and wants to expand B's vocabulary, then B may look it up and what it means.

FR688. *Turn 37.*

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A asks what B, for instance, refers to and how B can develop the Norwegian language.

FR689. *Turn 36.*
B says yes.

FR690. *Turn 35.*
A says that some talk. A is an old Norwegian teacher, and some talk about the fact that A has the impression that when coming from lower secondary school, they write Norwegian flawlessly, and do not get any of those red lines on their written mistakes. Then they feel that Norwegian is something they know. Is there anything more to learn in Norwegian now? B comes directly from lower secondary school.

FR691. *Turn 34.*
B says that perhaps not on a daily basis, and wonders if they are talking about, for instance, Norwegian. In that case, new words are acquired from the news, for instance, or the media and those kinds of things - more advanced words in a way.

FR692. *Turn 33.*
A mentions the general principle of using the language and says that some people use it automatically on a daily basis and some have to do it actively in order to use it. A asks if B talks English on a daily basis.

FR693. *Turn 32.*
B says that B had talked about the fact that B will use it as well. B needs to develop that language sense.

FR694. *Turn 31.*
A elicits more information.

FR695. *Turn 30.*
B says that B was thinking of the same, and that it is about reading and watching movies. B refers to listening to others talking the other language.

FR696. *Turn 29.*
A asks B about the conclusion B had reached.

FR697. *Turn 28.*
B says yes.

FR698. *Turn 27.*
A says that then B has something to (incomprehensible).

FR699. *Turn 26.*
B says that B thinks that it is very important to work with texts, etc., in terms of Norwegian and English, just as B had mentioned a minute ago - just as in Norwegian, where it is possible to talk in a way. Try to develop and become better from a grammatical point of view. If B works with texts, one sees how the sentences are constructed in a way.

FR700. *Turn 25.*
A asks if B has anything to add from the relevant group.

FR701. *Turn 24.*
B says that it helps to read, watch movies, talk to others, and practise a lot.

FR702. *Turn 23.*
A says yes, in order to improve in languages.

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Appendix 3A: Backwards induction of the French Case (FR)

FR703. *Turn 22.*
(Incomprehensible.)

FR704. *Turn 21.*
A asks if B can do anything in order to develop B's language, not only when talking French, but on a general basis.

FR705. *Turn 20.*
B says that it is important to make oneself understood and communicate with the rest of the world.

FR706. *Turn 19.*
A wonders if B has any thoughts about general language learning in terms of why it is important and what the challenge is. A asks B to think in terms of all the languages B knows. B may think in terms of French and English.

FR707. *Turn 18.*
B confirms this. B also says that they have delved more into the matter of learning a completely new language now in a way. B says that there is, of course, a difference between learning Norwegian and learning French. B says that it is about repetition and knowing what belongs together, not only getting many rules over us, but also understanding how they are to be used and put into ordinary situations, and the like.

FR708. *Turn 17.*
A says yes and asks if the others also have something on that.

FR709. *Turn 16.*
B assumes that it is foreign languages.

FR710. *Turn 15.*
A says learning languages.

FR711. *Turn 14.*
B says generally speaking.

FR712. *Turn 13.*
A confirms the case of French, which they will return to after a while. Now they are talking in general terms.

FR713. *Turn 12.*
B says that they are only talking about French.

FR714. *Turn 11.*
A asks if there is a difference between Norwegian and English in terms of repetition and practising.

FR715. *Turn 10.*
B says not only to sit there engaged in rote learning of words and grammar, but also to make use of it.

FR716. *Turn 9.*
A says repeat and practise.

FR717. *Turn 8.*
B says yes, languages and to practise. Repeat and practise.

FR718. *Turn 7.*
A asks what is important in terms of learning languages.

Appendix 3A: Backwards induction of the French Case (FR)

FR719. *Turn 6.*
B asks learning French.

FR720. *Turn 5.*
A says that the ten minutes have passed, and asks B to turn around so that they can gather a bit and then have a conversation. A says that they can start with one from each group and then begin at the back. A asks B to start and asks what kind of conclusion they had reached. A asks B what kind of thoughts B had about these matters.

FR721. *Turn 4.*
B discusses.

FR722. *Turn 3.*
A tells B to sit in groups and creates the setting for the seating procedure. A tells B to discuss for ten minutes.

FR723. *Turn 2.*
B says yes.

FR724. *Turn 1.*
A presents the general characteristics of foreign language didactics, and its relationship to this year's programme. The focus is on being aware of how one learns languages and what B can do in order to learn languages, as well as learning about learning languages. A says that this year's programme is an experiment, on the basis of which B will learn more about teaching oneself how to learn languages. In June next year they will have a conversation similar to the one they are having today, a bit informally about learning languages, and in between this session and the session in June, they will have a scheme during some sessions where they are going to do specific matters related to language learning. If B in life outside the school, when engaged in doing homework or whatever, thinks of something they have done during these sessions, then it is interesting to hear about it. Or if B finds it very boring, then this is OK as well. Today they are going to start with a general conversation about learning languages. A says that B probably speaks and writes Norwegian well. A says that B is good at English, but in terms of French, B is in a learning process. Some of B has come further than others, but all are in the process of learning French. And there are perhaps learners who have studied other languages. A knows that there is a learner at the back who also speaks Spanish fluently. Today's topic, as a consequence of this project, is about general language learning- what it takes to learn a language, the experiences B has in terms of learning languages, in relation to all the languages B has been in contact with. In terms of French, and more specifically issues related to French, they will try to get back to that in a more specific sense towards the end of this session. In the beginning, they will be talking about what is important when learning languages, perhaps ways to do it as well. A tells B to think through and express some experiences and points of view in terms of what is important when it comes to learning languages. A tells B to start from a general point of view and then B may include French. Nevertheless, towards the end of this session they will mention specific problems related to French compared to English and Norwegian.

Appendix 3B: Pragmatic Analysis of the French Case (FR)

1. Assessment of the SBI programme (FR1-FR25)	A compares metacognitive issues to a tool box for learning. A states that Latin words in English are words one may find in Spanish, but that these words are rather advanced.
	B states that B has become more aware of the availability of options in terms of metacognitive learning strategies, although this does not imply that B has relinquished old ways of doing things. B says that it is too time-consuming to spend too much time thinking about the conscious deployment of learning strategies. B states that in some situations of speech production, B may consider using other methods. B states that the SBI programme has given B more leeway and produced strong motivation to learn French, and that the great number of French words in English may be used.
	A (defining, "B reflects on the usefulness of the SBI programme")
2. Assessment of working methods (FR26-FR31)	A states that the goal has been to make the learners read aloud every session.
	B states that B finds group work more interesting than rote learning on one's own and that B only practises pronunciation. B has also written down examples of oral practice.
	A (prompting, "B reflects on the variety of working methods")
3. Metalinguistic comparison (FR32-FR37)	A claims that French and English have some common features even though these two languages have differences in terms of grammar and vocabulary. A states that the most important aspect is that the learners hear English almost every day, thus getting good practice opportunities. A claims that this situation makes the active seeking of practice opportunities in French even more important, such as TV, movies, music, advertising, magazines, and recommended advanced books at a later stage. A also defines English as belonging to the same language group as Norwegian.
	B claims that English is more similar to Norwegian than French, arriving at the conclusion that English belongs to the Germanic language family.
	A (comparing, "B understands the essential differences between the learning of French and English")
4. Exposure to the language (FR38-FR46)	A asks if there are any differences between the ways B has learned English and French and refers to early start projects. A also wonders why Norwegians are much better at English than at French, referring to those who are actually taking French. A emphasises the importance of varied working methods and materials. Continuous input is also considered to be important.
	B emphasises the importance of an early start since the ability to absorb foreign languages is better at a young age. English is the language B has most probably used when travelling abroad as a child. The learners are exposed to linguistic input everywhere in terms of English, and exposure to French could be created by using the French version of Facebook and Twitter. B had also wondered why B's English was much better than B's French.
	A (prompting, "B reflects on the particularities of learning French")
5. Practice opportunities (FR47-FR59)	A states that the Internet is a relevant place to find pen friends and asks if B travels to France sometimes.
	B suggests watching movies, listening to music and reading as good ideas in terms of practice opportunities. Getting pen friends could also be a good idea. B also says that B tries to read the French texts in museums or similar places i.e. informative texts. If there are texts in other languages as well, B tries to

	muddle through the French text, using the other languages for comparison if necessary. A (prompting, "B reflects on ways to seek practice opportunities in French")
6. *Regularity in the work process* (FR60-FR62)	A states that French pronunciation can be a challenge for learners, especially since there are important discrepancies between pronunciation and the written language. Next year, there will be more focus on the written language, which is an important foundation. A claims that learning Spanish pronunciation is easier. A claims that the learners should follow the scheme developed by the teacher, and that the learners should trust the teacher in that process. A encourages B to take the initiative beyond the issues the teacher prepares for. B states that the goal is to work on a regular basis, do what one is told, and to make that extra effort without concentrating one's work only prior to a test. A (encouraging, "B takes on the challenge of working regularly towards the goal")
7. *The importance of correct language use* (FR63-FR74)	A asks whether grammar is important. A states that there is an important emphasis on grammar during the lessons. A asks how the learners should work in order to learn grammar and wonders if this year's focus on working methods has influenced them in any way. A focuses on the fact that grammar errors are less obvious and less critical to communication in oral speech. B feels that B has a good focus on grammar, but experiences that the learners in the Spanish classes are able to talk more than the learners in the French classes. B also notes that the French learners can write more than the learners of Spanish. B expresses the view that an essential step towards developing one's oral skills is first to learn to write. A (prompting, "B reflects on the importance of grammar")
8. *Vocabulary learning strategies* (FR75-FR84)	A asks how the learners can develop good vocabulary learning strategies. Words can always be looked up, but A emphasises the importance of an efficient vocabulary as the basis for oral skills. The focus of vocabulary learning should not be a word list *per se*, but the skills necessary for written production. B states that B discovers that learning has taken place when B starts to think in French. Words are recalled and B develops the ability to put names on things and talk about oneself in French. B states that rote learning is a good way of learning, as well as watching movies and listening to music in order to get input from other places than the books. Practice is also important, and working together with a person who knows more may be a good help. B has already tried this method. A (emphasising, "B understands the importance of efficient word learning strategies")
9. *Motivation and working methods* (FR85-FR98)	A states that the learners have developed their French, and that this process will hopefully develop in the years to come. A states that it seems that B is on the right track. A asks what the learners' goal for the learning process is, i.e. is the goal good grades, the language itself, or the possibility of getting the most out of a stay in France. A wonders how the learners relate to grammar and states that writing skills are important and will be focused upon more next year, especially in the past tense. A tells B to think through this year's SBI programme and asks what it takes to face challenges in terms of writing sentences.

	B confirms A's view about French being the right choice and states that it is important to create milestones during the learning process. B claims that it is important to write essays, prepare presentations and use the language independently of the fill-in-the-blanks in the book, since working with fill-in-the-blanks may give the impression that B does not know that much French. Nevertheless, fill-in-the-blanks is apparently an efficient method of learning words in a fairly quick way. B also states that it is important to have a strategy and be as efficient and fast as possible. Motivation arises out of discovering that B learns along the way. A (prompting, "B reflects over previous experience with different working methods")
10. Motivation and language choice (FR99-FR112)	A uses the example of grades as a factor that determines B's choice of language. A wonders whether there are other motivating factors as well. A compares French and Spanish, stating that on one occasion B had said that French is a more beautiful language. B says that B works primarily in order to be able to travel to France and possibly live there. B wants to avoid using too much English. B states that there are many similarities between Spanish and French. B confirms B's question in terms of B's view that French is more beautiful than Spanish. B had applied for Spanish in the first place, and B's starting point was simply to know another language than English. A (prompting, "B reflects over the reasons why B has chosen French")
11. Motivation and goals (FR113-FR147)	A asks what it takes to learn a language, both Norwegian and foreign languages, using experiences back to B's childhood in light of what the group has experienced during the implementation of this year's SBI programme. A also asks what it takes to learn French. A asks what it takes to become motivated, especially since French is not a global language to the same extent as English. A asks what is the goal with French. A asks what it means to make sure there is enough time to avoid stress. A asks if French has a lower priority this year since it is not in its final year, and if French competes with other subjects. A also asks what motivates B to learn French. A says that there are many opportunities to spend a year in France after graduation from upper secondary school. In that case, it would be possible to learn both the language and its culture. B says that motivation is the first step towards learning, since B needs to know what B wants and which goals to achieve. Interest is important, for instance learning Norwegian as a foreigner in order to get a job. B says that it is a good thing to be able to express oneself globally, which is a goal. B says that the learners tend to work more with the subjects that are in their final year. B would like to study a year in France or travel to France once a year. A (asking, "B defines the goal and purpose of the learning process")
12. Assessment of metacognitive learning activity (FR148-FR151)	A states that language learning consists of four parts, and that the learners are still at a basic level in the process. A explains the purpose of the wheel as a self-assessment tool, and states that an important part of the language learning process is to be able to assess one's progress and fulfillment of plans reflected in goals. A states that the result of the self-assessment work will be used as a basis for future activities, and that these kinds of activities may create opportunities for knowledge and insight into the learning process. B states that the activity had provided B with a good overview, but that it was difficult to answer the questions with a clear 'yes' or 'no'.

	A (defining, "B assesses the development of self-assessment skills")
13. Cognitive strategies (FR152-FR156)	A states that the first pages of a book are often the most important ones, and it is important to get started. Reading Harry Potter in French is a good idea. A also suggested the radio as a source of learning. A emphasised the importance of starting to unravel things and then discovering that one learns more along the way. A states that when A lived in France, A used to go to offices when A needed something instead of calling, since A wanted to look at the facial expressions in order to understand better.
	B states that B uses the context in order to understand the meaning of difficult sentences when engaged in reading activities. B also says that facial expressions can convey meaning, for instance in terms of being sad or glad. B also says that it is scary to learn a new language. On one occasion in Mexico, some English-Canadian interlocutors had pointed to the mistakes B had made during a conversation. Perfect knowledge of the language is not necessary.
	A (advising, "B explores previous use of cognitive learning strategies")
14. Overcome affective obstacles (FR157-FR165)	A suggests that B looks at previous errors again in order to avoid making the same ones again. A states that A tries to avoid too much red ink. A emphasises the fact that one learns as time passes; the first time A had gone to France, A had felt as if there was a red light in his head. A says that the most important thing is to communicate and get the message across.
	B says that it is possible to correct oneself when talking. It is possible to go back and say it again. B says that when talking, one needs to think through "le" and "les". This may cause trouble when buying things, since B may get more than one thing. B says that B often thinks through what B says, depending on others for corrections. B says that B finds it difficult to correct oneself since B's knowledge is limited. Correcting others may lead to a feeling of superiority towards the other.
	A (explaining, "B reflects over the importance of relating constructively to one's mistakes")
15. Mistakes as a source of learning (FR166-FR177)	A states that some people make a mistake several times, some learn, and some learn from others. A says that A calls tests "learning tests". A says that it is normal to make mistakes every once in a while. A asks what people do when they get a test back and what they look at first. A says that A prefers to go through items after the test, since people tend to be more receptive then. A wonders if B uses the test as a basis for further work.
	B says that B looks through the mistakes and rewrites sentences. B says that if B notices that there is a lot of red ink, it requires too much energy to go through it. Less red ink means more attention to the mistakes. B expresses that if B has felt that things have gone well, it is a pity when B sees what B has misunderstood. When B writes something B is not sure about, it is possible to check afterwards to find out what is correct, verifying after the test. B states that it is easier to relate to subjects with a clear focus on rules, such as mathematics and French. Geography is more difficult.
	A (prompting, "B reflects on how to relate to mistakes")
16. Planning for a language learning activity (FR178-FR189)	A gives some examples of how to ask about the price in French. A expresses hope in terms of going to the café before the summer vacation and asks B if B looks forward to that. A also says that the goal of the learning process should be to be able to say things in French. A asks B what B can do in order to prepare for the visit to the French café. A asks B to identify what could be interesting to learn something about. A states that with B's actual level in

	French, it is possible to read books, for instance Harry Potter. A mentions basic reading strategies. A states that reading film reviews prior to watching the film is a useful method to get an idea of what the movie is about. A uses a forthcoming trip to Vichy in the third grade and asks what B can do in advance in order to prepare a visit to a family, wondering what B can do if B has to spend time alone in the family. A uses some specific phrases to illustrate what B can focus on prior to the trip. A states that this initial planning helps overcome fears by using, for instance, role plays. A uses the expression "Le voyage, c'est bien passé?" and the difference between "bonjour" and "bonsoir".
	B asks if B is only going to talk French during the visit to the café. B wants to make sure that they actually speak French there. B says that reading about Coco Chanel in French is a good idea. They can write down phrases during the stay in the café. In terms of the forthcoming trip to Vichy, B plans to explain a little about B, as well as asking the hosts about the same issues. B plans to prepare these questions in advance. B suggests that: "Have you had a nice trip?" is a good question to use.
	A (focusing, "B identifies specific relevant activities")
17. Identifying a topic (FR190-FR200)	A suggests going to a café or watching a movie as two relevant activities. A states that thinking through the situation beforehand creates a better basis for the activity. A tells B to work in small groups in order to plan the visit to the café and to watch the movie. A confirms B's view that a role play prior to the visit to the café is a useful method. A asks what kind of expressions B needs for the visit in the café.
	B states that it is important to start with the basics, such as finding out what they need in terms of words for ingredients and food. B proposes working with a role play prior to the visit, as well as studying relevant chapters in the text book. Relevant expressions are important, for instance asking for the price.
	A (preparing, "B analyses relevant topics for the forthcoming activity")
18. Travelling as a source of intercultural understanding (FR201-FR205)	A suggests that a forthcoming trip to Denmark is a good example of how cultural understanding can be developed, since the learners will be going to France at a later stage. A states that such a trip can be used for learning purposes and asks if B has thought about the learning potential of such a trip.
	B says that the purpose of the trip is to enhance understanding between Scandinavians. B also expresses a lack of understanding in terms of the pedagogical nature of going to Denmark, but that a previous visit from Denmark had been a very social experience. B says that they are going to consider the differences between Danish and Norwegian in a project. B says that learning may occur as a consequence of listening to the language in the environment. B had noticed considerable differences, an observation which may be useful.
	A (emphasising, "B explores the potential of intercultural encounters")
19. Topicalisation of learning strategies (FR206-FR217)	A states that the topic of this session is metacognitive learning strategies. A asks what the meaning of the concept 'metacognitive learning strategy' is and what it means to have a strategy. A defines strategies as a goal for learning. It is important to think about what we do. It is important to define the purpose of one's activities, and that this has to be seen in the light of previous discussions in terms of goals. The teacher suggests using ongoing work with presentations in French, combining these with a recent activity related to verbs, asking B what the purpose of this activity had been. A asks B to think

	about the goals discussed in the previous session, analysing if the presentations fit into these topics in any way.
	B says that the meaning of the concept 'metacognitive learning strategies' is having goals. B says that it means being aware of how B learns in order to develop B's efficiency. B says that B learns a lot from presentations, since B has to talk, prepare, answer questions, and listen to others. B says that B enjoys making something on B's own, and being able to present it without restraint. It is important to force oneself into seeing how sentences are built up. When presenting something orally, B has to understand what the others say, being able to match circumstances to something that happens. B says that B has to expand vocabulary. B says that the goal was important for that person. B also says that what has already been studied is important for that person. B says that the most important difference between French and other subjects is that B is less confident about what B wants to say.
	A (defining, "B explores previous experience with learning strategies")
20. Development of writing skills (FR218-FR223)	A refers to experiences where friends have come together to practise French. A asks if B has done anything particular and if B had written a card to Geneva. A emphasises the fact that it is important to set individual goals.
	B expresses the view that having a pen friend would have been nice. B says that B has been on Facebook and that B has found some French people online. B says that the book has much focus on colloquial written language.
	A (asking, "B comes up with ideas in terms of activities related to the development of writing skills")
21. Categorisation of a social strategy (FR224-FR225)	A asks about speech production, wondering what B can do to become better communicators. The practice opportunities offered in the school setting are not enough. A wonders if B has done anything specific towards that end, apart from being present during the sessions and doing homework.
	B says that they were only supposed to speak French on one occasion in lower secondary school, but that B did not have enough vocabulary.
	A (prompting, "B reflects over the active seeking of practice opportunities")
22. Reading skills (FR226-FR233)	A asks about reading and if B had the intention to be able to read technical material and books. A asks how B had read signs in Geneva. A asks B what B wants to read.
	B says that it would be nice to be able to read literature, but that this skill is possibly difficult to achieve. B says that B's experience with poetry and literature so far has been incredible. The language is apparently consistent with the desire to express oneself poetically. B has developed an urge to read literature in French. B says that B had not read, but B was in France with a friend a few years ago. On that occasion, B had bought a children's book. B says that B had understood signs in Geneva. B states that B does not know whether B wants to read a lot of technical material, but B wants to be able to read French literature in French.
	A (asking, "B explores B's experience with the development of reading skills")
23. Listening skills (FR234-FR237)	A asks what B thinks about listening. The teacher mentions foreign channels, and says that it is sometimes possible to watch French movies, sometimes with an African accent. A mentions tourism as a way of seeking opportunities for listening.

	B says that B sometimes stops when there are words in class. B says that the goal is to understand most of what is being said, and that as of today, B understands some words. B reports a stay in France when B had talked in the family about leisure time, school, etc. A (defining, "B explores opportunities for listening")
24. Purpose of an educational activity (FR238-FR243)	A writes "metacognitive learning strategies" on the blackboard, asking if the learners remember what this means. A emphasises the importance of knowing about the objectives of one's actions, also in terms of language learning. It is important to have goals set for teaching and strategies for achieving these goals. A relates the worksheets to an ongoing project. After the activity, the groups will present their results. A asks if B thinks in terms of striving towards a goal, i.e. learning French at a certain level. A explains the rationale behind fill-in exercises. B answers that it is about planning and knowing about one's own learning process. B states that a goal-oriented focus depends on the situation. Fill-in exercises are easily carried out, whereas bigger projects require more focus on what has to be learned. B states that B thinks that this person learns something that may be useful in the future. A (defining, "B understands the importance of clear goals for the learning process")
25. Definition of learning strategies (FR244-FR255)	A asks if it is worthwhile working with others or with someone weaker than oneself. A states that it is A's experience that one learns a lot from teaching others, and that this may make one experience success. A asks how many learners write systematic verbal reports. A asks about the learning environment at the school. B states that it is an advantage to work with a learner who is weaker than B, since it will place greater demands on B. It is also a good idea to work with someone better that B, since this gives B something to strive towards. Teaching others may be beneficial for one's own learning. The difference between the learners is more noticeable in lower secondary school. B says that B should not talk in too advanced a way when giving presentations. It is important to think through what kinds of questions B could be asked and to be better prepared. B says that B learns more from simply reading than writing. B also says that B learns better by working directly with the text. A (prompting, "B reflects over different applications of learning strategies")
26. The importance of goals (FR256-FR264)	A asks what kind of words B usually writes down and if B writes down things word by word, or if B tries to create sentences with words. A asks how it is possible to work together on a project, and how it is possible to avoid injustice. A also asks what B felt was important when doing project work. B says that B practises grammar, looks at the text, and does the exercise. B says that B usually does not write down words to a large extent. B writes down what B does not understand the meaning of. B also figures out whether B would be able to say something specific in French, trying to write this down in French. B says that B uses rote learning to learn new words. In terms of group work, B says that it is important to communicate, make agreements, and make sure that all learners involved work on the same topic. B also says that it is useful to spend time well in school to avoid things having to be done just before the test. B says that it is important to start early and organise things well. It is important to think through what B is doing. If there are different levels in the group, this will have consequences for the individuals. Individual differences must be respected.

	A (asking, "B thinks through working methods that reflect goals")
27. *Important aspects of the learning process* (FR265-FR269)	A asks B how the learners can prepare for a forthcoming test. A suggests that visiting friends could be a good way to seek practice opportunities, and that this could also be a way to study for a test together. A confirms that it is important to work on a regular basis and to do homework all the time. B states that the learners have to learn the rules, practise the text and then revise it once again. B also says that it is possible to work with another learner, and that this fellow learner can read out texts for translation. B's mother also knows some French, and can be of good help. B's mother reads out a Norwegian text and the learner translates. B says that it is important to work on a regular basis and do the exercises beforehand. A (proposing, "B identifies efficient learning strategies")
28. *Definition of focus* (FR270-FR275)	A asks how B prepares. A states that they have been working with the passé composé and the use of *être* and *avoir*. A tells B to focus on A, B and C, but that other items are also relevant. A comments on the specific nature of this session's strategy in terms of organising one's work and/or making sure that the learning environment is good. A claims that B needs to practise the use of aids. A refers to task B (preparing project work), stating that this project is to be presented in French. A comments on the learning of vocabulary, and that this part of the process should be focused upon. B asks what kind of grammar they need to study prior to the test. B asks if the learners are allowed to use aids when doing the test at school. A (topicalising, "B asks about the limits of the test")
29. *Planning as a language learning strategy* (FR276-FR279)	A defines the concepts of metacognition and language learning according to the curriculum. A focuses on the relationship between the main area *Language learning* and the other two, i.e. *Communication* and *Language, culture and society*. A refers to theory saying that the debate around SBI revolves around the issue of whether time should be spent on SBI, since it takes away time from actually working with the language. On the other hand, theory claims that spending time on SBI could be a useful method to enhance learning outcomes in the subject, and that this would compensate for the time spent on SBI. Political guidelines state that metacognition is important for Norwegian foreign language learners. B states that too much focus on learning strategies may spoil the joy of learning. Some learning comes naturally, and too much focus on how things should be done may not be that useful. B says that B had reflected more on what B had done previously in terms of language learning. B states that greater awareness has been useful. B says that some strategies are good. B says that learning a language implies working with things that are interesting to that person, such as reading a good book in English. B has worked a lot with Paris and learned a lot from it. Reading poems may be useful, and structural understanding is important. B found that SBI should be directly and specifically related to the teaching as such. B says that B does not spend time on thinking about what has to be learned. A (theorising, "B thinks through language learning habits")
30. *Assessing a practice opportunity* (FR280-FR287)	A defines delayed speech as a strategy only when it is used as a method for learning for a certain amount of time and with a purpose, not when the learners are simply silent in class out of fear of talking. A states that the effort made is better than not making any effort because of the uncertainty. A refers to talking as a step towards enhancing motivation. A asks if B has ever been in a situation where the focus had been on active listening in order to learn

	more. A mentions watching movies as a method, in addition to listening to the radio. A comments that when listening to the radio, a strategy is to decide the focus of the activity in advance. A states that this can be relevant training for real-life situations with native interlocutors, even if listening to the radio or watching a movie does not mean that one is engaged in a dialogue.
	B states that it had been great fun managing French in that situation, and B felt that B had learned a good deal from actually trying. B explains that they had once had a visit at their school from French teachers. They had not been allowed to talk English, and the French teachers had been understanding towards the learners. B also states that, B and B's family had experienced some practical problems during a trip to Nice, and B had had to cope with these problems in French, constructing some simple sentences in French. B states that when B is in Finland, B always needs time to adapt to the Finnish language before B dares to use it. B states that when B is in Bolivia, it takes B a week to get into the language. B has the same experience in Portugal even if B does not speak Portuguese. B understands some Portuguese and needs time to adapt when travelling to Portugal. B is also bilingual, and states that B does not need any time to adapt to the circumstances when visiting the target country.
	A (prompting, "B assesses previous practice opportunities")
31. *Learning the mother tongue* (FR288-FR290)	A asks how B learns B's mother tongue. A states that in the first phase a child merely screams without being able to talk. A compares the strategy of delayed speech with a child's learning of the mother tongue. A wonders if B has any ideas on the subject, since B has spoken the language since B started learning it.
	B states that B hears the language in the environment and picks up what is possible. B also mentions French people's lack of ability to speak English.
	A (prompting, "B reflects on how the mother tongue was learned")
32. *Conceptual development* (FR291-FR295)	A tells B to work with a translation exercise based on a text they had recently worked with. A tells B to relate the main topics of this translation to today's session. A tells B to take into account the key words *nationality*, *close past* and *time expressions*. A uses these key words for establishing the right focus for working on the sentences.
	B comments on the right accent in *Grèce*, *Norvège* and *Norvégienne*, the spelling of *touristes* vs *tourists*, some preposistion issues, and the pronunciation of /s/ in *ils habitent*. B also discusses the use of *rencontrer* from a semantic point of view. B discusses the pair *Elle habite à Oslo* vs. *C'est en Norvège*. B discusses whether it would be possible to use *il y a* instead of *c'est* in *C'est en Norvège*.
	A (focusing, "B reflects on grammatical issues")
33. *Metalinguistic discussion* (FR296-FR319)	A relates declarative/procedural knowledge to the task at hand. A states that metacognition is used in order to make learning more efficient, and that this year's programme focuses on 11 different metacognitive learning strategies. A writes the following questions on the blackboard: Why do we carry out an activity/task? What do we need to carry out the activity? A focuses on automatised knowledge and wonders how associations can be used. A wonders what kind of associations B gets when working with fill-in-the-blanks. A wonders what B needs in order to do the forthcoming task. A asks what the passé compose is, and asks B what one needs to know. A asks about vocabulary. A sums up the significance of metacognition for learning. It brings more results and enables the learner to use B's own resources and get more out of the tasks. It makes the activity more active. A compares this

	process with a computer spell checker. B needs a conscious relationship to the activity and to be responsible for B's own learning. B states that B had defined which strategies may be used in practical situations. B defines the relevant topics as learning the *passé compose* and maintaining previous knowledge. B answers that understanding the text is important as well as using free texts with the *passé compose*, and not just filling-in-the-blanks. B wonders what happens when there are familiar words, expressions and conjugations. B says that it is easier to fill in the words, and that there is often one rule that needs to be practised. B states that they need to know the *passé composé* and auxiliary verbs conjugated according to the person in order to do the task. B says that they need to know how to conjugate *avoir*. B answers the participle and states the importance of knowing the words and how to formulate them in French, in addition to remembering the *passé compose*. A (prompting, "B reflects on working methods")
34. Initiation to a practice opportunity (FR320-FR329)	A suggests giving people a note where it says exactly what people have to answer. A asks if anybody would have asked the French teacher. A acknowledges the fact that B has many resources in the school environment. A asks B how B prepares when in a CD store in France. A states that addressing people playing *boule*, saying "bonjour" to them, cannot be done in Paris. A states that one can do this further south, where there are good places, whereas in Paris it may be difficult to find people to play *boule* with. A states that *boule* is similar to *boccia*. A states that it is easier to make full use of a conversation when the purpose is to pay for something, since asking for something is more difficult. A states that it is a good strategy to say that B is a Norwegian learning French. A states that A would have helped a foreigner learning Norwegian in a similar situation. A also states that it is possible to learn some standard phrases that can be used in conversations. These sentences can always be used when one gets stuck. A asks B what B has learned. B states that B would simply have gone to the people playing *boule*, saying "Bonjour". B remembers a book in the tenth grade with a lot of *boule* and with several cities listed. B relates that B had once been in France with a friend, and that they had imagined a whole conversation with the person at the counter. It ended up with B saying "hello" and paying after learning the price. B says that it is important not to stress, because then it is easier to forget things. It is important to take time to make mistakes and self-correct. B says that B would have smiled properly and said that B is from Norway. If B has difficulties explaining something to another person who does not understand, B has to find out what kind of mistakes B made. B may also ask A. A (advising, "B reflects on previous practice situations")
35. Planning a practice opportunity (FR330-FR348)	A states that the most important thing is to find something B wants to learn, asking B what B wants to do before they leave. A advises B to develop some cultural insight, suggesting the use of music in order to prepare for the activity. B should also learn the rules for *boule*, as well as relevant words and phrases in French. In this way, it is easier to get to know people when playing *boule*. A also suggests that it is important to know some general words and expressions in order to be able to talk normally. A asks where B would have gone to use everyday words and expressions. A says there is a difference between being visual or auditive in terms of preferences. A asks how B would have solved the problem of learning words and expressions. A asks where B would have gone to get help. A says that it is OK to have the cultural understanding that some words are useful to know, but it is not always easy to use them. A mentions understanding that school French and everyday French are two different things. A asks if B would have created a fictive

	dialogue. A says that B can imagine a dialogue and thereby imagine whole sentences. If one has many words, it is not easy to know how one wants to use them, but it is easier with sentences. A says that cooperation makes one better. A asks if B would have entered a dialogue with people.
	B says that B would also look for CD's in a store. B would have found a bakery and asked about the way. B would like to play *boule* with French people and look for cheap CD's. B says café and clothes store in Paris. B says that B has to learn how to buy things when going into a store. Basic courtesy is also useful, and this may be learned in the textbook. It is also possible to look for some French music shops on the Internet in order to learn useful expressions. Other useful information ise exchange rates and prices. B suggests the acquisition of words, expressions and phrases that can be used to get to know people when playing *boule*. It is also useful to learn some general words and expressions in order to be able to talk normally. There is a good deal of formal material in the book referring to oral language and pronunciation. The Internet, for example You tube, is a useful tool to find relevant linguistic material. B says it is possible to watch movies and that in some American movies, people use words that are not used on an everyday basis, such as *fuck*. This is a word that could cause reactions if people use the word in that way. B also says that it is possible to imagine a conversation with the other person and then talk to oneself, pretending that B talks to the other person. B would have read through the textbook, and there are many good expressions there. B says that B can find some other learners to play *boule* with during the breaks. B says that if B analyses some dialogues, B would also have people ask questions. B says that B would have had someone ask questions so that B would have to answer unprepared. A (prompting, "B reflects on relevant topics for the practice opportunity")
36. Difference between procedural and declarative knowledge (FR349-FR362)	A emphasises that important questions thus far have been: Why do we learn this? What is the usefulness of what we are doing? Why have we learned about learning strategies? Why have we learned about these methods? A states that there is a reason for doing this, and that there are tools to use when learning on one's own. A asks if B remembers what cognition is about, and introduces the concept metacognition, explaining its meaning. A also explains how it relates to language learning processes. A asks if B remembers the difference between declarative and procedural knowledge. These concepts are important when working with metacognition. A defines the two concepts as two opposites, with declarative knowledge being knowledge about facts and procedural knowledge about procedures, with reference to examples. A states that one needs both, just as equations in mathematics. A defines understanding as a combination of declarative and procedural knowledge, or applied understanding. A tells B to apply this at a specific level. B is to pretend that B is in France and has to use strategies to get out of these situations. B has to think in cultural terms, since Paris is different from the countryside. A states that B has to find a topic according to B's competence and level. B responds that it easier to learn something new since B becomes more aware about learning. B defines the procedural part as about understanding. B asks if declarative knowledge is about understanding. B uses facts, such as rote learning of years, as an example of declarative knowledge. B states that even if B has learned all the years in which the battles of WWII took place, it does not mean that B understands why they happened. B defines the procedural part as understanding the connections. B wonders if it is wrong to write 'understanding' as a definition of procedural knowledge. A (defining, "B understands the difference between declarative and procedural knowledge")

Appendix 3B: Pragmatic Analysis of the French Case (FR)

37. Topicalisation of affective learning strategies (FR363-FR368)	A states that they will relax a little before Christmas and go back to the texts. A states that sometimes one may feel that the learning curve goes downwards instead of upwards, and that in the second grade, one may feel that French was easier in the first grade. B states that B makes a cake with a French recipe. B states that when B has a hard time reading a text, B can read something they have had before, a text which was reviewed a long time ago, and see that this person understands everything. This creates a good feeling. B states that working out is a good way of having a break. It is easier to continue working after a work-out session. B states that watching a movie or listening to music prior to a learning activity may provide motivation to learn. B understands more and this method can also be used after the activity as a reward. A (defining, "B understands the difference between declarative and procedural knowledge")
38. Topicalisation of social learning strategies (FR369-FR373)	A states that one challenge when comparing French with Spanish is that Spanish pronunciation is more directly related to how the words are written. The same is the case for German, which is easier to pronounce even there are also some intricacies. The Rogaland dialect is an asset because of the open vowels, the uvular R and the … L. In French there is a discrepancy between the pronunciation and the written language. A mentions social strategies as learning strategies. A says that if one wants to learn to swim, one has to be thrown into the ocean. One then either survives and learns to swim, or the opposite. A states that it is a goal to be able to communicate with others in writing or orally. A asks if there is anything one can do in Stavanger in order to seek practice opportunities. One has to take the initiative on one's own in order to hear French outside of the lessons. A mentions affective learning strategies. B states that they had received a visit from some French teachers in lower secondary school. On that occasion, B had shown them around, and B had talked only French, since B had been forced into communicating with them. B states that it is very useful to read out to others, because B corrects others and finds similarities and mistakes. B states that B learns from this kind of activity. A (prompting, "B reflects on the usefulness of social learning strategies")
39. Topicalisation of cognitive learning strategies (FR374-FR377)	A explains the purpose of the SBI programme in terms of declarative and procedural knowledge. A states that when B is going to learn X, B has to do this and that. A states that B has to be able to state declaratively what the strategy is all about and B has to be able to use the strategy in practice, i.e. procedurally. A states that this provides B with a theoretical background in language learning that will constitute the basis for specific work with specific learning strategies and rehearsal related to these topics during the spring semester. A states that they will establish a link between the declarative and procedural aspects of language learning strategies. A states that they will use these concepts and become more aware of different learning strategies related to what they are doing. A states that they have already explained what cognitive means. A states that when having problems with numbers, one could write on a sheet of paper such as B had done. Now B seems more confident about the numbers. A states that this is a way to understand one's weaknesses and use feedback to learn from one's mistakes, eradicate the mistakes, and become more confident, which is the learner's own responsibility. A states that this is a good strategy. B states that this perspective is very much related to what they usually do in the sessions if they have a new verb form, an irregular verb. In these cases

	they repeat that form by using fill-in-the blanks, or by writing sentences in order to use the verb in different forms. B also looks up the verb in a dictionary if there are things B sees but does not understand, thus trying to learn it. When B writes long texts, or only sentences, B tries to challenge B to try new things, looking around in the book to see if there are things B can use. B thinks this is a good learning method. B states that after reading texts in the book, it is useful to use the expressions in them, which makes it is easier to learn them. B states that in terms of pronunciation, it is useful to read the text several times, and between each reading think through what kinds of pronunciation rules B knows. Then B learns about B's performance and the pronunciation becomes more and more correct. A (prompting, "B reflects on the usefulness of cognitive learning strategies")
40. Topicalisation of learning strategies (FR378-FR383)	A instructs B to fill in the task and state what B thinks about the topics they have been dealing with so far. A states that they have to focus on the concepts they have been dealing with. A emphasises that the focus has been on different kinds of learning. A asks B if B can explain the difference between declarative and procedural learning. A refers to the use of recipes to illustrate learning and compares this concept with the actual doing of things. In terms of French, this relates to grammar and vocabulary, and the procedural part is to be able to communicate in French. A states that this kind of practice is carried out in every lesson. A informs that the focus in this lesson is on the so-called strategies, which means the ways to proceed. A mentions the concept of cognitive learning strategy and states that the subject has to do with pedagogy and psychology. A also mentions the word 'social'. A states that they will return to these concepts later and that they will look at similarities and differences. A also mentions the affective strategies, relating these to the word 'affection'. A states that when learning a language, there are many ways to learn the procedural and the declarative part. A states that anything B does to achieve learning is a strategy, which means that one does something in order to achieve something else. A explains that cognitive strategies are used in order to understand something, such as grammatical rules or words. Cognitive has to do with cognition, which means understanding, that one perceives something, acquires something, and learns something. The activities undertaken in order to learn or understand words and rules are cognitive strategies. A states that the purpose is to understand the overall structures of grammar and to see similarities between words, for instance in the form of words we recognise from English. A states that this is a method to understand what may appear to be chaos. A states that social strategies are used in order to learn the language in interaction with other people. A uses examples such as asking the teacher for help, going to a school adviser to get help, talking to a friend, or travelling to the country in order to speak the language. A states that all the strategies and methods B uses to practise the language are social ones. A states that affective strategies have to do with affections, i.e. emotions and attitudes in relation to something. A defines affective strategies as everything one does in order to cope with stress and frustration in the language learning process, such as going out for a walk to feel better, or deciding to watch an interesting movie after working with homework as a future reward for a learning activity. A defines an urge to learn French as an affective force, and not a strategy, since this relates to motivation. Giving oneself a good feeling is an affective learning strategy. A states that these words are used in order to be able to talk about the learning process. B mentions declarative and procedural learning, information, or knowledge. B states that procedural is what one can use automatically. Declarative is that one is able to do it.

Appendix 3B: Pragmatic Analysis of the French Case (FR)

		A (prompting, "B reflects on the relationship between learning strategies and learning psychology")
41.	*Topicalisation of cognitive learning strategies* (FR384-FR390)	A asks what B has done in the previous session. A asks if B feels that things have become easier. A says that in terms of French pronunciation, once is not enough, for instance the fact that the *–ent* ending in the third person plural is silent.
		B states that what B has learned so far is that B has learned rules for pronunciation, and then they have to talk themselves. B states that it helps to talk oneself, for instance in smaller groups, as more people then feel confident. B states that they had repeated after A in the previous session. B states that a good strategy is to talk and then be corrected, as it is then easier to remember. Then B discovers basic pronunciation mistakes. B also states that there are important rules to be learned, such as the *–ent* ending in the third person plural. B states that this is not logical, but is simply something which has to be learned and remembered so that it goes automatically.
		A (prompting, "B reflects on the usefulness of cognitive learning strategies")
42.	*Conjugation of verbs* (FR391-FR410)	A states that if one knows the *er*-verbs, one knows 90% of all the verbs. Knowing one of them means knowing them all. A states that they have looked at the most common irregular verbs. A states that acquaintance with the verbs is achieved through usage and through seeing texts. A states that it is important to look at the forms and then do some quick exercises to try them out. A states that it is important to learn to see the patterns. A asks how one may recognise an *er*-verb in a text and if it is, for instance, conjugated in the third person present tense. A asks what the ending in the third person singular of an *er*-verb is. A confirms that it is an *–e*. A states that if there is an *–e* in the third person, then one can conjugate the verb. A asks if B remembers more verbs apart from the two verbs and the *–e* verbs. A confirms that *être* was the verb for this session, and that it is an irregular verb. A states *vouloir* and *pouvoir*. A asks if they have looked at the verbs called modal auxiliaries. A states that they are important. A asks if they have looked at other important verbs before the autumn holiday. A confirms *aller*. A states that this is an example of passive knowledge, meaning that if one had seen this verb, one would have recognised it right away. A states that there are many irregular verbs in a text because they are much used. A states that this is why they have acquired these special forms. A states that they have had *faire* and *venir*. A emphasises that these verbs have a special conjugation, that they are not regular verbs. The same goes for the *–ir* verbs. A asks about pronunciation, about learning the rules, and about declarative and procedural knowledge. A asks if there are ways to learn these in the best way. A claims that the big challenge in French is the discrepancy between the written language and the pronunciation of many verbs.
		B states that B only knows verbal paradigms of *être* and the rule of the *–er* verbs. B states that B is good at verbs. B states that B is not good at verbs. B states that B has to learn the irregular verbs by heart. B states that these do not easily stick in the mind. B states that in terms of grammar, there is much about rote learning and there are many rules. B states that it is important to write texts afterwards, filling them into dialogues, talking about and using them in tasks. B says that B looks at how it is conjugated. B says an *–e*. B says *être*. B says *vouloir* and *pouvoir*. B says *aller*. B says that *faire* is a verb they know.
		A (prompting, "B reflects on conjugation patterns of verbs")

43. *Acquisition of words* (FR411-FR421)	A instructs B to focus on passive and active vocabulary and learning procedural knowledge. A states that the procedural part is the use of these words. A asks what B has experienced in this respect, and what ideas B has about how this learning process should take place. A asks about the best way to learn words and expressions. A asks if it is just a matter of looking up unfamiliar words and then closing the book afterwards. A asks if this can be done on a computer and asks if B looks at this afterwards. A states that the tasks they have looked at so far are related to the first chapter, that is talking about oneself, about hobbies, and also representing another person than oneself. A states that there are many words and expressions in what they have been doing here. Later B may use word lists in a different way, more freely than so far. A states that when working with new texts, they create word lists, they need oral practice, they have to learn the words, and they cannot simply look them up in dictionaries all the time. They need to have them present, and they must be able to talk. A states that they often talk about the difference between passive and active vocabulary. A asks what B associates with this difference. A asks what passive and active vocabulary means. A defines active vocabulary as what B has available when B talks, or which one B does not have to look up, perhaps only to check the orthography of, but B knows the word. A defines passive vocabulary as something B has learned. If B reads a text, B understands more than B would be able to reproduce and use procedurally because B knows what it means when seeing it in a text in a certain context. B says reading texts and looking up the words B does not know. B says that B may take notes and think through the situation. B says that B has a document and that B scrolls down this page. B says that when writing texts in French, B has a need for expressing himself properly in order to avoid being ordinary. When B is writing a text, B uses things which B does not know from before, and B feels that B learns a lot from this. B states that it is then possible to acquire new words which are used, read texts, and look up words. B refers to a text B had written about Lars Lillo Steenberg. In the text, B does not talk about the colour of the house, what kind of family members he has, or how many cats he has. B says that active vocabulary is what B uses, whereas passive is what B understands if B sees the word. A (prompting, "B reflects on the acquisition of words")
44. *Declarative and procedural knowledge* (FR422-FR431)	A asks if B can remember the two Latin concepts from last time. These concepts were related to learning. A states that one of the concepts was about learning things and the second was about the use of this knowledge. A explains how memory works. It is not enough to say things once, but things have to be practised. A states that the first part was declarative knowledge and the second part was procedural. A asks if B remembers the difference between these two words. A asks what they tell about different forms of knowledge and learning. A states that declarative is theory, learning. The other is about practice, or use. One has to learn things and one has to use them. A states that the main goal is to be able to communicate in written and oral French. A states that they are working with two phases in this learning process. A asks if anyone remembers what they talked about during the last lesson. A asks what they said about the difference between the two concepts. A asks what they had said about making waffles. A states that they had used these pictures as a metaphor for learning, not only for the learning of languages, but also for learning other things. A asks whether the declarative knowledge is the recipe. A states that they had used a concept for that. A states that they are not quite sure about the recipe, but that they will make something. B states that B does not remember the difference between the two concepts. B states that they had talked about waffles made without a recipe. B states

	that waffles made without a recipe are when B knows more or less how to make waffles without using a recipe, B knows more or less what to put into the batter. B states that B can then make something which resembles waffles. B states that declarative knowledge is the recipe. A (defining, "B reflects on the difference between declarative and procedural knowledge")
45. *Balance between declarative and procedural knowledge* (FR445-FR450)	A confirms that it is very important to learn from one's mistakes, and applies this principle to the declarative and procedural learning of verbs in a communicative setting. A states that this is why A calls tests "learning tests". In that way, A provides B with feedback in terms of things B must become more confident about and have a closer look at. A states that it is not possible to believe that one can go through life without making mistakes. A states that it is important to learn from one's mistakes in all kind of settings. A states that learning grammar is about learning the structures of the language. A states that most learners will probably not use French for many years after graduation, but having studied French and acquired some understanding in terms of declarative and procedural knowledge at the age of 17 or 18, they will acquire the skills again much faster. A believes that everyone learns and everyone's experience is stored in the brain. A states that we might not have access to everything all the time, so we have to activate and process things. A states that if B starts from scratch, B might feel that B starts all over again. A confirms that it is easier to pick things up again if B has seen the connections before, such as in the case of grammar. B states that in the case of assembling a tent, B will most likely not be able to manage it the first time B tries. B states that if B sees that it does not work and then takes it down again, this is also a kind of learning. B states that B learns from B's mistakes. B states that procedural knowledge is something B can lose over time if B does not maintain it. B states that in such a case it is not procedural, and B has to learn it again, starting from scratch again. B states that if B has once been really good at something, and been able to use it properly, then B will not forget it. B states that it is then easy to pick it up again. A (defining, "B reflects on the proper balance between declarative and procedural knowledge")
46. *Differences in learning patterns* (FR451-FR464)	A states that A thinks that one learns a lot through playing and different kinds of play. A refers to girls playing with children and dolls and boys playing with techno. A states that this type of playing is rather gender-biased, but that one learns a lot in terms of how things work together and that this knowledge is transferable. A states that some people claim that animals have a kind of instinct to learn things. A says that some people claim that intelligent people know everything by heart and asks if B thinks the same. A states that some people learn things faster than others. A also states that they have to work a bit, and that everyone has to acquire some declarative knowledge in order to be able to do things procedurally. A states that there is a certain injustice in that some people are good at mathematics and not that good at relating to other people, just sitting there alone with their numeric knowledge. B states that if B knows more or less what a tent should look like when assembled, then B would be able to imagine this tent without having assembled a tent before. B states that the place of logic in terms of learning patterns is a bit vague. B refers to a comment made by A in terms of animals having a kind of instinct to learn things. Animals know things without having learned them. B suggests that people also have that ability. B relates to instinct the ability some people have to learn faster than others. B denies A's question in terms of intelligent people knowing everything by heart. B states that not

	everybody needs the same amount of declarative knowledge in order to be able to do things procedurally. A (explaining, "B reflects on differences in learning patterns")
47. *Language families* (FR465-FR470)	A asks what kind of languages B is able to understand without having learned them or being able to speak them. A states that not everybody knows that Urdu is in the same big language family as French and Norwegian. A asks if B knew this. A states that they are all Indo-European, so that Indian and Urdu have a many traits in common. B states that when using the language, there are languages which B understands without having learned or being able to speak. B states that B's mother tongue, Urdu, resembles these languages, but that they do not resemble them so much that B is able to speak them. B understands them, however. B states that B did not know that Urdu belongs to the same language family as French and Norwegian. A (explaining, "B reflects on the characteristics of language families")
48. *Importance of previous experience* (FR471-FR479)	A states that foreign languages have to be learned differently from one's mother tongue. A states that the brain is most receptive around the age of two, and that it declines after that age. A states that A has experienced something similar when people have used Lego. In those situations, one learns how to assemble things. A wants to use a concept that is mostly related to animals, stating that people also have instincts. A states that animals know what to do from the day they are born. A states that they find the mother in the first hour without having learned to do so. A asks if we are animals when we have a human body. A states that they have other instincts they are born with and that they can do certain things straight away, without having seen that the mother gives milk. A asks if the nice words are interesting. A states that mathematics is interesting because one talks about applied mathematics in that subject, one uses mathematics in a practical setting. B states that it is possible to do something even if B has no knowledge of it. B states that if B has a tent which B places before someone, saying "assemble it", then this person will eventually find out how to assemble it. B states that in this way it is possible to teach B. B states that animals do not have any instincts in terms of how to assemble a tent. B states that B cannot only have procedural knowledge. B states that B has perhaps done things before. If B gets a task in mathematics that B has never seen before, B has knowledge of mathematics, B uses the knowledge B already has, B uses the things B has learned before, so B has been through a process of acquisition. A (explaining, "B reflects on the nature of acquisition of procedural skills")
49. *The nature of linguistic perfection* (FR480-FR491)	A states that using spray cream and marmalade on top of the powder waffles is just like talking French and smiling if one messes things up. A asks if B thinks it is possible only to have procedural knowledge. A states that one learns a language as one's mother tongue if one hears it around oneself all the time. A asks B if B has ever heard or learned Finnish. A states that B has heard the words so many times that B knows how the words are to be bound together and formed in certain contexts. B says that if B makes waffles without a recipe and one really tries, even if the waffles are not perfect, people would still say that it is a good effort. B claims that the same applies to French; if B tries, people would become more open, even if B's French is not perfect, with errors and B messing up the words. B asks if it is possible to have only procedural knowledge without others telling one how to do things. B states that B speaks Finnish, but nobody

	has ever told B any rules in Finnish. This situation is similar to the situation with waffles made without a recipe. B states that B has Finnish family and that B has been to Finland. B states that B does not hear the language around B all the time, but that B is somewhat fluent in the language. B states that there is a good deal of grammar in Finnish, but that B does not know this grammar. A (asking, "B reflects on the nature of linguistic perfection")
50. Integration of declarative knowledge (FR492-FR528)	A asks B how B goes about making food. A states that B is able to choose freely, and B might have friends coming for a visit. A states that acquiring knowledge about the making of the food is achieved through reading the recipe. In that way, B learns about the nature of the ingredients and how to cook without looking into the book. A asks what B's mother had said on one occasion when B had asked her how to make an omelette. A states that when B is able to use the language according to what they have understood, it is procedural knowledge, which one is able to use when communicating with someone in writing or orally. A states that declarative knowledge is the knowledge we acquire when learning new things, words or grammatical forms, or syntax in addition to word order. A uses an example from the previous session when they had forgotten to look at the exercise with negation, where to put *ne ... pas*. A states that this is an example of something that will have to be converted into procedural knowledge. A asks B if B uses declarative or procedural knowledge when telling B's friends how B made the omelette. A states that the knowledge is declarative when B is able to tell one and when one has knowledge about how B did it. A states that when making waffles without a recipe, B does not follow a recipe. A states that if A had put 100 ingredients in front of B, telling B to make waffles, A wonders if B would have made potato dumplings or waffles. A asks if B had been told to make waffles, if B had got the waffle iron, and been told to fix the rest. A wonders if B has the necessary declarative knowledge to get started. A asks if B remembers how much water is added. A claims that B has to read up on this, and in that case, B's declarative knowledge is not integrated. A asks if anyone is good at making waffles. A states that it is interesting that B thinks that B could have made something that resembles waffles. A claims that they had talked about this when talking about basic knowledge; B can have it consciously there for a while, and then it disappears, or at least a part of it. A asks what B has to do in order to maintain this knowledge. A asks if B has the necessary declarative knowledge to go over to the grocery's and buy the ingredients needed to make waffles. A asks if anyone has that procedural knowledge. A asks what they think he would say if they come up with French spoken without a recipe, even if it is possible to communicate with money in the one hand and French spoken without a recipe. A says that B should not say that B feels that B will probably never talk perfect French. A asks if B has followed the news about a Norwegian woman who went to France as a young girl as an au pair when she had finished upper secondary school in Oslo and who is now running for the presidential election. She might also have thought that she would never speak perfect French. Her pronunciation is still not perfect, but she is Eva Joly. She was only 16 and had so much to learn in life and so little basic knowledge in many fields in terms of life experiences, love and, last but not least, French. A states that B's procedural knowledge in French is very good. B states that first B reads the recipe and then B makes the food while looking at the recipe. B states that B is able to make an omelette as a dish B is able to make without a recipe. B remembers that B had asked B's mother the first time B had made it. B states that B needs eggs, milk, salt and spices, and other things B wants to put into it. B says that B had gone alone into the kitchen to do this. B states that telling friends how B made the omelette is an example of declarative knowledge. B states that in terms of procedural knowledge and

	ingredients, it means that B is able to treat all the ingredients and what they can be used for. In this way, the recipe is integrated, and B knows how to use milk and flour and sugar in order to make waffles as B knows how the different ingredients become what they become. B has done it before and B knows what happens. B states that B thinks that B made waffles once, but that B had used powder. B is thus only able to add water. B confirms that the declarative knowledge is not integrated if B has to read up on how much water is added. B states that a good deal of powder is used and that it tastes good and is much easier. B states that B could have made something which resembles waffles. B says that B feels that B could have gone to the grocery's to buy the ingredients needed to make waffles. B asks if it is not enough to know that it becomes something which resembles waffles. This is a metaphor for learning French. If their French is like waffles made without a recipe, B would not have got a very good grade, but B would have got by in France. B states that being able to communicate is the most important thing, since B feels that B will probably never talk perfect French. B states that B is pleased if B learns a lot of French. B compares waffles made without a recipe with French, saying that B gets French with conjugation errors, but it becomes edible. B is able to communicate. A (prompting, "B reflects on methods to integrate declarative knowledge")
51. Difference between declarative and procedural knowledge (FR529-FR540)	A states that they are going to learn two concepts taken from pedagogy or didactics related to learning and teaching. A states that these concepts will be used later on when discussing specific advice for language learning. This is why it is important to know the difference. The first one is declarative, and A asks if anyone associates anything with the concept "declare". A asks what this verb may be in French, and states that it is an *–er* verb. A says "déclarer", and states that it comes from Latin. A states that the other concept is procedural knowledge. A asks if B has ever heard of anything that resembles "procedural", wondering if there are other words which start with "proc" for instance. A repeats the word "procedure", and states that these two words will be used in relation to learning about learning. A states that in relation to language learning and the learning of verbs, they have learned regular verbs, conjugation patterns, they have learned many irregular verbs in the present tense, they have looked at the structure of how these are conjugated in person, singular and plural, and A explains that this is declarative knowledge. A wonders if B could have conjugated "faire" in all the persons if A had told B to do so. A states that B could have been able to do that, stating that procedural knowledge is when one is able to use it, use "faire", when B is to communicate, write to someone, or talk to someone in French. A states that through this declarative learning, which may be the first encounter with what a verb looks like, we can use it. A states that declarative has to do with learning and procedural with use. A states that B has to use the verbs, master them. A states that when they are to make a sentence with "faire", they do not have to go through the whole conjugation pattern. A states that sometimes during the first phase in second language learning, it is a good idea to have it at the back of B's mind or write it down if B is not sure. A states that it is also possible to look it up if B is not certain in terms of those kinds of verbs. A asks if B can come up with examples where B acquires knowledge and then uses it. A asks if anyone is good at cooking. B asks if "declare" has anything to do with "avklare". B says "declare". B says "procedure". B says that B could have conjugated "faire" in all the persons. B says that this has to do with facts and understanding. B states that the declarative is the facts, the clean facts, taken out of context. Procedural knowledge is apparently the understanding of how these are used. One has to understand them in order to use them. B states that B is good at cooking.

	A (defining, "B reflects on the difference between declarative and procedural knowledge")
52. *The relationship between learning and acquisition* (FR541-FR550)	A states that they are going to talk about the learning of vocabulary, how to write down words in order to learn them. A states that when they have a session that has ended up in learning, they get to the next session where they start off with basic knowledge 2. A asks what the difference is between the formula basic knowledge + new knowledge = learning and the second formula basic knowledge 2. A states that the knowledge which B acquires there is now integrated into the basic knowledge. In the next phase, B hopefully acquires new knowledge which is preferably different from the first formula. A states that this leads to new learning, as the goal is to add something new. A states that they are now in a phase where they repeat things which they have had in lower secondary school. For others, this may be completely new. A repeats the work they have done with the concept "knowledge". A states that they are also going to work with another concept called "acquisition". A asks if there is any difference between these concepts. A states that when B has integrated knowledge, B has acquired knowledge. A asks what the difference between the two is. A wonders what the difference between having knowledge about something and acquiring a skill is. A says that the goal is to use the knowledge B gets when learning words, grammar, etc. A states that in order to acquire something, they need knowledge. A states that the goal is to be able to use more and more of the language automatically so that it happens without thinking. In order to do this, they must work with their knowledge. A asks if anyone associates what they do in French as a way of building up knowledge to the extent that acquisition is achieved. A claims that A uses integrated methods, and wonders if B sees that. A asks if B has ever experienced learning from talking to another person about the content of a written text.
	B states that B acquires basic knowledge when B has learned something . B states that knowledge and acquisition are rather similar. B states that having knowledge about something, and using this knowledge, are different from each other. B states that B was once in France. B knows how to talk basic French, but using it in everyday life implies acquiring the knowledge B has. B answers that when they have written texts, A tries to make them look up from the sheet of paper and talk to the person B has written to in order to make the knowledge stick in the mind. This is done instead of simply reading out aloud, because B does not learn from this method. B feels that this is a good method. B states that it is often quick oral pair exercises. B states that this is a good way to acquire automatisation, since B uses the language. B states that this also applies to situations in which they read texts and write down what they do not understand, since they learn new words and acquire a larger vocabulary.
	A (explaining, "B reflects on the difference between learning and acquisition")
53. *Construction of knowledge* (FR551-FR572)	A states that the purpose is to become more aware about the concept of learning, not only in French, but also in other subjects. This implies thinking about how we learn things, and French will be used as a frame of reference. A states that B may also use other subjects as a frame of reference. A states that they are going to use some concepts that are not that difficult, and B has to think about them and see how they relate to B's experiences in terms of learning French, but also in terms of learning other subjects. A states that the first concept is "basic knowledge". A states that the concept "new knowledge" is added to this basic concept of learning. A states that these two concepts are equated with learning. A states that B is to become familiar with these three concepts, asking if B feels that this can describe the way B learns things in, for instance, French. A asks what B may call the things B knows

	from before, in addition to the next step. A states that B builds upon that, and this extra piece is that B has learned something. A asks what it means if A, after a session, asks B if B has learned something during that session. A asks what has happened if B says that B has learned something. A says that B has acquired new knowledge, and this leads to the fact that B has learned. A states that when B started at this school B had studied French in lower secondary school for three years. A asks how B would relate to what B learned during these three years in this pattern. A asks if this is basic knowledge. A asks if this means that what they have practised during the month they have spent together is new knowledge. A asks if everything they have done so far is what B feels B already knew. A asks if anybody has learned anything during this month. A asks why B says that B has acquired new knowledge since they have worked within what should have been basic knowledge. A says that some of the things which should have been basic knowledge are not, since B has not covered them before.
	B states that B knows things from before, so it is a matter of building upon that knowledge in a way. B uses what B knows in order to learn new things. B says that this knowledge is called basic knowledge. B states that new knowledge comes as the next step. B asks if B has acquired new knowledge. B confirms that most of what B has learned during the three years of French in lower secondary school is basic knowledge. B states that what B can use automatically is basic knowledge. New knowledge is something B has to concentrate upon and integrate into B's mindset. B states that they now have repeated everything. B states that what they learned in lower secondary school is basic knowledge, and if this has been learned, then it is only brushing up basic knowledge. B confirms that everything they have had so far is to a certain extent what B feels B already knew. B states that it is difficult to say if B has learned anything during this month, as B does not know if it is new knowledge, since B has heard it before. B says that B does not know everything, because there are many things that they practise and which B forgets. B states that most of what they have practised so far is what B has heard before. B thinks B has new knowledge, since it is there. B also states that B has acquired much new knowledge during these months or weeks. B states that it is repetition if they have gone through it in lower secondary school. B wonders if there are certain things they have not gone through in lower secondary school. In that case it is new knowledge. B states that B feels that B has learned a good deal, things B did not know before since they have used different ways to learn. That is why B did not know it before. It helped that B had worked with it before, but B feels that it is better now. B feels that B has learned many new things since what B learned in lower secondary school varies. It is mainly repetition. At the same time B learns at another level and in new ways. Things are thus brushed up in a new way. B also states that even if they have learned about certain topics before, they have had new texts and have consequently learned many new words. Even if B has talked about B, B's family and B's house before, B has learned many new words.
	A (prompting, "B reflects on how knowledge is constructed")
54. *Seeking of practice opportunities* (FR573-FR596)	A states that B is going to have French for at least two years, and asks what ways B will need to work with the French language. A asks if B has any ideas beyond the movies and other materials A is going to use. A asks what B can do actively in order to use the language, since it is important to use it. A asks if B has ever been to France and experienced that it is necessary to use the language in practice. A states that it is a very good strategy to create situations among the learners. A states that A has seen several learners doing this. Some of the best learners create small role plays where they have a topic, and then they try to use the French they have. In those situations, B has to look it up and then develop an active relationship with it. A states that it is thus not necessary to have a long stay in France. A states that a stay in France can

	come at a later stage. A states that when B is sitting on the bus or the train in the morning, B may try to name what B sees from the window. A states that at this point it does not have to be very advanced. A states that B may also start with the future tense and think about what B is going to do tomorrow, and then say it silently. A suggest sentences such as "Je mange"[1] and "Je vais à l'école"[2].
	B emphasises taking the initiative on B's own. B states that if B really wants to learn French, then B has to work for it. B states that it is possible to get a pen friend, in which case B has to talk French. B states that it is a bit difficult to use French. B states that it is possible to travel to France in order to gain the opportunity to use the language in practice. B states that there are many people who do not know English, and then B has to use French, or French and one's hands. B states that using the language in practice is incredibly important if B is to develop fluent language. B states that B has been to France, but that was before B had started studying French, so B was not able to use the language very much. B states that B got by on one occasion by using sign language, which is also possible. B states that B does not necessarily have to travel to France in order to learn the language. B states that it is possible to talk a little on B's own. B states that B did this a lot when B was younger and was learning English, when B did B's make-up, had a shower, or was making food. B states that B thinks half of everything in English, so this goes automatically, it is not of the kind: "Oh hello, my name is". B states that B can simply talk about issues that B finds interesting in order to talk to B as well.
	A (prompting, "B reflects on practice opportunities")
55. *The advantage of positive transfer* (FR597-FR612)	A asks if B thinks that learning French can improve B's English and Norwegian as well. A asks if B has thought about how this can happen. A states that one goal is to reach a little higher and be able to talk about the family and B. A states that B is to learn many French words that are considered to be advanced in English, and to extend the English vocabulary. A states that although these are sometimes slightly altered, they are still possible to recognise. A states that they have talked about different language families. A states that they have talked about Romance and Germanic. A states that there is a learner who speaks another Romance language fluently, and A asks B what the big perceived challenge in relation to French is. A confirms that B feels the advantage comes gradually as the grammar becomes more advanced.
	B states that B had only English and Norwegian in lower secondary school. B thinks that it could easily have become boring just to know two languages. B states that even if they would surely have learned them much better than they do, this is also the challenge. B states that it is somewhat exciting. B states that even if B may have hated French the first year, when B starts to understand more, it becomes much more fun. B confirms that learning French can also improve B's English and Norwegian. B mentions grammar in French, and claims that French and English grammar is quite similar. B states that B has often compared the two. B claims that French creates access to several languages. When B knows different languages, it is easier to learn other languages. B refers to a claim that when B knows several languages, B can easily learn more or less all the languages of the world. Then B has grasped the way B learns languages. B claims that having an extra language provides the opportunity to have a key to the other language. B confirms that B has learned French knowing English beforehand. B had felt that it was much easier to learn French because, since B had learned English, B learned

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[1] I eat.
[2] I go to school.

	those words first. B thought that there are many words in English that are very similar to the French words. B states that B made associations, and it is much easier in a way when B knows that there are many similarities. When B does not know something in French, B can think of what it is in English, and B may then tweak it a little so that it fits into the French pronunciation. B feels that this is a very useful strategy. B states that the challenge for B is that there are many words and expressions that are similar in French and Spanish. Thus, if two words are written almost the same way, B may write the Spanish instead of the French. B confirms that the advantage comes gradually as the grammar becomes more advanced. A (prompting, "B reflects on positive transfer")
56. *The importance of plurilingualism* (FR613-FR615)	A asks if B envisages a world where it is more important not only to learn English in addition to one's mother tongue. A asks if it may be useful to know other languages. B states that at least English will be extremely significant in many jobs, especially if B is going to travel, as B will be completely dependent on that. B states that it is all about being able to communicate with other people, and this is often an important part of many jobs. B states that in terms of French, it is useful if B is working in France, in a French-speaking country, or if B works in a French company, for instance an oil company. B states that there are so many people who speak French, and it is an important language. The French speaking labour market is important, and with skills in French, B has possibilities outside the English labour market. B confirms that it is not enough simply to learn English in addition to B's mother tongue. B states that it becomes more and more easy in a way only to know English. Nevertheless, it is important for many people to know a third language. A (asking, "B reflects on the importance of plurilingualism")
57. *Relevance of practice opportunities* (FR616-FR630)	A asks what the fact that French is a completely new language for the learners means for the actions that need to be undertaken in order to learn French. This situation is different from Norwegian, which is the learners' mother tongue, and also from English in Norway. A asks if the fact that B has to work in a different way has any implications for the learning of French. A asks if B is able to read a book in French and if B has ever tried this. A asks if B understands the text of the music B listens to. A wonders what kind of world B envisages in terms of the world in which B is going to grow up in, live in, and work in. A asks what kind of importance languages have in that world. B refers to the fact that B hears a lot of Norwegian and English during childhood and adolescence, while in terms of French, B states that B has been to France a little, but that B never gets to learn French as a child. B states that in this way, French is a completely new language with completely new words that B has hardly ever heard before. B states that it is possible to find French artists or watch French movies and the like, since there are many who watch movies, listen to music, and read books in English. The same is possible with French, but B has to start smoothly. In the beginning, B may understand a word or two, and B then constructs knowledge from there. B states that B once read a children's book. B states that B used to live in France, and that B has some French music. B says that B understands the name in the song. B states that B cannot always hear what they are singing. B acknowledges the necessity to seek practice opportunities in French to a much greater extent. B repeats the lack of practice opportunities for French in Norway compared to English and Norwegian. This means that B has to seek practice opportunities on B's own, for instance by going to France. When learning Norwegian, B reads everything, such as shampoo bottles, milk boxes and signs. B states that this has a good deal to say for the vocabulary. B states that B will never forget

	the word "oeuf" in French because this word was on a shampoo bottle they once had. That word means *egg*, just to mention an example. B does not learn it the same way just through short words. A (prompting, "B reflects on the relevance of practice opportunities")
58. *Linguistic differences* (FR631-FR636)	A states that French differs somewhat from English and Norwegian, as some of the learners may have already noticed. A asks in which way French differs for B compared to the learning of English and Norwegian. A asks what the most important difference is. A confirms pronunciation and states that they have started to work with pronunciation. A also states that they are going to work more on that. A states that the rules are easy to understand. A states that it probably makes it more difficult for people in some fields to learn languages from another linguistic group. B states that pronunciation is the most important difference between French and English/Norwegian. B states that French is supposed to be part of the Romance language family, whereas Norwegian and English are supposed to be Germanic. B states that they are thus two different families. B states that in terms of learning French as a new language, after having learned Norwegian and English quite well, the issue is more about attitudes. B thinks that B gets by in the world B lives in now and survives with Norwegian and English. It makes it more difficult to learn French, knowing that B gets by at the end of the day. Nevertheless, B feels very much like learning it, because it is a new language. There are certain contrasts. A (prompting, "B reflects on the relationship between linguistic differences and language learning issues")
59. *Usefulness of linguistic competence* (FR637-FR643)	A confirms that the task was to define why it is important to learn other languages. B states that it is possible to survive in Norway with almost only Norwegian. B states that if one is to move out of Norway, then one also needs other languages one can use. B states that those languages are important if one wants a job and education, or simply to talk to people, to cope with being in another country, to buy food, and to get hold of things without using Norwegian, which they do not understand. Learning another language provides one with even more opportunities. A (prompting, "B reflects on the usefulness of linguistic competence")
60. *Learning abilities and age* (FR644-FR661)	A states that B is at an age where B might develop more nuanced thoughts and feelings. As a consequence, B might develop a need for a more nuanced language as well. A states that A also thinks about the fact that when one is young, one writes simple sentences. One then needs more subordinate clauses to construct a more complicated language that corresponds with a more nuanced way of thinking. A asks how early one is to start, and wonders if B has talked about that. A emphasises that the question refers to having Norwegian first as a mother tongue and then English, which A assumes that B is interested in learning. A states that if one includes a third language, A asks if B would be able to manage three languages and learn the two languages which are not the mother tongue at the same time. A asks at what time B thinks that it would be wise to start studying French in order to get the most out of it. B states that B must not forget the words, but B thinks that this becomes more automatic after a while. B thinks that B discovers a new word all the time, be it on television, in the newspapers, or in a book. B may suddenly feel that there should be a word for a certain thing. B thinks that it becomes more

	automatic after a while and B thinks that there are not that many words to read in a book. B states that the more B acquires the subject B learns without language, skills the more words B learns, because of the greater number of concepts B needs to use in order to master the subject. B states that it is wise to start learning languages at a young age. B states that B has had English for a long time now and it is quite natural, but French, which is the language they started to study in lower secondary school, is something they have more difficulties with. B guesses that it may be partly due to age, so starting early may be good. B says that what B says not only applies to languages. B learns to skate when B is little, and even if B does not practise it for some years, B still masters it when B tries, just like children. B does not sing during the whole childhood and adolescence, but B still masters it. B states that the things B learned as a child are mastered longer. B confirms that B would be able to manage three languages and learn the two languages which are not the mother tongue at the same time. B has to start with English and then another language has to come later. B states that it is too much to learn two languages when B is that small. B agrees that B needs to be fairly proficient in English before starting to study French in order to avoid mixing the two languages. B states that, to a certain extent already when attending lower secondary school, things were already rather difficult at that point. B suggests that B should have started to learn it late in primary school. However, this presupposes that B had started to learn English at a very early stage. B states that B had started in the fourth grade and the first grade. A (prompting, "B reflects on age related factors in the language learning process")
61. *Potential for development* (FR662-FR673)	A asks what one has to do in order to improve. A refers to the fact that B has mentioned reading newspapers and reading books. A asks if B can be even more active. A confirms that it is a matter of reading and writing, and that in addition to this, it is also a matter of producing language. A asks if B feels it is easy to write, if it is easy to express oneself for instance in the mother tongue Norwegian. B states that B masters the language creatively as well to a certain extent. B states that B can always become a better writer and a better reader. B states that there is always a lot to learn in terms of how B can express oneself the best way in writing. B states that it is not only knowing the language, but also being able to use it as creatively as possible, and develop it. B can always improve. B states that B can use reading and writing in order to improve. B states that it depends completely on what B wants to write. If B has to answer a task in an educational book at home, then it depends completely on the subject. B also states that it is always possible to become much better and to develop. B states that it is really to explore B's own possibilities since B has the language integrated, B has learned it. B states that B has to teach B how to use it in the best possible way. B does this by writing on B's own. B states that it is difficult to get through such a process, but it is simply a question of getting started. B states that it is not impossible in any way. A (asking, "B explores the potential for development")
62. *Fluency* (FR674-FR686)	A asks what B does in order to develop and in order to achieve better fluency and a more precise language. A asks if B has experienced that when B sometimes tries to say something in Norwegian and English, and then in French as well, there may be a communication problem in French. A asks what B can do if B feels that the sentence becomes wrong. A confirms that there are many ways to say things. B states that everybody probably knows the basic words, and that it is a matter of developing, such as learning more words and more advanced sentences in

	order to develop good language and good fluency. B repeats reading newspapers, books, and different kinds of texts. B states that achieving a better fluency in the language is very important. B thinks that this is achieved simply by being conscious when B writes. One way is not to use the same word over and over again and to place full stops and commas in the right places. B states that even if it is not necessarily wrong, it may be that it does not fit that well, or that another comma could also have been suitable. It is possible to develop fluency in the language simply by being conscious about it, just like watching TV in order to learn from it. B states that B experiences that there are simply shortcomings in B's vocabulary. B knows a word in English which simply fits perfectly, but then B does not have a clue in terms of what this word is in Norwegian. B states that if B feels that a sentence becomes awkward, B deletes the whole sentence and starts all over again. Then B manages to do things in a completely different way. B does not have the habit of fixing things. B states that in addition to words, B thinks that B is able to interpret what B reads. A (asking, "B reflects on how to develop one's fluency")
63. *Improvement of linguistic skills* (FR687-FR705)	A asks if B can do anything in order to develop B's language, not only when speaking French, but on a general basis in order to improve. A mentions the general principle of using the language and says that some people use it automatically on a daily basis and some have to do it actively in order to use it. A asks if B talks English on a daily basis. A states that A has the impression that learners coming from lower secondary school think that they write Norwegian flawlessly, assuming that Norwegian is something they can master. At that point, they wonder if there is anything more to learn in Norwegian. A asks B how B can develop the Norwegian language. B states that it helps to read, listen, watch movies, talk to others and practise a lot. B states that B thinks that it is very important to work with texts, etc., in terms of Norwegian and English. B needs to develop and become better from a grammatical point of view. If B works with texts, B sees how the sentences are constructed in a way. B states that it is important to use the language and to develop a language sense. B states that new and advanced words are acquired from the news or the media. B confirms that there is more to learn in Norwegian now. B states that there are some learners who are able to explain all the words in the dictionary, more advanced words. B also states that if B reads a new word in television, and sees a new word, then B may look it up and learn what it means if B wonders about something and wants to expand B's vocabulary. A (asking, "B reflects on methods to improve one's linguistic skills")
64. *Important factors in the language learning process* (FR706-FR724)	A asks what is important in terms of learning languages. A confirms repetition and practice. A asks if there is any difference between Norwegian and English in terms of repetition and practice. A wonders if B has any thoughts about general language learning in terms of why it is important and what the challenge is. A tells B to think in terms of all the languages B knows. B may think in terms of French and English. B states that it is important to practise and repeat. B states that B should not just sit there engaged in rote learning or words and grammar, but also make use of it. B states that there is a difference between learning Norwegian and learning French. B states that it is about repetition and knowing what belongs together, not only drowning in many rules pouring, but also understanding how they are to be used and put into ordinary situations. B states that it is important to make oneself understood and to communicate with the rest of the world.

Appendix 3B: Pragmatic Analysis of the French Case (FR)

	A (asking, "B defines important factors in the language learning process")

Appendix 4A: Backwards induction of the Spanish Case (SP)

Session 16

SP1. *Turn 477.*
A emphasises the importance of metacognitive awareness and the active use of language learning strategies for the development of learner autonomy in the language learning process and its usefulness for other subjects as well.

SP2. *Turn 476.*
B claims that previous attempts to work with language learning strategies and this year's programme have contributed towards B's deeper understanding of relevant learning methods, especially in terms of observation of teacher behaviour in class and autonomy in relation to teacher instructions. B also claims that the programme has helped B to develop a focus on finding efficient, interesting and motivating ways to learn Spanish, including possible opportunities for studying abroad in a Spanish-speaking country.

SP3. *Turn 475.*
A asks whether there are any particular experiences to be drawn from this year's SBI programme.

SP4. *Turn 474.*
B answers that B had become very surprised upon learning that it is possible to learn simply by listening to the spoken language.

SP5. *Turn 473.*
A refers to the fact that learners in some schools have started to learn languages at an early stage, around the fourth and the fifth grade.

SP6. *Turn 472.*
B states that B would have liked to start earlier, since the younger one is, the more receptive one is to the learning of new languages.

SP7. *Turn 471.*
A comments on the adequacy of a combination of declarative and procedural knowledge as an important factor at B's age due to the relevance of a conscious approach to language learning when the learner is not a child anymore.

SP8. *Turn 470.*
B emphasises the importance of declarative knowledge for the learning of the Spanish verbal system, since the Spanish system is very different from its Norwegian counterpart. B also states that a good combination of declarative and procedural knowledge is important for the acquisition of Spanish.

SP9. *Turn 469.*
A rejects B's statement about a possible cognitive confusion and a learning obstacle that could occur as a consequence of B studying another language, such as Arabic. A describes the learning of Arabic as beneficial to the learning of Spanish due to the lexical influence of Arabic on Spanish.

SP10. *Turn 468.*
B asks whether the learning of Arabic could be detrimental to the learning of Spanish.

SP11. *Turn 467.*
A comments on the ratio of learners in each class that actually develop fluent skills in Spanish, specifying that only a few learners in each group learn the language very well.

SP12. *Turn 466.*
B claims that most people who learn foreign languages after the age of ten will never use them because of the complexity of the learning process and

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Appendix 4A: Backwards induction of the Spanish Case (SP)

that only a few people learn a language well enough to be able to use it. B
wonders about the best age for learning languages and asks if there has been
any relevant research in the field.

SP13. *Turn 465.*
A comments on the benefits of studying more than one language at a time. A
mentions comparative issues, for instance how it is easier to explain the use
of the subjunctive in Spanish to learners who have knowledge of German, since
the subjunctive is actively used in German. A refers to the fact that the
subjunctive is hardly used in Norwegian, so this factor makes the
understanding of the subjunctive in Spanish more difficult. A emphasises that
in the process of learning more languages simultaneously, one may discover
and explore similarities and differences in a fruitful manner. However, A
emphasises that it is important to focus upon the language one learns at
school, in this case Spanish.

SP14. *Turn 464.*
B asks whether it would be too much to learn several languages simultaneously,
and also actually have skills in several languages.

SP15. *Turn 463.*
A encourages B to grasp the opportunity to learn more languages.

SP16. *Turn 462.*
B comments on the opportunity to learn two more languages next year.

SP17. *Turn 461.*
A comments on the fact that the more languages one knows, the easier it is
to acquire more linguistic skills in other fields. A states that A cannot
give an authoritative answer to the question regarding how many languages it
is possible to learn simultaneously.

SP18. *Turn 460.*
B asks whether research has provided any answers as to how many languages it
is possible to learn simultaneously.

SP19. *Turn 459.*
A states that B is at the best age for learning languages according to some
experts. A claims that this facility declines after the age of 20.

SP20. *Turn 458.*
B states that a general learning principle is that, as one grows older, the
more difficult it becomes to learn something new.

SP21. *Turn 457.*
A refers to a threshold where learning becomes more difficult. A relates the
important dichotomy of procedural and declarative knowledge to age, and
confirms the importance of having both procedural and declarative knowledge.

SP22. *Turn 456.*
B states that declarative and procedural knowledge are important in order to
have something to which to refer. B also states that B had discussed the use
of learning strategies.

SP23. *Turn 455.*
A confirms B's statement about the importance of having good experiences with
previous language learning.

SP24. *Turn 454.*
B refers to a learner in lower secondary school who experienced reluctance
towards learning Spanish since this learner thought that he did not know

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English well enough. Based on this story, B claims that a sense of mastery in other languages may constitute a motivational factor for learning other languages.

SP25. *Turn 453.*
A confirms that English is a language that the learners get the opportunity to practise more often than Spanish. A also remarks that A notices immediately whether a learner has had the chance to practise his or her Spanish.

SP26. *Turn 452.*
B states the importance of seeking practice opportunities in Spanish. Practice opportunities in Spanish contrast to those in English, which is a language that surrounds the learners at all times.

SP27. *Turn 451.*
A comments on the relevance of using, for instance, French words when speaking Spanish in order to remedy the lack of lexical knowledge.

SP28. *Turn 450.*
B conjectures that all languages are related to each other in some way, and that extensive linguistic knowledge is a good basis for comparison. B claims that such knowledge makes it easier to learn new languages instead of complicating the matter, since comparative issues may be beneficial to language learning processes.

SP29. *Turn 449.*
A emphasises the advantage of knowing other languages, especially English, but also other Romance languages, such as French and Italian.

SP30. *Turn 448.*
B states that knowledge of English may be an advantage for learners of Spanish.

SP31. *Turn 447.*
A acknowledges B's remark about teacher qualifications.

SP32. *Turn 446.*
B refers to an experience from lower secondary school, where B's first teacher was Norwegian. This teacher was apparently not adequately qualified for the job. Thereafter, B had had a teacher from Chile who had to correct what they had learned from the Norwegian teacher, thus creating the impression that they had acquired many mistakes. B also states that the teacher from Chile did not speak good enough Norwegian, so this teacher was not able to explain things properly to B.

SP33. *Turn 445.*
A acknowledges B's remark about the necessity to have more teachers.

SP34. *Turn 444.*
B confirms the necessity to have more teachers.

SP35. *Turn 443.*
A refers to the necessity of organising many Spanish classes because of the great demand at the school.

SP36. *Turn 442.*
B refers to an experience from lower secondary school where a French teacher had to teach Spanish because of the demand at the school. Supposedly, this teacher did not know Spanish well enough, and this lack of knowledge was reflected in the fact that the teacher had to look up many words and that

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Appendix 4A: Backwards induction of the Spanish Case (SP)

she only knew some conjugation patterns, apparently due to the similarities
between Spanish and French.

SP37. *Turn 441.*
A comments on possible differences between language teachers and other kinds
of teachers, who appear to be more qualified in their subjects.

SP38. *Turn 440.*
B confirms A's question about the implication of the word *qualification.*

SP39. *Turn 439.*
A asks about the implication of the word *qualification*, i.e. if qualification
must relate to linguistic criteria.

SP40. *Turn 438.*
B states the importance of having a qualified teacher.

SP41. *Turn 437.*
A states that B has to take a new language in the eighth grade, for instance
Spanish. A asks B what B has to do in order to learn the language of their
choice.

SP42. *Turn 436.*
B confirms A's remark about the importance of creating a plan for setting
goals for the language learning process. B refers to the importance of
learning strategies that have been presented during the sessions, with a
focus on what B has to do in order to learn the language at hand. Items
specified are teachers, books and relevant activities, as well has having a
good structure for the learning process in order to avoid learning irrelevant
and only basic topics.

SP43. *Turn 435.*
A asks for more input.

SP44. *Turn 434.*
B claims that books are an important tool in the learning process.

SP45. *Turn 433.*
A repeats the importance of the skills of reading, writing and talking.

SP46. *Turn 432.*
B comments that an integrative approach to the four basic skills is important.
Talking, listening, reading and writing are all necessary to produce good
language learning.

SP47. *Turn 431.*
A states that the goal for the language learning process is related to
motivational factors. Good motivation grows out of knowledge about the reason
for one's actions, and motivation has been mentioned earlier during this
session.

SP48. *Turn 430.*
B refers to goals being important in order progress as far as possible. B
mentions possible goals, such as travelling to the country where the language
is spoken, or simply having acquaintances with the relevant linguistic
background. Another goal may also be to know how much you want to learn.

SP49. *Turn 429.*
A confirms B's remark about the importance of oral practice.

SP50. *Turn 428.*

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B emphasises the importance of talking the language as much as possible, since talking the language leads to oral skills.

SP51. *Turn 427.*
A defines the importance of safe surroundings.

SP52. *Turn 426.*
B refers to the importance of a good school environment. B claims that a good school environment contributes towards an adequate linguistic adaptation process, since B dares to talk the language in a good environment.

SP53. *Turn 425.*
A acknowledges the importance of the teacher as a source of learning.

SP54. *Turn 424.*
B refers to the usefulness of having a teacher as a source of learning to correct B, or at least to have a competent person to correct mistakes in order to avoid fossilization.

SP55. *Turn 423.*
A attempts to elicit more information from B.

SP56. *Turn 422.*
B expresses that learners of Spanish living in Norway need a teacher as well as the motivation that has been mentioned earlier. B compares this situation with that of a child who is surrounded by the language all the time. Children simply have to learn the language in order to communicate, and moving abroad as an adult would have a similar effect because of the necessity to communicate when living in the country where the language is spoken.

SP57. *Turn 421.*
A confirms B's remark about exposure to the language.

SP58. *Turn 420.*
B mentions the usefulness of being surrounded by the language in order to learn, since this situation creates a necessity to communicate. B states that a strong willingness is important, as well as using whatever sources one has available, for instance reading.

SP59. *Turn 419.*
A asks what it takes to learn a new language if a teacher is not absolutely necessary.

SP60. *Turn 418.*
B confirms the idea expressed by A in terms of the role of the teacher.

SP61. *Turn 417.*
A claims that one does not need a teacher to learn a new language.

SP62. *Turn 416.*
B claims that what one needs is linguistic input from somewhere.

SP63. *Turn 415.*
A acknowledges B's claim about the importance of a teacher.

SP64. *Turn 414.*
B claims that a teacher is not necessarily important, but that B at least needs someone around.

SP65. *Turn 413.*

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Appendix 4A: Backwards induction of the Spanish Case (SP)

A asks for clarification in relation to B's claim about the role of the teacher.

SP66. *Turn 412.*
B claims that a teacher is an enormous advantage, but without being absolutely necessary. B mentions situations where people, for instance children, learn the language by simply being in a place where one's own language is spoken, and that this situation may substitute the need for a teacher. B emphasises that exposure to the language is important.

SP67. *Turn 411.*
A repeats B's claim about the importance of exposure to the language.

SP68. *Turn 410.*
B claims that exposure to the language is important, for instance in the work environment, the school setting, or a private setting.

SP69. *Turn 409.*
A mentions that having a good teacher is a factor that goes beyond the learner as such.

SP70. *Turn 408.*
B claims that a good teacher is necessary to learn the language. The topic mentioned is reasons for learning, with a focus on motivation as a factor that is present in a communicative situation. B confirms motivation as always being important when learning a language.

SP71. *Turn 407.*
A asks if motivation is always important when learning a language.

SP72. *Turn 406.*
B answers that good motivation is a keyword in language learning processes.

SP73. *Turn 405.*
A asks what it takes to learn a language.

Session 15

A states that the wheel may be used in the third grade during the trip abroad.

SP74. *Turn 404.*
B says that assessment had been carried out in the English sessions, and that B uses TV programmes and films with Spanish subtitles.

SP75. *Turn 403.*
A asks B if B had ever assessed B's own performance.

SP76. *Turn 402.*
B answers that it was frustrating in lower secondary school, but that it is more motivating now. At this point, it is easier to see the larger picture, whereas in lower secondary school it was more limited, without much transfer value.

SP77. *Turn 401.*
A tells B to leave it open, and asks if the Wheel is a motivational factor, or rather a frustrating factor.

SP78. *Turn 400.*

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B states that this activity had been used in lower secondary school as well, but that the activity seemed better at this later stage of learning. B asks what to answer if one had never read a comic.

SP79. *Turn 399.*
A introduces the "Wheel" and explains its use. A also relates it to metacognitive awareness in the language learning process and tells B to assess the value of focusing on individual points.

Session 14

SP80. *Turn 398.*
B says that B will always remember this word.

SP81. *Turn 397*.
A answers *ruido*.

SP82. *Turn 396.*
B asks what *noise* is in Spanish.

SP83. *Turn 395.*
A illustrates a situation where a learner is to say spontaneously that there is a lot of noise in the classroom. A tries out the same with another learner as a spontaneous exclamation. A states that A should have said *noise maker* but says *idiot* instead. A makes a summary of the situation, and shows how this is a strategy.

SP84. *Turn 394.*
B says that it is basically not important, since it is possible to use English. B says that it is even more disturbing if one does not say anything at all. B says that if one talks to a native speaker, it would be possible to use body language. At the doctor's, this would not have worked. B says that it is not important to be flawless, but that it may be embarrassing to make mistakes in a classroom setting. B says that B wants to feel that B masters what this person has to say. B wants to be calm. B says that B would not judge others if they said something wrong, but one is stricter with oneself. B says that there is nothing to worry about with Spanish friends.

SP85. *Turn 393.*
A asks how important it is to use the language flawlessly.

SP86. *Turn 392.*
B says that B looks for words B already knows, and then B sees if things fall into place. B says that B listens in the bus, and gets happy every time B understands something. B says that if one listens to somebody, it is important to grasp the gist.

SP87. *Turn 391.*
A asks what B does in order to check if B understands properly.

SP88. *Turn 390.*
B says that B starts the sentence no matter what happens and that B finds another word on B's way. B says that B tries to talk as correctly as possible in school; at home, B cares less. If B speaks English, B tries to talk better than with other kinds of foreigners. B says that it is OK to make mistakes. B says that if B has once not found a word, it is easier the next time. B relates that B had once conjugated the verb silently in Spain, but that this makes it less efficient. B says that B prefers to conjugate the verb first, but when engaged in a conversation, the most important thing is to keep the conversation going. When the Spanish talk to you, you try to talk slower.

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SP89. *Turn 389.*
A emphasises the fact that this is a social learning strategy. A also asks what happens when B talks.

SP90. *Turn 388.*
B says that B looks at the kinds of mistakes that have been made. B says that B looks at the verb conjugations that B knows, which may be a problem and depends on the test. If B discovers a rule, B tries to focus on this rule. B says that B analyses the mistakes from one occasion to the other. B says that if B discovers any system in the mistakes made, B tries to correct this the next time. B says that B inserts another colour in order to discover typical mistakes. B says that when B gets a test back with many mistakes in it, B's heart sinks. B states that at first it is frustrating, but that it then becomes easier when B receives help from A.

SP91. *Turn 387.*
A asks if B tries to understand the nature of the mistakes.

SP92. *Turn 386.*
B answers that B did this when reviewing the last test. B also states that B looks at the mistakes prior to a test, but that B does not correct all of them. B says that B corrects the mistakes, and then places the test in a drawer. B says that B writes it in a Word document. B says that B uses a mixed method. First, B is disappointed, but takes it out later in order to check it in more detail.

SP93. *Turn 385.*
A asks if B uses this method with all the mistakes.

SP94. *Turn 384.*
B says that B corrects it and writes the mistakes in brackets.

SP95. *Turn 383.*
A asks B about the content of the discussion and what actions B takes in order to correct mistakes.

SP96. *Turn 382.*
B works with the document.

SP97. *Turn 381.*
A wonders what options one has when one is not able to communicate anything, and A tells B to work with the questions outlined in the document.

SP98. *Turn 380.*
B refers to an exam about the financial crisis. The problem was that B was not able to say very much. Not being able to say anything, B had wondered what to do. B had used body language instead.

SP99. *Turn 379.*
A tells B to imagine that the test looks like a Christmas tree. A asks B how important it is to be correct.

Session 13

SP100. *Turn 378.*
B says that B watches soap operas and considers getting Spanish TV. B says that it is very difficult to understand when they talk.

SP101. *Turn 377.*

A says that sometimes A chooses to talk to a certain person, thus running the risk of being rejected. A asks if B ever goes to the movies.

SP102. *Turn 376.*
B says that one has to take risks.

SP103. *Turn 375.*
A says that one has to take the initiative.

SP104. *Turn 374.*
B answers that one has to seek opportunities to talk to people in Spain.

SP105. *Turn 373.*
A says that if they are going to plan something, they need an expert on movies. A mentions the importance of seeking situations to practise the language. When they were once in Spain with some learners, A had noticed that some learners spoke Spanish everywhere, while others did not get the opportunity to speak. A asks what B has to do.

SP106. *Turn 372.*
B says that the movie needs to be edited.

SP107. *Turn 371.*
A confirms this as a page of synonyms. A asks if they understood the importance of good planning.

SP108. *Turn 370.*
B says that there is a web page where words with the same meaning are shown.

SP109. *Turn 369.*
A asks if there are other things B needs.

SP110. *Turn 368.*
B says that B uses Tritrans as a tool for translating.

SP111. *Turn 367.*
A replies that it is a social strategy.

SP112. *Turn 366.*
B says that it is perhaps declarative.

SP113. *Turn 365.*
A asks what kind of strategy this is.

SP114. *Turn 364.*
B says that it is possible to ask a teacher.

SP115. *Turn 363.*
A asks how it is possible to find this out.

SP116. *Turn 362.*
B says that the Norwegian word *rot* is a tricky word, since it means both *raíz* (root) and *desordenado* (messy) in Spanish.

SP117. *Turn 361.*
A asks if they have any aids. A comments that the way people behave is also something that has to be taken into consideration. A says that it is important to have knowledge about body language and to have a dictionary. A asks if B could see any dangers in the use of a dictionary.

SP118. *Turn 360.*

Appendix 4A: Backwards induction of the Spanish Case (SP)

B says that some people used *Navidad*.

SP119. *Turn 359.*
A says that good planning is important and that it is possible to use other topics they have had, for instance *Celos y amor*.

SP120. *Turn 358.*
B comments that it can be a detective story with other topics mixed into it from other projects.

SP121. *Turn 357.*
A defines these words as words which bind sentences together.

SP122. *Turn 356.*
B says that one needs short and useful words that keep the conversation going.

SP123. *Turn 355.*
A says that descriptions are important, since one has to utter sentences such as: *Is he frightening? Is he good looking?* etc.

SP124. *Turn 354.*
B remarks that one has to describe people in the environment.

SP125. *Turn 353.*
A says that it is important to know the difference between SER and ESTAR.

SP126. *Turn 352.*
B answers SER and ESTAR.

SP127. *Turn 351.*
A asks what B has to know in order to be able to make this movie in Spanish. A wonders about the words B needs to know when the topic is stealing jackets, etc.

SP128. *Turn 350.*
B answers that it is a detective story with thefts involved. B says that the question is how good the movie is going to be.

SP129. *Turn 349.*
A points to the importance of knowing about the topic in advance, and that this knowledge would determine the way one should approach the task. A asks what kind of topic the movie was about.

SP130. *Turn 348.*
B answers that this seemed unlikely.

SP131. *Turn 347.*
A states that A wants to use the project which had already been used in class. A introduces the topic to B by saying that B had already talked about the outline of the planning process of the ongoing project, and that B today one is going to discuss some micro aspects of the project. A says that the group of French or German learners could easily have started to work on the project without any prior experience in Spanish.

Session 12[1]

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[1] Towards the end of the session, the Head of Department wanted to make some closing remarks. He said that the purpose of this instruction programme is to make the learners aware of how they learn best. He asked B if they use any of this material in an active way, and how B related to learning previously and now. B said that B was not

Appendix 4A: Backwards induction of the Spanish Case (SP)

A once again defines the relationship between goal and purpose. A uses an episode from a trip A once had in Spain in order to show the usefulness of working with a movie.

SP132. *Turn 346.*
B says that they read the book, and now they are writing the manuscript. B says that they had watched the film, and that they had done this twice. B says that this was on an individual basis in terms of the roles in the play. B says that they had started with a reading activity, and thereafter more reading and speech. Others in the group had listened. B says that the social aspect is strong. One learns to talk without restraint, and this makes it feel safer to say it aloud. B comments that work was carried out on an individual basis, but that everybody had been touching upon the elements written on the blackboard. B says that they had experienced variation, something that makes the whole process more interesting. They had reviewed all the elements.

SP133. *Turn 345.*
A says that one purpose may be to become better listeners.

SP134. *Turn 344.*
B says that they had talked. B says that they had become better listeners.

SP135. *Turn 343.*
A says that it was organised on an individual basis, and A wonders if B has noticed anything in terms of what was written on the blackboard.

SP136. *Turn 342.*
B discusses and states that B decides how active B wants to be.

SP137. *Turn 341.*
A answers that knowledge, in this sense, may be understood as procedural and declarative knowledge. The social goal would be to have a good time. A says that they had almost finished the film, and A asks if they had thought about the purpose. A asks if they understand the concept "purpose", and A relates this to having a goal. A tells B to work in small groups of two-three learners.

SP138. *Turn 340.*
B says that knowledge implies being able to conjugate verbs.

SP139. *Turn 339.*
A introduces the topic in terms of the importance of being aware of the purpose of one's actions. A says that B was going to use the film as an example, and A says that B had got used to asking questions about why, when doing something. A says that B has had a purpose with the film, which is based on the four areas within language learning. A writes the four areas on the blackboard: Speech, listening, reading and writing. A asks them to think about the project. A writes *purpose*, *goals*, *knowledge*, *skills* and *social aspects*.

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aware of this before, but B was not sure if it has helped in terms of learning behaviour being conscious or subconscious. This person said that it might have helped, but that it is difficult to say, especially if the process is subconscious. The Head of Department asked if this instruction programme might have had any transferable value to other subjects. B said that on one occasion, B had felt that a learning process in one subject had been too declarative, and the Head of Department replied that the teacher in that subject had been challenged in that respect. B said that "rote learning" had assumed a new meaning. The Head of Department concluded by saying that B had become more active in the learning process.

Appendix 4A: Backwards induction of the Spanish Case (SP)

Session 11

<u>**SP140.** *Turn 338.*</u>
B says that the goal in upper secondary school is not to get through the subject as it is in lower secondary school. B says that in the film project, one gets to learn expressions that can be used. In the film, they got to use the language in other contexts. In Spanish lessons, making a movie is not irrelevant, as it would have been, for example, in a Norwegian lesson.

<u>**SP141.** *Turn 337.*</u>
A emphasises the fact that the determination of the purpose is important.

<u>**SP142.** *Turn 336.*</u>
B says that B is not aware every time B listens, but that listening in itself is fun. B says that B is often not aware of this in the particular situation, but afterwards this awareness may grow. B says that B had once understood parts of a conversation. B says that the language is the most important part, and there are other challenges.

<u>**SP143.** *Turn 335.*</u>
A says that this is not necessarily so, because there are reading impediments which may come in the way. A asks if B is aware of the goals B has when they use the language in any way.

<u>**SP144.** *Turn 334.*</u>
B says that if one is able to write and talk, the rest will come naturally.

<u>**SP145.** *Turn 333.*</u>
A summarises the importance of clear goals; if one wants to achieve something, knowing why this is being done is an important step in the process of learning.

<u>**SP146.** *Turn 332.*</u>
B says that B wants to know that one gets better. B says that if one is able to talk, it is easier to write.

<u>**SP147.** *Turn 331.*</u>
A asks what B thinks about the written exam.

<u>**SP148.** *Turn 330.*</u>
B says that being able to get by in the foreign country is an important goal. Things should come naturally. B says that this is called "fluent".
In terms of writing, B says that B wants to study abroad. B says that B will be able to write tests. B also says that B does not care about writing, since B does not want to be an author in Spain.

<u>**SP149.** *Turn 329.*</u>
A asks if they had any other comments.

<u>**SP150.** *Turn 328.*</u>
B says that being able to read Ikea brochures in Spanish is a goal.
In terms of speech, B says that being able to get by in a Spanish-speaking country is a goal. B says that B wants to adjust this to the kind of activity in which B is engaged in terms of work or holiday. B says that being able to teach B's children is important.

<u>**SP151.** *Turn 327.*</u>
A says that A once drove in the wrong direction in a roundabout. A was stopped by the police, and did not find the road. Instead of starting to protest, A said that A had not understood the signs and that A therefore had got lost. The fine was reduced by 50% and the policeman helped A find the way.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP152. *Turn 326.*
B replies that understanding most of a conversation with a native speaker is
the goal. B also says that a mixture is important in terms of talking to a
native speaker and getting by as a tourist. B says that understanding what
is being said on the radio is important. B says that coping with a situation
for which one is not prepared is important in terms of being prepared for
unforeseen situations. B says that using Spanish in a professional setting
is important. B says that this person wants to study abroad and wants to be
able to get by as well as possible. In terms of reading skills, B says that
reading newspapers and magazines is important. B says that being able to read
Spanish literature is important, since elements may get lost in translations.
Therefore, the original literature is important. B says that it is important
to be able to read signs in the country. B says that if you drive the wrong
way on a road, it may have consequences.

SP153. *Turn 325.*
A refers to a movie with some learners taken on a trip to Spain. A explains
a scene where the learners talked and talked, and they listened to what others
were saying. Apparently, they clearly understood what was going on. A
distributes copies of today's tasks. A tells B to mark the relevant choices.
A explains that finding the right focus for learning is important. If one
knows the purpose of what one is doing, reaching the goal is easier. A then
asks what B wants to achieve.

SP154. *Turn 324.*
B responds that listening is important.

SP155. *Turn 323.*
A answers that understanding is a skill that applies to all four basic
language learning skills. A summarises these four skills as listening,
reading, speech production, and writing. A asks if one of them is more
important than the others.

SP156. *Turn 322.*
B wonders which skills one acquires. B answers that understanding and
listening are important skills.

SP157. *Turn 321.*
A asks whether one knows what one is doing. A wonders if B studies Spanish
in order to get good grades and why B learns.

Session 10

SP158. *Turn 320.*
A finishes the session by giving B the task of defining the cast, and A says
that A wants a definite list in place soon.

SP159. *Turn 319.*
B says that B should finish an outline for the manuscript, and B also says
that B should define the cast.

SP160. *Turn 318.*
A says that everything should be ready before they start shooting.

SP161. *Turn 317.*
B states that B must create the past tenses, since the text is in the present
tense. The text writer must put in everything. B states that B could think

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Appendix 4A: Backwards induction of the Spanish Case (SP)

about the fact that this is declarative and that the challenge is how to make it procedural.

SP162. *Turn 316.*
A says that the director gathers all the threads and that they need a text writer. They should also find a director. A informs B about the fact that the linguistic level in the text has been adapted.

SP163. *Turn 315.*
B asks how one gets the idea across.

SP164. *Turn 314.*
A replies that A was not going to decide this, but the danger could be that B just starts without getting on with the project. A asks how B would organise the whole thing. A says that there should be a linguistic idea behind it.

SP165. *Turn 313.*
B comes up with a director.

SP166. *Turn 312.*
A asks if anyone was good at keeping order and system.

SP167. *Turn 311.*
B suggests the Winter Holiday, but they did not agree on a particular date yet because of other events going on at the school. B suggests that they could shoot in the centre, with many people taking part as volunteers. B discusses the cast once again, and B proposes the director of the movie.

SP168. *Turn 310.*
A replies that this could be too long.

SP169. *Turn 309.*
B suggests the Easter Holiday.

SP170. *Turn 308.*
A shows B a collection of phrases and expressions they had been working on called *Situaciones auténticas* (Authentic situations). The text is written in the present tense, so they should think of the verbal tenses. If a story-teller calls to explain what has happened, the text should be changed into the past tense. A wants to know if they had discussed at any time a framework for the project. A asks if they felt that they were efficient and what they envisaged.

SP171. *Turn 307.*
B says that the main character could call the boss and explain what had happened. B suggests that they could have a voice telling the story.

SP172. *Turn 306.*
A asks if they had been thinking about grammar in any way. A comments that B had been working with the present tense and some past tenses.

SP173. *Turn 305.*
B also says that they could sing a song they have had. B continues coming up with more ideas for scenes. B says that B could select texts and songs they had been working with and think about solutions for how these could be integrated.

SP174. *Turn 304.*
A suggests that the topics they had been working on may also be used procedurally. A mentions the texts "Celos y amor" and "Comida" to come up with specific ideas.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP175. *Turn 303.*
B comments that B has worked with words and expressions related to food, and that this could possibly be used in the movie.

SP176. *Turn 302.*
A suggests a scene in a restaurant, and asks if B could come up with any specific plans for linguistic practice in order to be able to create this scene.

SP177. *Turn 301.*
B comments that B, among other things, had also discussed using songs in the movie.

SP178. *Turn 300.*
A summarises this as the fact that B wanted to use music procedurally, since B has learned songs B could integrate into the movie. A then continues the brain storming process based on the suggestion of using music in the movie.

SP179. *Turn 299.*
B suggests that they could make a musical out of it.

SP180. *Turn 298.*
A points out that the dichotomy between declarative and procedural knowledge could also be used to understand the deployment of this strategy. A asks B how B would apply this dichotomy to the work they were engaged in, who is/are the receiver(s) the play is meant for, and what topics they had been discussing.

SP181. *Turn 297.*
B works in small groups, discussing the above-mentioned issues.

SP182. *Turn 296.*
A tells B to sit in small groups and plan the work on the movie. B should focus on how they would go about the working process, and identify the roles. B should also discuss the cast. A emphasises the fact that B should also focus on the linguistic part.

SP183. *Turn 295.*
B comments that B had not been present when they defined the cast.

SP184. *Turn 294.*
A relates that A did not want to guide them too much in the beginning; A wanted B to start swimming in deep waters and then see if B was able to get organised independently. A informs B that they were going to work with *la película* (the movie), and that this work would fit into today's session. A tells B that planning is important when engaging in a language learning activity, and A confirms this by explaining that careful planning prior to any language learning activity could be beneficial for the learning process, thus explaining in practical terms what this session's learning strategy is all about.

SP185. *Turn 293.*
B continues creating a manuscript in Spanish based on the film, and the whole group are to participate in the same movie.

SP186. *Turn 292.*
A wants to use a film project which is about to start. The film project is based on a novel about a police dog that catches thieves. It is a book for children, but because of the content, the language is suitable for the target group.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

Session 9

A says that B is at least aware of this fact. A suggests that there are many ways to organise language learning. It is, for instance, possible to find web sites with Spanish exercises.

SP187. *Turn 291.*
B says that we have learned about the difference between different learning methods, and B says that they had had a test in another subject before Christmas. B comments that this test had been based on a declarative learning process, and that this should have been different. B says that it is difficult to say whether conjugations have been learned, but that B can say that *I am in love with*.

SP188. *Turn 290.*
A comments that this is difficult to measure.

SP189. *Turn 289.*
B comments that the learning outcome had not been that good so far, but that the programme had led to a greater awareness.

SP190. *Turn 288.*
A asks what they thought about the instruction programme so far, specifying that the curriculum states that B has to be able to describe B's own progress.

SP191. *Turn 287.*
B says that one could use English and find similarities with Spanish. B says that it is difficult to translate *por favor*. B wonders if the Spanish think that we are not that polite.

SP192. *Turn 286.*
A asks if B is aware of a relationship between Norwegian and Spanish. When teaching on shared talk, one might discover these things. A uses the Norwegian words *koselig*[2] and *kose seg*[3] as examples.

SP193. *Turn 285.*
B comments that eating breakfast is important, and B says that this is another effective learning strategy. B says that listening to Spanish music and songs is important.

SP194. *Turn 284.*
A says that the same applies to the language learning part of one's life. A says that it is important to define goals and then reach them.

SP195. *Turn 283.*
B says that studying just before going to bed is a good method to let the long term memory work and digest the matter. B says that it is important to use the practical part of one's life and talk to fellow learners. B says that teaching others is also a good way of learning. B says that B once taught a Spanish person Norwegian on the Internet on shared-talk.com, a pedagogical learning site. B says that one has to set clear objectives and follow these objectives.

SP196. *Turn 282.*
A asks what kind of learning strategy this is. After some suggestions along the lines of declarative and cognitive issues, A asks if B would agree that

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[2] Cosy.

[3] To have a nice time.

Appendix 4A: Backwards induction of the Spanish Case (SP)

going to bed early could be considered as an effective learning strategy. A topicalises this suggestion from the point of view of feeling bright when trying to learn something.

SP197. *Turn 281.*
B answers that going to bed early is important.

SP198. *Turn 280.*
A asks what the individual learner may do in order to reach the goals stated in the curriculum.

SP199. *Turn 279.*
B reads aloud what this session's task implies.

SP200. *Turn 278.*
A asks where the terrible part was and where it is stated that we have to conjugate verbs. A says that this is a description of what language learning is all about.

SP201. *Turn 277.*
B states that the topic is insight into one's own language learning. B reads out aloud what was stated under language learning.

SP202. *Turn 276.*
A comments that since B had such a spontaneous reaction, it could be that B thought that the curriculum as such has planned for a good deal of grammar. A distributes the overview of the curriculum outlined in the planning sheet for this session. There was a description of all the learning goals at the back. A tells B that they were going to focus on the language learning part of the curriculum, but that it is interesting to have a look at the description of the other main areas as well in order to understand the setting of metacognition in this picture. A then briefly explains the content of the three areas and reads the text aloud.

SP203. *Turn 275.*
B cries out: "Oh -grammar".

SP204. *Turn 274.*
A announces that B was going to have a look at the curriculum, where there was a copy of the rest of the main areas from the curriculum (communication/language, culture and society).

Session 8

To end the session, A presents the dichotomy between declarative and procedural knowledge related to this theory: declarative knowledge is to be able to state that delayed speech, in order to listen to others, is a strategy that can be used to learn a language, and procedural knowledge is actually being able to this in a particular setting.

SP205. *Turn 273.*
B says that one has to listen to others.

SP206. *Turn 272.*
A says that one has to be an active listener.

SP207. *Turn 271.*
B relates an example from a previous learning activity when they had had to listen to numbers. B states that B had also experienced a situation where they had to listen to a weather forecast in Spanish and then write down what

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they remembered from the weather forecast. B wonders for how long one has to wait in order to start speaking the foreign language. B relates that B had come to Norway as a four-year-old boy, and after one and a half years, B had started to speak Norwegian. B comments that this may be a good method when one is older.

SP208. *Turn 270.*
A also mentions the opposite strategy, i.e. rattling on without being afraid of making mistakes. A tells a story about a Spanish learner who took the plane to Spain and talked to everyone he met on his way.

SP209. *Turn 269.*
B comments that one should at least be aware of the strategy when using it.

SP210. *Turn 268.*
A asks when one should move from listening to speaking.

SP211. *Turn 267.*
B says that sometimes one is afraid of talking. B says that it is useful to listen to conversations when in Spain.

SP212. *Turn 266.*
A responds that it is dubious whether this may be considered a strategy, since it is not possible to talk to the movie. The conclusion was nevertheless that this is one way of learning.

SP213. *Turn 265.*
B says that this is a strategy B uses when watching American movies.

SP214. *Turn 264.*
A summarises these strategies as learning strategies according to the topic of the sessions.

SP215. *Turn 263.*
B says that this strategy works best abroad. When one has a limited vocabulary, it may be used to listen to what others are saying. B says that B has relatives in Greece, and when B is there, B listens in order to learn from what is being said. B states that B has a background in Kurdish Iraq. When there, B tends to listen to others in order to learn Kurdish.

SP216. *Turn 262.*
A comments that this is normally the procedure when working in groups, and A wonders whether this method had been used as a conscious strategy to learn from the listening.

SP217. *Turn 261.*
B discusses in small groups. After the group discussion, B comments on the fact that delayed speech had been used in a situation in which they were working in groups with a language-learning task.

SP218. *Turn 260.*
A responds by using a couple of phrases A had learned in Egypt while on holiday in that country, and says that A had learned these phrases by listening to what others had been saying.
A tells B what to do in the group work by referring to the questions developed for this session.

SP219. *Turn 259.*
B comments that this may work best when one is a little baby.

SP220. *Turn 258.*

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Appendix 4A: Backwards induction of the Spanish Case (SP)

A presents the theoretical explanation of delayed speech. A comments that this strategy should not develop into a method of avoiding speaking by using the strategy as a pretext for not speaking. A jokes that the strategy should not be used to avoid speaking in class, for instance by saying that *I am using this strategy so I will not speak out in class*.

Session 7

A says that in this way, topics can be developed and built upon. A finishes the session with a comment on metacognition and repeats its relevance for this session.

SP221. *Turn 257.*
B says that this means a connection with previously studied topics.

SP222. *Turn 256.*
A comments on the fact that this focus consists of a thematic collection of key words.

SP223. *Turn 255.*
B answers that B remembers better than when doing it another way. B also comments on how B had experienced the learning situation so far, and says that by focusing on a task, one has a fall-back option.

SP224. *Turn 254.*
A asks if this improves B's focus.

SP225. *Turn 253.*
B answers that one becomes more aware of the words, and one thinks through the words more consciously.

SP226. *Turn 252.*
A emphasises the metacognitive aspect of this focus. A also asks B how B perceived the situation.

SP227. *Turn 251.*
B works individually with the instruction not to write long sentences, but simply to identify some words and to remember this particular focus. B talks about the chosen words.

SP228. *Turn 250.*
A summarises the main activities of the autumn term according to the outline of the session. A focuses on the difference between declarative and procedural knowledge and on the factors that come into play in this respect. A asks B what cognitive, affective, metacognitive and social learning strategies imply, and uses some examples from last session's work with these principles. As a part of session 6 in the Spanish group, B had prepared work with a text on *Mi super estrella* or *Amor y celos*. A instructs B to use this text as the basis for an oral presentation of the chosen topic. The exercise chosen for this session was therefore to decide the focus of the upcoming presentation and then select words from the text that would be relevant for this presentation.

Session 6

A walks around guiding B, and provides B with some further explanation. A instructs B to work on the text and think about the principles they had focused upon during the session. A tells B that they would sum up next time.

SP229. *Turn 249.*

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B works for approx. 25 minutes, discussing these issues.

SP230. *Turn 248.*
A uses the task Super Estrella. A instructs B to write about a person that B considers to be an *estrella*. The material contains a page of key vocabulary with words in Norwegian and Spanish. It also contains a page with important words and expressions in Spanish and with explanations in Spanish. On the subsequent pages, there are texts about famous Spanish- speaking artists (Shakira, Penélope Cruz). These texts have been written by previous learners. A instructs B to use them as a basis for B's own work. A writes on the blackboard: 1) Why?/Por qué?, 2) Which vocabulary do you have to build up?, and 3) What can you associate this with? (Shakira, previously studied material, hobbies.) A tells B to reflect over these questions.

Session 5

SP231. *Turn 247.*
A asks if they thought it would be beneficial with these kinds of situations. A says that these principles will be integrated into the programme all day during the trip, also in the evenings. They have to be together in pairs. A wants to remember these situations for later use, and wants to keep them in a drawer. A collects the sheets.

SP232. *Turn 246.*
B says that after the trip to Málaga, they will discover what kinds of words they do not know, and when they get back, they will know what to focus upon. B mentions that such insight will make learning in school more adapted to what they can say and what they cannot say.

SP233. *Turn 245.*
A confirms that when B does not know the word for the size, B may say *alto*, and then people understand. A suggests that they might reply with *grande*.

SP234. *Turn 244.*
B says that even if you do not know a particular word, it is possible to talk around it, so that people understand what one thinks. If B wants a sweater, B can say *alto*.

SP235. *Turn 243.*
A says that B thus takes into consideration that there is a teacher taking care of the planning part. A asks if anyone has planned something very difficult, like going to the parachute club. A says that when they are there, all of a sudden they do not know the word for "size". One realizes that one has forgotten to look it up. A asks what B will do to work through that part when B gets home. A says that B will most probably get into those kinds of situations, i.e. thinking that B should have done this and that.

SP236. *Turn 242.*
B says that they could use some of the Spanish lesson to plan this trip. B says that they can plan to go to shops, or plan an evening in a restaurant. B says that some people may go to the beach, others to different stores, and that the teacher may have an overview.

SP237. *Turn 241.*
A suggests that B goes into a boring clothes store, and then B has to try more stores. One cannot just buy a stupid blue cap. Perhaps one wants a green cap that fits better. A asks if B has thought of other strategies in order to get things done.

SP238. *Turn 240.*

Appendix 4A: Backwards induction of the Spanish Case (SP)

B says that when buying clothes, it is possible to go to several stores to try clothes.

SP239. *Turn 239.*
A says that everything is possible, but that it has to be planned. This planning is part of the metacognitive thinking process. B decides what to do, and thinks that perhaps the teacher is needed as a bodyguard.

SP240. *Turn 238.*
B says that they could bring along the teacher just in case.

SP241. *Turn 237.*
A says that this is a strategy that A has seen someone use. One practises something, and then one uses it over and over again with several people just to learn it. One is not sure if one is to talk about the weather in Norway, *Llueve mucho en Noruega?* One has said it once, and thereafter one says it several times. A says that A has used that technique in Spain. A states that A has told the learners to ask about the way 20 times, even if they know the way. A tells B to remember this strategy.

SP242. *Turn 236.*
B says that B imagines improvisation of some kind. B would also get the help of a friend to get the necessary support if B gets into difficult situations.

SP243. *Turn 235.*
A says that this learner would improvise, but at the same time have a topic to use as well, such as going to the disco. A says that the conversation could develop in different directions. One can use body language and onomatopoeia. A says that this is also a strategy. It is possible to plan the use of body language, and A tells B that A knows B as being expressive. This means that B has a strategy that most likely fits B well. A says that this becomes really interesting. A tells B to explain what B will do in order to do what B envisages. A tells B to plan exactly what to do when going to a disco, and A asks what B does in order to carry out the activity. A asks what B will do if it keeps raining for a week. In such an event, B does not get the chance to go to the beach to play volleyball, in which case one ends up there alone.

SP244. *Turn 234.*
B confirms this approach, or at least to have someone to ask if necessary. B says that B does not know exactly what B would have done, but that B would think of sentences to get used to.

SP245. *Turn 233.*
A asks if B would talk Spanish to the other learners as well.

SP246. *Turn 232.*
B says that B would have sought the help of a fellow learner to make it less frightening, to have a backup. If it stops, it makes it less frightening.

SP247. *Turn 231.*
A asks if B would prepare for normal daily situations and small talk. A suggests that small talk can be B's goal. There might not be difficult topics, such as bullfighting, *violencia*[4], *la corrida*[5]. It may just be small talk.

SP248. *Turn 230.*
B says that B would have prepared for small talk in the disco because one cannot have a note in one's pocket and use it as the conversation develops.

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[4] Violence.
[5] Bullfighting.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP249. *Turn 229.*
A emphasises the possibility of saying things spontaneously based on the basic vocabulary one possesses.

SP250. *Turn 228.*
B says yes. B also says that, as we have commented upon, all of a sudden the person working in the shop will ask *Hola, ¿de dónde eres?* The answer will be *Noruega*[6]. It would then be useful to know other things as well in order to have a backup. B says that B would have learned some relevant words and expressions. B would also have tried to improvise as well as possible.

SP251. *Turn 227.*
A asks if B would prepare certain words and expressions that have to do with clothes.

SP252. *Turn 226.*
B says that many of them want to learn Norwegian. B says that if B wants to go to a clothes store, B may use what B knows about that topic. B may build upon that to find new words and expressions.

SP253. *Turn 225.*
A says that this could be of mutual help, B teaches them Norwegian or English, which they are sometimes not good at. They will often learn English.

SP254. *Turn 224.*
B says that B could talk to waiters in restaurants, waiters who often know some basic Norwegian. B guesses they are interested in learning Norwegian, and B can practise Spanish with them in order to learn more.

SP255. *Turn 223.*
A says that if B meets a boy, B can say that B wants to discuss relevant topics, and then B has several topics as a backup.

SP256. *Turn 222.*
B says that B would have a normal introduction, such as *hola, qué pasa*. B had thought about the fact that B has to think about what kind of topics one can talk about. B says that one needs a backup in case one does not know what to say. B thinks that a Spanish boy could be interested in films or soccer, or something like that. B suggests that it is then possible to look for those kinds of words and expressions on the Internet beforehand. One can also practise with one's friends.

SP257. *Turn 221.*
A says that the difference now is that B does it strategically. A says that it may also happen in Norway that people go to a disco without saying anything. But now B has to talk, *Tú tienes que hablar en España*[7]. A says that it is not enough just to go in there and dance.

SP258. *Turn 220.*
B says that if B is in a disco, B would talk to people anyway.

SP259. *Turn 219.*
A says that as long as people do not know this, it does not matter. A says that if people know that this is practice, it might not be that nice for them. A suggests that one should keep silent about this.

SP260. *Turn 218.*

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[6] Hi, where are you from? Norway.
[7] You must talk in Spain.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B says that even if these situations are constructed and planned beforehand, it does not mean that they are false. If B is interested in talking to people, the conversation will develop as B goes along according to whom one is talking to. B states that it does not matter that B has decided beforehand what B wants to say. B says that the people B is talking to do not understand that the conversation has been planned.

SP261. *Turn 217.*
A says that this could be considered rude.

SP262. *Turn 216.*
B says that B would find out how to get away afterwards, in order to end the conversation in a polite way. B says that B can simply go through the whole situation and then say that it is *broma*[8] and leave the place.

SP263. *Turn 215.*
A asks if B would have everything in B's head and not on a note in the pocket.

SP264. *Turn 214.*
B says that B would have a backup for things B could say in case of silence, a sentence or so.

SP265. *Turn 213.*
A asks if B would plan topics for a plan B.

SP266. *Turn 212.*
B says that B would not have learned them word by word, but B would have tried to grasp the most important aspects.

SP267. *Turn 211.*
A asks if B would learn these *de memoria*[9].

SP268. *Turn 210.*
B says that B should find words and expressions on the computer and listen to conversations.

SP269. *Turn 209.*
A tells B to be aware of the fact that B may choose between funny comments like that, or real life expressions. A says that B is now into metacognition at a very high level. B has to think: What do I want to achieve with all of this? A says that it is a bit far-fetched to plan to say to someone: Will you sleep with me? A says that B is touching upon a very interesting topic, because we are dealing with other humans. A says that other people will be used in this setting, so we have to treat them with respect.

SP270. *Turn 208.*
B states that B would try to learn them beforehand, for instance how to contact boys. B says: "Would you like to sleep with me?"

SP271. *Turn 207.*
A asks if B had any particular strategy for the moment when B goes in there, how B would plan in terms of expressions and words.

SP272. *Turn 206.*
B says that B would go to the disco and stand outside talking.

SP273. *Turn 205.*
A says that of course B may use what B can.

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[8] Joke.
[9] By heart.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP274. *Turn 204.*
B says that this kind of activity is rather easy, since it is about B.

SP275. *Turn 203.*
A says that B would carry out a role play to practise this. A says that B
had worked with words based on topics B could continue with.

SP276. *Turn 202.*
B suggests that one learner can pretend to be the shop-keeper and the other
learner a customer. B also says that B could simply talk together.

SP277. *Turn 201.*
A says that A knew about good fashion stores in Málaga. A asks what B would
do to plan these activities. A asks what the necessary next step is. A
suggests that it is important to think through words and expressions as well
as the sources, in order to find the relevant words and expressions.

SP278. *Turn 200.*
B says *en la discoteca[10], en la playa[11], jugar al voleybol en la playa[12], en
un bar o una cafetería[13], en una tienda[14], en una tienda de moda[15]*. B states
that B also wants to go to the ice bar afterwards to relax.

SP279. *Turn 199.*
A reminds B of the fact that B has to be 18 to get into the disco, and that
the rest have to join A at the bazaar.

SP280. *Turn 198.*
B suggests talking to people of the same age on the beach or at the swimming
pool. B says *discotecta también[16]*.

SP281. *Turn 197.*
A repeats *en una parada de autobuses[17]*.

SP282. *Turn 196.*
B says a bus stop.

SP283. *Turn 195.*
A repeats *en la playa[18]*.

SP284. *Turn 194.*
B says on the beach.

SP285. *Turn 193.*
A says that this is going to be especially interesting since B knows that B
will do it later on. A says that B should first present the different kinds
of situations B had come up with. These situations should be as specific as
possible.

SP286. *Turn 192.*

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[10] In the disco.
[11] On the beach.
[12] Play volleyball on the beach.
[13] In a bar or a cafe.
[14] In a shop.
[15] In a fashion store.
[16] Disco too.
[17] At a bus stop.
[18] On the beach.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B discusses.

SP287. *Turn 191.*
A corrects this comment in terms of metacognition being learning about how
to learn. Metacognition is about providing B with a strategy for learning in
order to make learning easier. One thing is to say that we are going to learn
a language, and then we start learning it. Another thing is to be aware of
the techniques B has at B's disposal. This may be an important tool for
learning. *Meta* means beyond. A wonders if B has ever heard about metaphysics.
Physics is the specific science where one learns about gravity forces, etc.
However, metaphysics is beyond that, something supernatural. A explains
further that cognition is about thinking, and that metacognition is thinking
about thinking. A asks how we are to plan this process. A informs B about
the fact that during this session, B is going to work with a task, and
afterwards a classroom discussion will take place based on this task. A says
that B is going to Spain, and A tells B to skim through the definition written
on the sheet. A says that the plan is to go to Málaga. B is to think about a
situation where B needs to use the language for learning. During that stay
abroad, B is going to practise what B can and see if B can learn even more.
B chooses the situation. B might choose to go into a shop, for instance a
clothes store, or do something else. A instructs B to think along the
following lines: What shall I do in this situation? Which words do I need to
learn in order to get by in this clothes store? Thirdly, B has to think: How
shall I carry out this procedure? Useful questions could be: How can I make
sure that I get to use the words in the store? It is not enough to know the
words - what shall I do in the store in order to use these words? How do I
remember them? Have I rehearsed beforehand? Do I know them? Do I bring along
a little note? Finally, B is to define what B has learned from the whole
situation. Perhaps B has heard words that have been used several times, but
that B did not understand properly. A says that this is what they are going
to do when they go to Spain in the third grade. Then B will work with such
practical situations. This means that this session's activity will lead up
to an activity to be carried out in two years' time. B can remember this
situation in order to do exactly the same in Spain. A says that B had proposed
that B should keep this information with a name on it in a drawer for two
years. In two years, B may take it out and ask if B remembers this session's
activity.

SP288. *Turn 190.*
B answers that metacognition means being able to use what one learns and not
simply learn it by heart.

SP289. *Turn 189.*
A says that this session is the last one on theory. As from the next session,
the focus will be on 11 specific practical issues. A informs B that during
this session, the focus is on a journey abroad. A says that they would see
how much B can use of cognition, or metacognition. A asks if B remembers what
cognition means.

Session 4

A says that the next session is about metacognitive strategies.

SP290. *Turn 188.*
B says that when B feels tired doing homework, B starts to play Tetris, and
B then starts all over again with another exercise. B has thus forgotten that
B is stressed. B has thought about something else, and then it is not that
hard to start all over again. B says that when B feels bored, B decides to
eat sweets, watch TV, or go out, as a method of motivation.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP291. *Turn 187.*
A confirms this as a reward.

SP292. *Turn 186.*
B says eat chocolate. B says that during exams, B has sweets sometimes. When B has finished a paragraph, B eats sweets as a reward.

SP293. *Turn 185.*
A asks about positive things, how to reward oneself, etc. A asks if B at any point had done something to reward B upon completion of something B is pleased with.

SP294. *Turn 184.*
B says that even if B thinks it is embarrassing to talk and that B might make a fool of B, B knows that B will not see these people again. They will probably forget B, so B can simply rattle on, make mistakes, and learn from them.

SP295. *Turn 183.*
A says that these processes are about emotions, which makes it interesting. A mentions the question of whether we should, for instance, train effective strategies in class. A wonders if it is a good idea to talk about how to get through such an emotional crisis.

SP296. *Turn 182.*
B replies that they expect less from you in Spain, and then it is OK.

SP297. *Turn 181.*
A says that this is strange, because in Spain they are much better at Spanish than in class.

SP298. *Turn 180.*
B says that B feels that it is easier to talk Spanish in a Spanish-speaking country than in class. B says that B feels that people are always very pleased when B tries to say something. People are happy even if B only says *Hola*[19]. But there are many good learners in class.

SP299. *Turn 179.*
A says that in doing so, B had reduced the anxiety threshold, and it was not that scary after all.

SP300. *Turn 178.*
B says that if they get more used to unrehearsed talking about things in Spanish, it will make things easier. B states that B had once felt in Spain that B did not dare to talk about anything. Then B started to talk after a while, and people corrected B. B says that people like it when one talks Spanish to them.

SP301. *Turn 177.*
A says that this gave B some kind of confidence.

SP302. *Turn 176.*
B says that B would have something to say and that this could make B talk.

SP303. *Turn 175.*
A asks if B had had some cognitive elements B had made use of.

SP304. *Turn 174.*

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[19] Hi.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B states that B feels that the worst part is not Spanish, but rather when it is about German or French. B states that B had been to Spain last summer, and B had been afraid that people would start talking nonsense to B. B states that B did not want to be a coward, so B tried to find out what to say in B's head before going there. There would be different possible answers, but at least B would be able to say something.

SP305. *Turn 173.*
A asks how B reacts.

SP306. *Turn 172.*
B answers that B's mother has got into her head that B speaks both Spanish and German fluently. B states that B's mother lives in Andorra, and when B goes there to visit her, she always says to people that they should talk Spanish to B. B states that B has to try to follow what is being said. B says that this stresses B.

SP307. *Turn 171.*
A underlines the importance of combining cognitive strategies with social ones, for instance by using Facebook in Spanish. A says that this is a good social strategy. A says that the last strategies are the effective ones. A relates that a girl with a good grade had once gone to Spain. She did not say very much. A relates that A asked why she did not talk that much, and she said she was afraid. A states that there was another boy who had not got such a good grade, but he rattled on. He had a very low anxiety level. The girl's anxiety level was very high. A wonders if B has had similar experiences.

SP308. *Turn 170.*
B states that B should get it in order to get friends. B states that B has tried to use some Spanish words in everyday life. These will become easier to remember. B says that B and a school-friend used to chat on Facebook in Spanish with Norwegian words in between. B says that B has a sister who listens to Playhouse Disney with a programme that mixes English and Spanish. B states that B tries to learn words in the background.

SP309. *Turn 169.*
A emphasises the importance of social media in this respect. A asks if A had given them Share talk.

SP310. *Turn 168.*
B says that B met many Spanish-speaking people last summer, and that B had talked to them in Spanish. B relates that they could also fall back on recur English in the event they did not understand each other. B has also been to Spain and spoken there. B says that B and a friend had tried to contact Spanish teenagers on the Internet. They had looked for people in Spain on Skype, but without any success.

SP311. *Turn 167.*
A acknowledges this to be a social strategy. A states that every Spanish teacher would very much like the learners to develop good social strategies in addition to their cognitive ones.

SP312. *Turn 166.*
B says that B visits a Spanish friend and her mother sometimes in order to speak Spanish. B tells B's friends to correct the mistakes B makes. B also writes Spanish to them on Facebook.

SP313. *Turn 165.*
A asks what B had discussed in terms of social learning strategies, issues that were different from rote learning, etc.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP314. *Turn 164.*
B replies that B sings it in her head, and then B learns the system. B says
that B had used the old-fashioned method of learning by heart without any
aids. It worked in that situation, even if B cannot remember now. B states
that B does not have television, but B listens to Spanish songs a good deal.
B does not know how much B gets out of it, but B listens to these songs when
B sleeps. B says that when B reads, B tries to understand the logic behind
what B reads. B tries to understand why things have been organised the way
they are. Sometimes B compares this system with the way things have been
organised in Norwegian or English. B suggests the usefulness of comparing
with something B already knows to see if it fits into B's system. B wants to
see whether B can also use it in more contexts.

SP315. *Turn 163.*
A asks if B plays it several times.

SP316. *Turn 162.*
B says that B had used a song to remember verbs. B still remembers this song.

SP317. *Turn 161.*
A says that this seems to be a very cognitive approach.

SP318. *Turn 160.*
B answers that sometimes with verb conjugations they have made songs with the
different conjugations. B also says that B used to divide the words into
units, or that B tried to associate parts of the words with different things
in order to remember them better.

SP319. *Turn 159.*
A asks what B does when learning things by heart.

SP320. *Turn 158.*
B states that B could not answer the question. B says that B learns things
by heart when doing homework.

SP321. *Turn 157.*
A reminds B about the fact that it is possible to use subtitles in order to
learn even more.

SP322. *Turn 156.*
B says that B tries to understand what it is all about from the context. B
also tries to listen to the pronunciation.

SP323. *Turn 155.*
A asks B what B actually does in order to learn Spanish when B watches this
channel. A wonders if A has developed any particular strategy.

SP324. *Turn 154.*
B says that B has used a podcast where verbs are practised in an easy way. B
also watches Spanish television, TVE, every once in a while. B states that
B's father has subscribed to this channel. He wants B to learn Spanish.

SP325. *Turn 153.*
A comments that B has learned a good deal of theory, and that this is
interesting. Theory is also the topic of this session. A states that B hopes
that B will be able to differentiate between a cognitive strategy, a social
strategy, and an affective strategy after this session. A states that it is
interesting that A may use words in this group that cannot, for instance, be
used in the third grade. A says that when B discusses learning with third
graders, they do not have the same conceptual knowledge as B. A says that

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Appendix 4A: Backwards induction of the Spanish Case (SP)

this fact had been an eye opener for A, and that A wonders if these teaching principles are perhaps useful in language learning groups, and that it is necessary to talk with learners about these issues. When learners reach the third grade, they have been working with learning strategies for three years, and this situation should provide the learners with enough knowledge to know what learning strategies are all about. A comments on the fact that the end of this project does not mean the end of the future relevance of these issues. A informs B about the topic for this session in terms of cognitive, social and affective learning strategies. A says that it is possible to read about them and tells B to work in pairs with the work sheets. A reviews the different learning strategies to be discussed. A informs B about the main purpose of the task in terms of understanding the main difference between cognitive, social and affective strategies.

When discussing the group work, A asks first about what B had done in order to learn these conjugation patterns. If the language is not acquired naturally, the words and rules have to be learned in some way. A claims that B must have used some strategies in one way or another in one way or another.

Session 3

A says that this classroom discussion has provided A with ideas about possible learning activities.

SP326. *Turn 152.*
B confirms that this is declarative knowledge. B says that it is difficult to learn words, but when they have used songs, they have learned whole sentences. B states that it is easier to learn the language when one knows a whole sentence and not just detached words.

SP327. *Turn 151.*
A asks if this was declarative knowledge.

SP328. *Turn 150.*
B says that B feels that they have learned how Spanish people talk and that they are very polite. B states that B also feels that B has learned what it is like in Spanish in terms of how they celebrate holidays and about daily life in Spain.

SP329. *Turn 149.*
A suggests that B might have uttered verbs in the third person many times, for instance *Jaime tomó un taxi*[20], *Bailó*[21] and *El habló*[22]. A suggests that it simply became that natural because B may have practised so much that it happened without thinking.

SP330. *Turn 148.*
B answers that it was because B remembered the rules B had learned declaratively.

SP331. *Turn 147.*

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[20] Jaime took a taxi.
[21] He/she danced.
[22] He talked.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

A mentions again the girl who had said *La mina derrumbó*[23] in a lesson. She had never heard the verb *derrumbar*[24] before, because it was used for the first time in that session. A states that A had written it on the blackboard. A wonders how this learner could say *La mina derrumbó* without thinking much about it.

SP332. *Turn 146.*
B answers that initially it is when B needs it during tests, but after a while, declarative knowledge will come naturally.

SP333. *Turn 145.*
A asks when B uses this basis, whether it is during tests, or in other situations.

SP334. *Turn 144.*
B says that it is very useful to talk freely, since such a situation makes the learners less anxious about making mistakes. B says that it is important to have some declarative knowledge as well, for instance in terms of verb conjugation paradigms. If B becomes uncertain, it is possible to think back and recall the patterns. B suggests that one may additionally use procedural knowledge to learn more, but with some declarative knowledge, one at least has a basis.

SP335. *Turn 143.*
A confirms this view. A comments on B's positive development in terms of B becoming more and more analytical about B's own learning.

SP336. *Turn 142.*
B relates that they had had a game where they had gone out into the school-yard, and the teacher had placed them at one end of it. The teacher had uttered a sentence, and the learners had to judge whether the sentence was right or wrong. If they thought it was right, they had to run over to the other end of the school-yard, and if they thought it was wrong, they had to stand still. Sometimes people were uncertain, and then they did not know what to do. B also says that B learns a good deal when they have texts in a window, and that this text forms the basis for talking in the classroom afterwards. B thinks that this method provides the learners with good learning opportunities, and such a method helps to develop procedural knowledge. It is apparently easier to walk around in the classroom than giving a presentation in front of the class.

SP337. *Turn 141.*
A asks if B had had other experiences of a declarative or procedural nature.

SP338. *Turn 140.*
B says that it would have been nice if they had learned to talk freely. One method for doing this could be one week where the focus was on how to order medicine and go to the doctor's, followed by a week about going to the beach, and so on. The problem with vocabulary tests is that B practises for these tests, but after the test, B tends to forget the words again before the next test, which is based upon another topic requiring another focus. B says that during a trip to Spain last summer, B had bought a Spanish music magazine. The first time B had read this magazine, B did not understand anything. After some time studying Spanish in upper secondary school, B saw the same magazine last weekend. On that occasion, B had recognized many words. B also understood what it was all about in terms of artists that B likes.

SP339. *Turn 139.*

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[23] The mine collapsed.
[24] Collapse.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

A suggests that this person had talked Catalan, since B had not understood what he was saying.

SP340. *Turn 138.*
B says that watching movies or listening to songs feels very useful. Learning things by heart is not that useful. B says that it is useful to talk freely during the lessons. B says that B did not get the opportunity to talk freely in lower secondary school. B states that B felt that they only covered what was in the books, without learning anything. B states that B was in Barcelona in the tenth grade, and a person had touched B's back and started to talk to B. B did not understand anything of what this person said. B simply said *no comprendo*[25] and left the scene. B did not have a clue as to what had been said.

SP341. *Turn 137.*
A asks how it is possible to build more upon the introductory phrases that B mentioned.

SP342. *Turn 136.*
B says that this is only a small part of the whole presentation that B had.

SP343. *Turn 135.*
A says that this knowledge has developed into acquisition and that B has had much procedural experience.

SP344. *Turn 134.*
B says that when B has to remember sentences, they are stored in memory. First, B had learned it by heart declaratively. Second, B carried it out procedurally and then B knew it afterwards. B says that it had been the other way around for that learner. In that situation, they had studied topics related to themselves, or a familiar person. B remembers that when B did this, B felt that it was great fun to do something different from simply working with exercises. B felt that B had learned a good deal at the time, but with the benefit of hindsight, B recognises that B does not remember anything. B is good at saying, *hello, my name is xx* and *I am xx years old*.

SP345. *Turn 133.*
A comments that this kind of activity made it procedural.

SP346. *Turn 132.*
B answers that this is declarative knowledge, since B simply reads the text and says it by heart. B also says that they simply read texts, and that they were not able to transfer what they read to other contexts afterwards. B relates that B had learned about very strange situations, for instance being a tourist who had to weigh his luggage and thereafter place it on the baggage belt. B asks when one would need language for such a situation, apart from when one would be flying somewhere. B also relates that they had learned strange things, for instance how to contact other people in a disco. B had exercises related to this activity, after which they we were to answer questions. The answers to these questions could always be found in the text, so B did not learn how to construct the sentences. B says that they had had vocabulary tests, but that they also had games, and that they had learned a lot from them. They went to the beach to surf and went to the disco afterwards, and they learned quite a lot from that.

SP347. *Turn 131.*
A asks if learning how to order chicken is declarative or procedural knowledge.

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[25] I don't understand.

Appendix 4A: Backwards induction of the Spanish Case (SP)

SP348. *Turn 130.*
B still remembers this principle, even if they learned it in the eighth grade.
When B has a hard time in tests, B writes the verbs down and divides them
into smaller units in order to remember the endings. Finally, these endings
are placed at the end of the verbs. B also remembers these endings when
talking Spanish, since it is easier to conjugate the verbs when knowing this
rhyme. B comments on a presentation about Spain and Mexico. B states that B
felt that facts had been learned, but not that much about the words that had
been used. B defines this knowledge as declarative knowledge about the
country. However, the words that had been used were more difficult. B states
that B learned about Spain, but was not able to say in Spanish today that
the biggest mountain chain is …. B does not remember the actual word for
mountain chain, but B remembers its name. B also says that in a Spanish exam,
B remembers more from the sentences that had been used rather than the content
of the sentences. B remembers how B said it, but not that much about the
actual content of the sentences. B says that they had used texts in the book,
that two or three students talked together, and that they were supposed to
read it out aloud to each other. There was a focus on special situations,
for instance how to order steak in a restaurant and how to identify the right
bus at a bus stop. B states that B felt that they were not able to transfer
this knowledge to other contexts, for instance they were not able to order
chicken instead.

SP349. *Turn 129.*
A reminds B of the fact that rote learning of the whole word had been the
method by which B had initially learned the present tense conjugation. A
comments on the importance of dividing the words into smaller units at a
later stage in order to identify the actual endings.

SP350. *Turn 128.*
B also points to the fact that rote learning of grammatical rules may be
useful for later practice in the language.

SP351. *Turn 127.*
A asks if B had used this principle at some point in school, or if B had
simply learned *voy*, *vas*, *va*[26] according to the traditional method.

SP352. *Turn 126.*
B says that it is useful to have declarative knowledge as a basis, i.e. to
be able to know why one carries out certain activities - not just to do
something, but also to know why you do it. It is then possible to use the
declarative knowledge as a basis if there is something procedural one is not
able to do. B states that there is a balance between them.

SP353. *Turn 125.*
A uses the example of *derrumbó*[27].

SP354. *Turn 124.*
B uses the example of tests in which one has to conjugate *IR*[28] in the present
tense. According to B's statement, the actual conjugation in that case is an
example of declarative knowledge, but that this conjugation is more difficult
procedurally.

SP355. *Turn 123.*
A says that it would have been interesting to see which five words B would
have remembered, if there is any system. A points to the fact that it sounds
slightly inefficient if B has to learn 20 words in order to remember five. A

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[26] I go, you go, he/she/it goes.
[27] Collapsed.
[28] To go.

wonders if there is a more efficient method to learn those five words. A guesses that these five words were ones of practical use in some way, like *Hola, qué tal?*[29] and *Buenos días*[30], but that words like *shoe heel* would not have been one of those words. However, A comments that people sometimes learn such completely strange words. A emphasises the fact that the one strategy is not better than the other, but that it is important to be aware of the difference between them in order to choose the most efficient strategies at a later stage.

SP356. *Turn 122.*
B says that even if B learns 20 words and then forgets most of them, even if B remembers five, B actually still remembers those five.

SP357. *Turn 121.*
A replies that when one wants to learn a language, one most likely wants to learn how to speak and write that language. When one learns a language, one may learn many conjugations. A states that A had studied Latin without learning to speak it. Nevertheless, A knew how to conjugate verbs in Latin. A stresses the fact that one thing is not better than the other. A asks B to write *declarative* and *procedural* and then write down examples of what they have done previously during Spanish lessons.

A says that there are several reasons for focusing on methods of learning verbs. One reason is that it is stated in the curriculum in terms of teaching methods for language learning. When learning something, another interesting aspect is to know how to learn in the most efficient way. A emphasises the fact that the conscious use of learning strategies is especially important for grown-ups such as B, since B is not a child growing up in a Spanish-speaking country. An example of declarative knowledge provided by A is the word tests used once a week during the first weeks. Words had to be learned by heart (rote learning), and then we forgot them the next day. In this way, the method was to learn the words for the test, but after that one would tend to forget them. Additionally, one learns the words without being able to know how to use them in natural settings.

SP358. *Turn 120.*
B asks why simply conjugating a verb cannot be procedural.

SP359. *Turn 119.*
A says that at that point one has reached fluency. A provides an example from a Spanish session in the second grade. In that situation, a learner had talked about the mines that had collapsed in Chile in August 2010. Without thinking, this learner had used the verb *derrumbar* in Spanish, which means to collapse. She said *Una mina derrumbó*. She even used the indefinido form, without thinking about that form. When hearing this, A had thought that: "Now she has reached acquisition, she used the indefinido form without thinking". At that point one has said things so many times that one has reached acquisition. A says that if A had said to her: "Could you please be declarative now and conjugate that verb?", such a question could have been stressful to her. She would have started saying aloud *derrumbé*, *derrumbaste*[31]. This would have been meaningless, but sometimes it may be meaningful.

SP360. *Turn 118.*
B asks about acquisition.

SP361. *Turn 117.*

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[29] Hello, how are you?
[30] Hello/good day.
[31] I collapsed, you collapsed.

Appendix 4A: Backwards induction of the Spanish Case (SP)

A uses conjugating verbs as an example of how one knows things, and when one knows how to use this knowledge, it becomes procedural knowledge.

SP362. *Turn 116.*
B says that declarative is when you study something in order to learn it and that you are able to say it aloud. Procedural is when you sit down and do things instead of simply hearing about them.

SP363. *Turn 115.*
A says that learning a new language is an enormous process. This is why we need a plan in the first grade so that B may reach acquisition in the third grade when they go to Spain. A asks B what the topic of discussion had been so far in the programme. A states that the topic had been how people learn languages. A wonders if B could comment on different ways to learn languages and asks if B remembers the concepts of "procedural" and "declarative" knowledge. A tells B to explore the two concepts of procedural and declarative knowledge.

Session 2

A talks more about the content of this year's instruction programme. A summarises B's comment during the session, and tells B that the goal of the instruction programme is to develop these insights further during the focus year, as a consequence of the interaction between A and B. During the session, the field of declarative and procedural knowledge will be developed, as well as the topic of learning strategies.

SP364. *Turn 114.*
B says that one is born with certain skills and that it is possible to improve within certain frames. A person has a certain limit in terms of how good that person can become, even with training. No matter how much one trains, one does not get any better. One has a minimum and maximum limit.

SP365. *Turn 113.*
A emphasises the importance of making full use of one's capacity.

SP366. *Turn 112.*
B says that some skills are inherited. If one is born with a talent for being fast, one does not have to train that much to achieve that goal. Nevertheless, B claims that it is also possible to take advantage of that talent and develop it even further.

SP367. *Turn 111.*
A asks if this goes for all kinds of knowledge, i.e. if natural talent is important. A highlights the importance between, for instance, speaking a language and playing soccer. A asks if there are any natural talents in speaking one's language.

SP368. *Turn 110.*
B says that there is a difference between being a natural talent and having a certain interest. Either one knows something or one does not.

SP369. *Turn 109.*
A uses an example from soccer. A had trained during the whole winter, and then all of sudden another boy came along in the spring and did much better than A.

SP370. *Turn 108.*
B mentions natural talents. If one is very at good at playing music, one thinks about it all the time, and one plays music all the time.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP371. *Turn 107.*
A confirms this view.

SP372. *Turn 106.*
B says that the most important thing is to be able to understand the connections between different elements. If B is able to compare something new with something B already knows, B develops an interest for it. Knowledge is developed little by little. B says that B has to practise a good deal, such as with sports. Just as in mathematics, B receives some information, and then B has to continue from there. B says that it is important to use the subject all the time.

SP373. *Turn 105.*
A replies that having a clear goal makes it easier to learn something. A asks what happens if B has to learn mathematics without being interested in the subject. A claims that A had been exposed to such a situation. A states that only when A had to use it at work, did A really learn mathematics. The same applies for the learning platform *It's Learning*. When this system was new, A learned to use it when A had to send messages. This situation shows that if one establishes clear goals, one is interested in achieving those goals. A says that if I say that I want to learn mathematics, I need a reason to learn it.

SP374. *Turn 104.*
B also says that goals are important, goals for what B wants to achieve. It is important to acquire understanding in the matter. B emphasises the importance of discussing with others.

SP375. *Turn 103.*
A uses computer technology as an example of something that requires interest in a particular topic in order to learn it.

SP376. *Turn 102.*
B says that interest is an important factor in addition to practising. B also mentions the importance of making mistakes in order to learn.

SP377. *Turn 101.*
A asks how we achieve things when we want to learn something, specifying that it depends on the kind of knowledge at hand.

SP378. *Turn 100.*
B says that people learn things in different ways, for instance doing, reading, and so on.

SP379. *Turn 99.*
A asks at what point acquisition takes place and also asks if the expression "learning by doing" concerns the declarative or procedural side to learning. A says that B has some previous knowledge, and B thus wants to test things out in the sense of having some declarative knowledge that B tries out. A states that different learning methods would be the topic at a later stage in the instructional programme. At this point, the different mechanisms are the topic, i.e. what actually happens. A states that the challenge a language teacher faces is how this perspective relates to the learning of languages, claiming that these perspectives make B good at learning languages. A states that during this year, B will learn the tactics that can be used to achieve something. A asks what the learners have to do during this process in different aspects of life. While one thing is to learn concepts, something quite different is what kind of conditions have to be fulfilled for B to

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Appendix 4A: Backwards induction of the Spanish Case (SP)

learn something properly. A provides the examples of boiling eggs, learning languages, cycling, and so on.

SP380. *Turn 98.*
B says that humans are curious. We start at one point and continue from there. B also says that you sometimes fall when you walk, and you are sometimes unable to sleep.

SP381. *Turn 97.*
A says that this is the interesting part about learning. B learns something, and then B learns more as a consequence of the first learning that has taken place. This is how people construct learning, i.e. building upon others' knowledge.

SP382. *Turn 96.*
B uses the concept *declarative* for this[32]. B states that it is not enough to know how to do things, but one has to learn it oneself. One starts to think logically and understand how to do things. Instinctive activities, such as eating, sleeping and going to the toilet, are acquired directly. The instinctive part of human psychology is interesting. Furthermore, B states that physical basic needs have been acquired. B refers to a situation where some poor young people had used computers without being told how to use them. After some weeks, they were able to download music, etc. Nobody had told them, and they went straight to the procedural part. B deduces that people need some kind of knowledge prior to this development. B also mentions switching on computers as an example. B discusses whether one has to know how to read instructions or not. In such a situation, people learn through trial and error. They have pressed a button, and then they have understood how that button works. In such a case, they have learned it.

SP383. *Turn 95.*
A adds that B can still explain to others what B has to do in order to cycle: you have to grab your bike, place yourself on it, and so on. The knowledge B can explain in this way is declarative knowledge. This means that it is possible to explain how to do things also after acquisition has taken place, at the same time as B is able to do it on B's own. A mentions basic skills, such as walking, talking, and singing. These skills were procedural in the beginning. Nobody told B how to do these things in detail. Small children do this automatically, and learning takes place when children watch adults doing the same. A poses the question of whether we would all have been creeping around if we had not seen how adults do things. Even with talking and walking, a process of learning has taken place. One does not wake up one day simply knowing it.

SP384. *Turn 94.*
B wants to discuss further the difference between declarative and procedural knowledge. B defines the difference as declarative being what you have to learn, while procedural is that you know how to do it, and acquisition being when you know it completely. B states that it has entered your head at that point and is a part of your behaviour. You know how to cycle and you do it automatically.

SP385. *Turn 93.*
A explains that acquisition is when you know something very well. When a person boils eggs without any problems or cycles, acquisition has been achieved. Reading is another example of the acquisition of skills. First, you learn the letters, and then this learning is converted into reading skills, even if there are some words that B cannot read.

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[32] As if declarative knowledge is the first step towards learning. This focus is probably a misunderstanding.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP386. *Turn 92.*
B focuses on previous experience with declarative knowledge and remembers that B has filled in verbs. At the same time, B wonders if this declarative knowledge became procedural automatically. B was told to think through situations in B's daily life where B has to relate to declarative and procedural knowledge in some way.

SP387. *Turn 91.*
A asks how B had learned languages previously in school.

SP388. *Turn 90.*
B answers that procedural knowledge is of this kind.

SP389. *Turn 89.*
A asks B how B had learned Norwegian. A explains the concepts *declarative* and *procedural* knowledge as the difference between learning about something and being able to use it. An example used is the paradigm for conjugating *to go* in English, i.e. that you learn grammar and how to conjugate verbs. A uses the verb *IR*[33] in Spanish and wonders if it is enough simply to know the paradigm and whether B is able to use it properly just because B knows how to conjugate the verb. A uses the example of boiling eggs and explains that A possesses the necessary knowledge to do so. A uses water, boils it up, and reflects over the fact that A does not have to think much about how to do it, since it happens automatically. A asks B about cycling. A states that cycling is a very difficult skill. A asks B what B does automatically without thinking very much about it.

SP390. *Turn 88.*
B states that it is important to be able to use what B learns, and that B first has to learn about the matter at hand, and then actually do it. B needs input and then B learns something for output. B also defines *knowing something* as being able to explain it to others.

SP391. *Turn 87.*
A asks B about the difference between learning and knowing something. A focuses on what it implies to know English, Spanish or Norwegian, and whether it is enough to know one word like *hola*[34].

A tells B to reflect over what it means to know how to cycle, make waffles, drive a car, and so on. A tells B to discuss these matters for a couple of minutes.

Session 1

A emphasises the importance of practical drills and provides B with motivating comments about the research project and its benefits for language learning processes, as well as information about the topic of the next session.

SP392. *Turn 86.*
B comments on the difficulty of rehearsing verbs simply based on their form. B mentions the fact that it is important to be able to use them in new settings.

SP393. *Turn 85.*

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[33] To go.
[34] Hello.

Appendix 4A: Backwards induction of the Spanish Case (SP)

A comments on the fact that specific linguistic knowledge is of less value if it cannot also be applied to other settings.

SP394. *Turn 84.*
B states that it is necessary to combine the conjugation of verbs with transferable skills to new situations.

SP395. *Turn 83.*
A encourages B in terms of the practical value of the topics that are covered during the language learning sessions.

SP396. *Turn 82.*
B comments on the use of specific situations vs. generalisable situations when selecting topics for the learning sessions. B compares experiences from lower and upper secondary school and expresses a judgement in terms of the practical value of these pedagogical settings.

SP397. *Turn 81.*
A acknowledges the importance of cultural issues in the language learning process.

SP398. *Turn 80.*
B mentions that Spanish is a language that is associated with expressive body language, and that it is spoken in cultures that are stereotypically perceived by Norwegians as vivid cultures.

SP399. *Turn 79.*
A defines B's comment "basic skills".

SP400. *Turn 78.*
B mentions the fact that second language acquisition takes place in a progressive model, in which the development of declarative and procedural knowledge in a mutual systematic way is important. B also expresses the view that Spanish grammar is easier than Norwegian grammar.

SP401. *Turn 77.*
A acknowledges B's remark.

SP402. *Turn 76.*
B suggests ways to compensate for the fact that Spanish is a language that the learners are not often exposed to in their daily lives, as opposed to English. B suggests that the classroom situation is important, as well as the learner's own initiative in terms of reading Spanish books in order to be exposed to the language.

SP403. *Turn 75.*
A asks about ways to improve such a deficit of situations of linguistic exposure for Norwegian learners of Spanish.

SP404. *Turn 74.*
B comments on the fact that basic declarative knowledge may be acquired during lessons, but that more advanced procedural knowledge is not that easily acquired simply through theoretical insight. B states that this situation is easier in the case of English.

SP405. *Turn 73.*
A comments that English is a tool that can be used to make the acquisition of Spanish easier for Norwegian learners, and that A used an experience from another school setting where the acquisition of Spanish had been much easier for English-speaking learners. A claims that B has a good working knowledge of English and that this knowledge may be an asset when learning Spanish.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP406. *Turn 72.*
B comments on the similarities between English and Spanish and this situation's relevance for learners of Spanish.

SP407. *Turn 71.*
A asks about the relevance of the use of the concepts "comparative" and "comparative challenge".

SP408. *Turn 70.*
B compares the utility of German vs. Spanish for Norwegian learners. B remarks that German is a language that is more similar to Norwegian, which therefore makes this language easier to learn for Norwegian learners.

SP409. *Turn 69.*
A confirms B's suggestion.

SP410. *Turn 68.*

B comments on the usefulness of positive transfer in order to learn the foreign language faster. B mentions the different linguistic roots of Spanish and Norwegian as an important issue in the learning process.

SP411. *Turn 67.*
A acknowledges B's remark.

SP412. *Turn 66.*
B comments on the importance of being exposed to the language in order to learn it well.

SP413. *Turn 65.*
A acknowledges the fact that Spanish is mostly learned in school.

SP414. *Turn 64.*
B comments on the difference between learning the mother tongue, in this case Norwegian, and the foreign language, in this case Spanish. B expresses the view that the mother tongue was learned in natural surroundings, whereas Spanish is learned in rather artificial surroundings, with a teacher and working on exercises. B states that the learning of the foreign language requires a more conscious attitude towards learning compared to the learning of one's mother tongue, which comes naturally.

SP415. *Turn 63.*
A states that regularity is an issue.

SP416. *Turn 62.*
B mentions regularity as an important characteristic of the language learning process in terms of the importance of using words and phrases on a regular basis in order to learn them properly.

SP417. *Turn 61.*
A asks about the differences and similarities between Spanish and Norwegian, especially relevant factors in this respect for Norwegian learners. A emphasises mnemotechnic issues pertaining to the use of, for instance, the title of a movie in relation to its content to make one remember words and expression.

SP418. *Turn 60.*
B uses a specific example from the Spanish sessions in order to illustrate how it is possible to provide meaning for words and expressions in the foreign language.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP419. *Turn 59.*
A acknowledges B's remarks.

SP420. *Turn 58.*
B comments on performance in the language learning process and its assessment by the teacher.

SP421. *Turn 57.*
A mentions the need for long-term strategies when improving one's learning curve.

SP422. *Turn 56.*
B comments on the importance of being active in the language learning process, especially in terms of finding opportunities for practice.

SP423. *Turn 55.*
A asks how languages are learned.

SP424. *Turn 54.*
B makes a comparison between strict and less strict teachers and the consequences for grading in the subject. B states that the later use of the linguistic knowledge will also have consequences for one's attitude towards grading procedures.

SP425. *Turn 53.*
A asks about B's possible reaction to a teacher who always gives good grades, even if the learners had not learned anything at all, compared to a situation where they learned a lot from a strict teacher, but nevertheless were awarded lower grades.

SP426. *Turn 52.*
B comments on motivation and learning, stating that there is a relationship between motivation and the teacher's choice of learning activities.

SP427. *Turn 51.*
A mentions motivation and the relationship between performance and grades.

SP428. *Turn 50.*
B makes a remark about the fact that teachers have to be able to motivate in order to make learners learn, and that good grades should only be given to good learners who actually perform well.

SP429. *Turn 49.*
A asks about the qualities a good language teacher should possess in terms of subject knowledge, motivational skills, or other factors.

SP430. *Turn 48.*
B states that a good attitude towards the teacher may be an asset for the learner.

SP431. *Turn 47.*
A states that phone calls are allowed as long as they are conducted in Spanish. A asks if B needs to like the teacher in order to learn the language at hand.

SP432. *Turn 46.*
B confirms A's point of view.

SP433. *Turn 45.*
A acknowledges B's comment.

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Appendix 4A: Backwards induction of the Spanish Case (SP)

SP434. *Turn 44.*
B refers to the experience of engaging in all sorts of activities during lessons without the teacher interrupting so that the learners can concentrate on the task to be performed.

SP435. *Turn 43.*
A refers to research on starting to learn languages at an early age and the extent to which this perspective is beneficial for the learners.

SP436. *Turn 42.*
B mentions family members who have taken part in an early start project.

SP437. *Turn 41.*
A refers to the "Early start" project.

SP438. *Turn 40.*
B comments on lower secondary school being a good place to start learning languages.

SP439. *Turn 39.*
A comments on age in the language learning process.

SP440. *Turn 38.*
B claims that people should start learning languages at an early age since learning is then easier, especially if one of the parents speaks a foreign language.

SP441. *Turn 37.*
A acknowledges having a reason as being important for learning. A claims that there must be a need for the new word for it to enter the long-term memory.

SP442. *Turn 36.*
B mentions the necessity of having reasons for learning things. B states that reason is an important motivational issue, as well as having an interest for the country where the language is spoken.

SP443. *Turn 35.*
A summarises B's previous comment about the importance of using varied methods in the language learning classroom. A focuses on the importance of avoiding too much rote learning and reading.

SP444. *Turn 34.*
B comments on the importance of using varied methods in order to create interesting language learning sessions.

SP445. *Turn 33.*
A mentions learning psychology in terms of knowledge disappearing from the short-term memory if it is related to too much rote learning for tests, without paying attention to the actual relevance of the knowledge.

SP446. *Turn 32.*
B comments on a previous teacher's poor pedagogical skills and the consequences for B's language learning development.

SP447. *Turn 31.*
A comments on psychological perspectives on the stimulation of learning processes, with a focus on ways of stimulating subconscious learning.

SP448. *Turn 30.*

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B mentions the context of learning. B comments on the fact that the use of music in the language learning classrooms can be beneficial for the learning process.

SP449. *Turn 29.*
A tells B to reflect further on the context for learning.

SP450. *Turn 28.*
B reflects on the possibility of transferring language-learning principles to other areas of learning as well.

SP451. *Turn 27.*
A asks B about the possibility of transferring language learning principles to other areas of learning as well.

SP452. *Turn 26.*
B comments on methods of remembering words and other linguistic elements when the learning process is combined with positive experiences.

SP453. *Turn 25.*
A asks B to develop this train of thought even further.

SP454. *Turn 24.*
B points to the fact that time is an important factor in language learning processes.

SP455. *Turn 23.*
A comments on the relationship between personality and language learning, especially with a focus on being open to challenges and the ability to seek opportunities for practice as a part of the language learning process.

SP456. *Turn 22.*
B mentions anxiety as an obstacle to learning and that the willingness to talk is an important asset when trying to learn foreign languages.

SP457. *Turn 21.*
A mentions personality and the language learning process, with a special focus on anxiety and lack of motivation to learn.

SP458. *Turn 20.*
B introduces the concept of *anxiety* and the fact that such emotional blocks may be an obstacle to the learning processes. B also comments on the importance of using mistakes a source for learning.

SP459. *Turn 19.*
A comments that B is responsible for B's own learning outside the school setting in terms of seeking opportunities to be exposed to the language in natural settings.

SP460. *Turn 18.*
B comments on the role of the school setting in the language learning process in terms of the school being the place where basic skills are acquired, but that further skills can only be developed as a consequence of the learners' own efforts outside the school.

SP461. *Turn 17.*
A summarises the importance of being exposed to the language if B wants to learn it properly. A uses the word "listen" as an important factor in the language learning process.

SP462. *Turn 16.*

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Appendix 4A: Backwards induction of the Spanish Case (SP)

B mentions the importance of listening to the language even if one does not fully understand it, and the relevance of being forced into using the language in natural settings, for instance in countries where English is not widely spoken.

SP463. *Turn 15.*
A mentions the role of interest in the language learning process, with a focus on how to create this interest.

SP464. *Turn 14.*
B mentions the fact that interest may be created by engaging in relevant language learning activities not necessarily organised in the school setting.

SP465. *Turn 13.*
A acknowledges B's remark about interest.

SP466. *Turn 12.*

B mentions interest and its roots in fields of interest identified by the learners themselves.

SP467. *Turn 11.*
A mentions interest with a focus on interest being a skill related to personality, or whether it is a skill that has to be acquired.

SP468. *Turn 10.*
B comments on the knowledge of a foreign language other than Spanish.

SP469. *Turn 9.*
A defines the concept of "target language" and the relevance of spending time in the target language country in order to enhance learning as a consequence of regular exposure to the language.

SP470. *Turn 8.*
B acknowledges A's remark.

SP471. *Turn 7.*
A mentions the necessity of sending learners abroad as a compulsory part of the language learning process to be organised by the school.

SP472. *Turn 6.*
B mentions the relevance of living in the country for language learning purposes.

SP473. *Turn 5.*
A emphasises the distinction between mother tongue, English and foreign languages, seen from the perspective of Norwegian learners.

SP474. *Turn 4.*
B discusses in groups.

SP475. *Turn 3.*
A informs about the research project and focuses on ethical issues and the relevance of discussing how human beings acquire languages.

SP476. *Turn 2.*
B asks about the extent of the research project.

SP477. *Turn 1.*
A provides B with information about the overall nature of the research project and B's role therein.

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Appendix 4B: Pragmatic Analysis of the Spanish Case (SP)

1.	*Perceived learning outcome* (SP1-SP4)	A asks whether there are any experiences to be drawn from this year's focus on metacognitive issues in the language learning process. A refers to the importance of metacognitive issues for the development of learner autonomy in the language learning process, as well as their transfer value to other subjects. B expresses surprise in terms of focused listening being a method to learn a foreign language. B emphasises their acquisition of a deeper understanding of the nature of language learning methods and specific ways to cope with challenges that may occur. B states that B has become more aware of the teacher's behaviour in the classroom, as well as enhanced autonomy in relation to the teacher's instructions. B also claims that the programme has helped B to develop a focus on finding efficient, interesting and motivating ways to learn Spanish, including possible opportunities for studying abroad in a Spanish- speaking country. A (prompting, "B reflects on the value of the SBI programme")
2.	*The importance of declarative and procedural knowledge* (SP5-SP8)	A comments on the adequacy of a combination of declarative and procedural knowledge because of the necessity of a conscious approach to language learning, since B is no longer a child. A refers to early start projects. B emphasises the importance of declarative knowledge for the learning of the Spanish verbal system, since it is very different form the Norwegian verbal system. B also states that a good combination of declarative and procedural knowledge is important for the acquisition of Spanish. B expresses regret at not having started to learn Spanish at an earlier stage in life. A (prompting, "B reflects on the importance of declarative and procedural knowledge")
3.	*The perception of parallel language learning processes* (SP9-SP10)	A rejects B's statement about a possible cognitive confusion and a learning obstacle which could occur as a consequence of B studying another language, such as Arabic. A describes the learning of Arabic as beneficial to the learning of Spanish due to the lexical influence of Arabic on Spanish. B asks whether the learning of Arabic could be detrimental to the learning of Spanish. A (explaining, "B understands the benefits of parallel language learning processes")
4.	*The development of language learning proficiency* (SP11-SP14)	A comments on the benefits of studying more than one language at a time. A uses the problematic nature of the use of the subjunctive in Spanish. A refers to the fact that it is easier for German learners to understand the use of the subjunctive in Spanish because of more similarities between its use in Spanish and German than in Spanish and Norwegian. A also makes remarks on the relevance of positive transfer in the language learning process in terms of discovering and exploring similarities and differences in a fruitful manner. A refers to the difficulty of achieving fluent proficiency in the language, specifying that only a few learners in each group learn the language very well. B wonders about the learning of several languages at the same time and the usefulness of having skills in several languages. B claims that most people who learn foreign languages after the age of ten will never use them because of the complexity of the learning process and the fact that

		only a few people reach full proficiency in a language. B asks about the best age for learning languages and if there is any research in the field. A (prompting, "B reflects on the complexity of the language learning process")
5.	*The usefulness of plurilingualism* (SP15-SP18)	A refers to the usefulness of plurilingualism for the acquisition of several foreign languages. A states that A does not know how many languages it is possible to learn at a time. A encourages B to grasp the opportunity to learn more than one language. B asks whether research has indicated how many languages it is possible to learn simultaneously. B comments on the opportunity B has to study another language next year. A (prompting, "B reflects on the usefulness of plurilingualism")
6.	*Language learning and factors related to age* (SP19-SP22)	A refers to an age limit where learning becomes more difficult, and emphasises the relevance of declarative and procedural knowledge for the language learning processes. A states that B's age is the best for learning languages, since this facility declines after the age of 20. B comments on the cognitive value of declarative and procedural knowledge and also states that learning strategies had been the topic of the group discussion. B comments that age is an important factor in the language learning processes, since the older learners become, the more difficult it is to learn something new. A (informing, "B reflects on the value of declarative and procedural knowledge")
7.	*The importance of previous experiences with language learning* (SP23-SP24)	A confirms the importance of having good experiences with previous language learning. B expresses the view that positive previous experiences with language learning can be an asset in the language learning processes. B claims that a sense of mastery in other languages may constitute a motivational factor for learning other languages. A (confirming, "B reflects on the value of past experiences in language learning processes")
8.	*The importance of seeking practice opportunities* (SP25-SP26)	A confirms that English is a language which the learners get the opportunity to practise more often than Spanish. A also remarks that A notices immediately if a learner has had the chance to practise his or her Spanish. B expresses the view that it is more difficult to get practice opportunities in Spanish than in English, and that this situation requires an extra effort on the part of B in order to practise Spanish. A (confirming, "B reflects on the effort required to get practice opportunities in Spanish")
9.	*The cognitive value of positive transfer* (SP27-SP30)	A emphasises the advantage of knowing other languages, especially English, but also other Romance languages, such as French and Italian for the learning of Spanish. A comments on the relevance of using French words as a communicative strategy when the speaker lacks the equivalent lexical knowledge in Spanish. B comments on the relevance of knowing English for learners of Spanish. B claims that comparative issues based on the relationship

	between languages may be positive to the language learning process since extensive linguistic knowledge is a good basis for comparison. A (prompting, "B reflects on the effort value of comparative issues")
10. The role of the teacher for learner development (SP31-SP41)	A asks what B has to do in order to learn the chosen language. A comments on the relationship between the number of classes at the school and the great demand. A comments on the fact that language teachers are possibly less qualified than teachers of other subjects. B states the importance of having a qualified teacher. B confirms the implication of the word qualification. B refers to an experience from lower secondary school. In this situation, a French teacher had to teach Spanish without being sufficiently qualified. B confirms the necessity of having more teachers. B refers to an experience in lower secondary school of having two Spanish teachers after each other, one Norwegian and one Chilean. The first teacher was apparently not qualified for the job and the second teacher gave B the impression that they had acquired many mistakes. The teacher from Chile was not able to explain linguistic issues in an adequate manner to B, thus creating learning confusion. A (prompting, "B reflects on the role of the teacher")
11. The importance of clear goals (SP42-SP48)	A focuses on motivation being a consequence of the knowledge of the reason for one's actions. A focuses on the importance of reading, writing and talking skills. B expresses specific motivational factors, such as travelling, making friends, or simply knowing exactly how much one wants to learn. B comments on the overall importance of the four basic skills in order to produce good language learning. B refers to the importance of goals for reaching far in one's endeavours. B comments on the importance of clear goals in the learning process and the relationship between such a goal-setting component and this year's focus on language learning strategies. A (prompting, "B reflects on the importance of clear goals")
12. The necessity of exposure to the language (SP49-SP69)	A comments that a teacher is not the only necessary factor in the language learning process. B claims that exposure to the language is important. B claims that exposure to the language in all kinds of settings is important. B focuses on the fact that the teacher has an important role to play in the language learning process, but that children are able to learn a language simply by being in the relevant linguistic environment. B claims that some kind of linguistic input is always necessary. B also mentions the willingness to learn, as well as the importance of using all kinds of resources, such as reading. B expresses the view that children learn in natural surroundings out of the necessity to communicate. B emphasises the importance of a school environment that fosters the opportunity for the learners to practise. B comments on the importance of oral practice. A (prompting, "B reflects on the importance of exposure to the language")
13. The importance of motivation (SP70-SP73)	A asks what it takes to learn a language. A asks if motivation is always important when learning a language.

	B replies that good motivation is essential in the language-learning processes. B comments on the central role of the teacher in the language learning processes, as well as the function of motivation for learning. A (prompting, "B reflects on the importance of motivation")
14. The use of the 'Wheel' (SP74-SP79)	A defines the Wheel as an important tool for self-assessment routines, as well as explaining how to go about the task. A asks whether the 'Wheel' plays a motivational role or whether its use is rather frustrating for B. A asks whether B had ever assessed B's performance at any point in the language learning process. B comments that this self-assessment activity had been used in lower secondary school, but that it seemed more relevant at this point of the language learning process. B also asks for specific instructions for how to work with the Wheel if an experience was missing, such as not having read a comic, an activity specifically mentioned in the 'Wheel'. B now feels that it is easier to relate the use of the 'Wheel' to the overall language learning process. B relates self-assessment to activities carried out in the English sessions, and reports on the use of TV programmes and films with Spanish subtitles. A (prompting, "B reflects on the importance of self-assessment activities")
15. Practical use of social and cognitive learning strategies (SP80-SP89)	A emphasises social learning strategies and asks what happens when B talks. A asks what action B takes to understand properly. A asks how important it is to use the language flawlessly. A uses a situation to model the use of a communicative strategy to associate the word *noise* with a specific communicative situation. A replies that the Spanish word for noise is *ruido*. B claims that simply starting a given sentence is important since it is possible to find the relevant word as one moves through the sentence. When using English, B tries to talk more correctly than with other kinds of foreigners. B also refers to a situation in Spain where a verb had to be conjugated silently before using it. However, this method makes the communicative situation less efficient. The most important aspect of the act of speaking is nevertheless to keep the conversation going. B also states that listening in the bus is a used strategy and that understanding in such a situation leads to enhanced motivation. The most important aspect of this process is to understand the gist. B expresses the view that flawless use of the language is not so important since it is always possible to use English or body language if the circumstances require so; at the doctor's the use of body language would not be functional, whereas talking with Spanish-speaking friends provides more leeway. B states that it is important to feel confident in the use of the language and one is more likely to be stricter with oneself than with others. Nevertheless, the worst thing is not to communicate anything at all. B refers to communicative strategies, since making mistakes is not negative as long as one uses such a situation in order to avoid making the same mistake the next time. B asks what the Spanish word for *noise* is. B states that they will always remember the word *ruido* (noise). A (prompting, "B reflects on the nature of social and cognitive learning strategies")
16. Mistakes as a source of learning (SP90-SP95)	A enquires about the content of the discussion in the following unit in terms of the actions B tends to take in order to correct mistakes. A asks

	about methods to correct mistakes. A asks if B tries to understand the nature of the mistakes. B states that B corrects the mistakes and writes them in brackets. B states that B looks at the mistakes prior to a test, but that *B does not correct all the mistakes*. B states that B corrects the mistakes, and then places the test in a drawer. B states that B writes it in a Word document and that B uses a mixed method. First B becomes disappointed, and then B takes it out later in order to check it in further detail. B states that B looks, for instance, at the verb conjugations that may be problematic. Having discovered a rule, B attempts to focus on the rule, as well as monitoring the nature of the mistakes from one situation to another and reviewing previous tests prior to a new one. The discovery of systems of mistakes is especially important for correct implementation the next time. B states that it is discouraging to get back a test with many mistakes in it. However, the situation becomes easier when B asks for help from A. A (prompting, "B reflects on the nature of mistakes as a source of learning")
17. *Remedy for the lack of communicative skills* (SP96-SP99)	A asks about the perceived importance of being correct. A wonders what options one has when one is not able to communicate anything. B refers to an exam about the financial crisis when B was in a situation where they were unable to produce any language at all. B had solved this problem by using body language instead. A (asking, "B reflects on methods to cope with the lack of communicative skills")
18. *Seeking practice opportunities* (SP100-SP105)	A states that it is important to seek situations to practise the language. A states that A had once been to Spain with some learners, and A had noticed that some of the learners spoke Spanish everywhere, whereas others did not get the opportunity to speak Spanish. A states that one has to take the initiative. A comments on the risk of being rejected when using the social strategy of finding a person to talk to when seeking opportunities to practise the language. A asks if B ever goes to the movies. B mentions the importance of finding people to talk to in Spain. B comments on the necessity of taking risks. B states that watching movies is a good way to learn, but that people tend to talk fast, which makes it difficult to understand. A (prompting, "B reflects on the nature of practice opportunities")
19. *Planning an educational activity* (SP106-SP110)	A asks what other items B needs for the making of the movie. B states that Tritrans is a relevant tool for translations. B refers to a web page that offers a list of words with the same meaning. B states that the movie has to be edited. A (asking, "B considers different relevant tools")
20. *Categorisation of a social strategy* (SP111-SP116)	A asks how it is possible to find out about possible translations for the Norwegian word *rot*. A asks what kind of strategy B refers to. A defines this strategy as a social strategy.

	B states that the Norwegian word *rot* is a tricky word, since it means both *raíz* (root) and *desordenado* (messy) in Spanish. B states that it is possible to ask a teacher, suggesting that this is a declarative strategy. A (correcting, "B categorises experience with a learning strategy")
21. Linguistic elements required for an educational activity (SP117-SP131)	A points to the importance of knowing about the topic in advance and states that this knowledge would determine the way one should approach the task. A asks what kind of topic the movie was about. A asks what kind of knowledge B needs in order to make a movie in Spanish, for instance the vocabulary needed when the topic is stealing jackets. A states that it is important to know the difference between SER and ESTAR. A states that knowledge about how to describe people is important, such as *Is he frightening?* or *Is he good looking?* A defines the short and useful words that keep the conversation going as "words that bind the sentences together". A states that good planning is important, and that it is possible to use other topics they have had, for instance *Celos y amor*. A defines body language as a linguistic element to take into account. A asks if using a dictionary may involve any problems. B considers the situation as unlikely that learners of French and German are able to start to work on this project without any prior experience of Spanish. B defines the topic of the movie as a detective story with thefts involved. B states that SER and ESTAR are verbs B needs to know when the topic is stealing jackets, etc. B states that one has to describe people in the environment. B states that one needs short and useful words that keep the conversation going. B mentions a detective story with other stories mixed into it from other projects they have had in addition to *Navidad* (Christmas). A (prompting, "B prepares an educational activity linguistically")
22. Focus on listening as a source for learning (SP132-SP135)	A asks whether B has taken into consideration the items on the blackboard. A defines becoming better listeners as an aim. B states that B has talked and become better listeners. B refers to a situation where the learners had practised as preparation for the movie. Some listeners had read the text aloud, while others had listened. B thought that the social aspects of the activity had been important since the learners had got the chance to talk without restraint. B had also experienced variation as a result of this learning activity. B comments on the talking and listening implicit in the activity. A (prompting, "B focuses on listening")
23. Purpose of an educational activity (SP136-SP139)	A comments on the importance of being aware of the purpose of one's actions. In the case of the current educational activity, the purpose is related to the four skills of speech, listening, reading, and writing. A writes "purpose", "goals", "skills" and "social aspects". A mentions that the kind of knowledge they are working with is both procedural and declarative, and that the social goal is to have a good time. A topicalises the concept of "purpose", relating it to having a goal. B states that knowledge implies being able to conjugate verbs. B states that B decides how active B wants to be. A (prompting, "B reflects on the purpose of one's actions")

24. *Consequence of having clear goals* (SP140-SP144)	A says that writing and talking will not necessarily come naturally, because there are reading impediments which may come in the way. A asks if B is aware of the goals B has when using the language in any way. A emphasises the fact that the determination of the purpose is important. B states that if one is able to write and talk, the rest will come naturally. B states that B is not aware every time B listens, but that listening in itself is fun. B states that B is often not aware of this in the particular situation, but may become more aware of this later. B states that B had once understood parts of a conversation. B states that the language is the most important part and that there are other challenges. B states that in upper secondary school the goal is not to get through the subject, as it is in lower secondary school. B states that in the film project, one gets to learn expressions that can be used. B states that they got to use the language in other contexts in the film. In the Spanish sessions, making a movie is not irrelevant, as it would have been in a Norwegian lesson. A (prompting, "B reflects on the purpose of one's goals")
25. *The importance of goals* (SP145-SP153)	A explains that knowing the purpose of an activity facilitates reaching the goal. A asks if B can define what B wants to achieve. B replies that understanding most of a conversation with a native speaker is the goal. B also states that a mixture is important in terms of talking to a native speaker and getting by as a tourist. B states that it is important to understand what is said on the radio. B states that coping with a situation for which one is not prepared is important in terms of being prepared for unforeseen situations. B states that using Spanish in a professional setting is important. B states that B wants to study abroad and wants to be able to get by as well as possible. In terms of reading skills, B states that reading newspapers and magazines is important. B states that being able to read Spanish literature is important, since elements may get lost in translations, and therefore the original literature is important. B states that it is important to be able to read signs in the country. B states that if you drive the wrong way on the road, it may have consequences. B says that being able to teach one's children is important. A (prompting, "B reflects on the nature of one's goals")
26. *Purpose of the learning process* (SP154-SP157)	A asks if B studies Spanish in order to get good grades and why B learns. A states that understanding is a skill which applies to all the four basic language learning skills. A summarises these four skills as listening, reading, speech production, and writing. A asks if one of them is more important than the others. B defines understanding and listening skills as important. A (asking, "B reflects on the purpose of the learning process")
27. *Procedural application of the strategy "planning"* (SP158-SP180)	A states that the dichotomy between declarative and procedural knowledge could be used to understand the deployment of this strategy. A asks how B would apply this dichotomy to the work B is engaged in. A suggests using music procedurally in the movie. A suggests a scene in a restaurant and asks if B can come up with a specific plan for language practice in order to be able to create this scene. A suggests that the topics B has been working with may also be used procedurally. A mentions the texts *Celos y amor* and *Comida* to come up with specific ideas. A asks if B has been thinking about grammar in any way. A comments that B has been working with the present tense and some past

	tenses. A shows B a collection of phrases and expressions B has been working with called *Situaciones auténticas* (Authentic situations). The text is written in the present tense, so B should think of the verbal tenses. If a story teller calls to explain what has happened, the text should be changed into the past tense. A wants to know if B had discussed a framework for the project at any time. A asks if B feels that B was efficient in terms of B's goals. A suggests that there should be a linguistic idea behind the organisation of the task. A states that the director gathers all the threads and that B needs a text writer. A states that B should also find a director. A informs B about the fact that the linguistic level in the text has been adapted. A states that everything should be ready before B starts shooting. A tells B to define the cast.
	B comes up with relevant ideas for making the movie, such as using songs, using expressions related to food, defining the cast, the director, the time schedule and the location, as well as writing the manuscript. B suggests that it is important to create past tenses, since the text is in the present tense. In this way, B has a procedural challenge.
	A (prompting, "B develops planning procedures prior to a learning activity")
28. *Planning as a language learning strategy* (SP181-SP186)	A suggests using a forthcoming film project based on a novel about a police dog that catches thieves. Although it is a novel for children, A comments that the content is nevertheless linguistically suitable for the target group. A suggests that there are many ways of organising the learning activity. A informs B to identify the roles and focus on the linguistic part.
	B states that B has already started to define the cast.
	A (prompting, "B reflects on the implementation of the learning strategy")
29. *Assessment of learning activities* (SP187-SP190)	A asks what B thinks of the SBI programme so far in the course, especially since the curriculum states that B has to be able to describe progress in the language learning process. A states that it is difficult to measure whether the learning outcome has been good or not.
	B states that the learning outcome had not been that good thus far, but that the programme had led to greater awareness. B defines the programme so far as a focus on the difference between different learning methods. B also refers to a situation where they assessed a test in another subject before Christmas, claiming that this test was based on a declarative learning process, and that the process prior to the test should have been different.
	A (asking, "B assesses the SBI programme")
30. *Transfer issues* (SP191-SP192)	A asks B if B is aware of some of the relationships between Norwegian and Spanish. A uses the Norwegian expressions *koselig* (*cosy*) and *kose seg* (*have a good time*) as examples of expressions that may cause difficulties between the two languages.
	B expresses the view that English can be used to find similarities with Spanish; it is difficult to translate the Spanish expression *por favor* (*please*). B wonders if the Spanish may consider Norwegians to be less polite than they are.
	A (asking, "B reflects on transfer issues")

Appendix 4B: Pragmatic Analysis of the Spanish Case (SP)

31. Affective learning strategies (SP193-SP200)	A focuses on the curriculum as a description of what language learning is all about. A asks what B may do in order to reach the goals stated in the curriculum. A defines going to bed early as an affective learning strategy. A states that it is important to define one's goals and then reach them.
	B states that going to bed early is important. B states that studying just before going to bed is a good method for training the long term-memory and digesting the object of study, in addition to using the practical part of one's life and talking to fellow learners. Teaching others is also a good way of learning. On one occasion, B had taught a Spanish person Norwegian on the Internet on shared-talk.com, an educational learning site. Another important aspect is to set clear objectives and follow them. B states that eating breakfast and listening to Spanish music is important for the language learning process.
	A (defining, "B reflects on the use of affective learning strategies")
32. Definition of insight (SP201-SP204)	A suggests that B might have assumed that the curriculum incorporates a good deal of grammar since B cries out "OH – grammar" of the curriculum, i.e. Communication/Language learning, Culture and society. A informs B that B should focus on the language learning part of the curriculum and the overall description of the main areas in order to understand the position of metacognitive issues in this picture. A explains the content of the three curriculum areas.
	B cries out "*Oh – grammar*". B states that the content of the curriculum is insight into one's own learning. B reads aloud the relevant parts of the text.
	A (prompting, "B reflects on the value of insight")
33. Assessment of the strategy "delayed speech" (SP205-SP220)	A states that delayed speech should not be used as a pretext for not speaking, for instance in a classroom situation. A refers to some phrases learned during a stay in Egypt, pointing out that these phrases had been learned by listening to others. A wonders if this method had been used as a conscious strategy to learn from listening. A questions whether watching American movies is a strategy as suggested by B, since it is not possible to talk to the movie. A asks when one should move from listening to speaking. A refers to the opposite strategy, i.e. rattling on without being afraid of making mistakes, using the example of a previous learner who had spoken to everyone on the plane to Spain. A states that one has to be an active listener.
	B states that delayed speech had been used in a situation in which B was working in groups with a language-learning task. B states that this strategy works best abroad. When one has limited vocabulary, it may be used to listen to what others are saying. B states that sometimes B is afraid of talking, and that it is useful to listen to conversations during periods of stay in Spain. B refers to a previous learning activity during which the learners were to listen to numbers. B had also experienced a situation where the task had been to listen to a weather forecast in Spanish and then write down what they remembered from this weather forecast. B asks how long one has to wait in order to start speaking the foreign language. B relates that after coming to Norway as a four–year-old boy, he/she started to talk Norwegian after one and a half years in the country, reporting that this could be a good method for older learners too.
	A (prompting, "B reflects on the value of using delayed speech")

Appendix 4B: Pragmatic Analysis of the Spanish Case (SP)

34. *Practical focus of metacognitive issues* (SP221-SP228)	A establishes the background for this session's activity, focusing on the difference between declarative and procedural knowledge, as well as using some examples from Session 6, during which there was a focus on cognitive, affective, metacognitive, and social learning strategies. A comments on the systematic construction of knowledge and the relevance of metacognitive issues. B states that B has become more aware of words and that one thinks through words more consciously. There is an increased focus on the fall-back option one has when working with a specific language learning task. B also states that the experience so far has consisted of an increased focus on establishing connections with previously studied topics. A (prompting, "B reflects on the value of metacognitive insight")
35. *Vocabulary learning prior to an educational activity* (SP229-SP230)	A instructs B to write about a person whom B considers to be an *estrella* (*star*). The document distributed contains a page of key vocabulary, with words in Norwegian and Spanish, as well as a page with important words and expressions in Spanish, and with explanations in Spanish. There are also pages with texts written by previous learners about famous Spanish-speaking artists, such as Shakira and Penélope Cruz. A writes three questions on the blackboard that ask the learners to focus on 1) the purpose of the activity, 2) which vocabulary they have to build up and 3) what they associate with this activity in terms of previously studied material and individual hobbies. B discusses for approximately 25 minutes. A (instructing, "B focuses on vocabulary learning")
36. *Planning for vocabulary learning* (SP231-SP236)	A focuses on the particular task of thinking through difficult situations after the trip to Spain in order to identify words that B had not prepared for. A confirms that this communicative strategy is relevant; the interlocutors might respond with the word *grande* (*big*). A also asks B to assess the educational value of using these kinds of situations. B defines specific situations for practising word acquisition, such as going to shops or restaurants, and spending time on the beach. B suggests that it is possible to talk around a word one does not know, so that people may still understand it, such as using the word *alto* (*tall*) if one wants a sweater. B states that the learners will discover what kind of words they do not know after the trip to Málaga, and this information will form the basis for future learning. A (prompting, "B defines situations for vocabulary learning")
37. *Topicalisation of strategies related to the activity* (SP237-SP241)	A mentions practising something, then using it over and over again with several people in order to learn it, such as *Llueve mucho en Noruega?* (Does it rain a lot in Norway?) A emphasises the need to plan as part of the metacognitive thinking process. One decides what to do. A suggests that B should go into a boring clothes store, and then try more stores if B wants several colours. A asks if B has thought of other strategies to get things done. B says that they could bring along the teacher. B states that when buying clothes, it is possible to go to several stores to try clothes. A (prompting, "B plans for the implementation of the activity")

38. *Situations which may occur during the activity* (SP242-SP254)	A asks if B would prepare certain words and expressions to do with clothes. A emphasises the possibility of saying things spontaneously based on the basic vocabulary one possesses. A states that planning for small talk is also important, covering topics such as bullfighting, *violencia* and *la corrida*. A comments on improvisation, but suggests that it is also important to prepare a specific topic, such as going to the disco. The conversation may develop in different directions and it is possible to use body language and onomatopoeia as a strategy defined by A. Because of these factors, a good planning process is important to get the most out of a stay in a Spanish-speaking country. An example is that the weather may be so bad, that going to the beach is out of the question.
	B suggests that waiters could be interested in learning some Norwegian. B could use this situation to practise Spanish with these people, as well as teaching them Norwegian or English. B states the possibility of saying things spontaneously based on the basic vocabulary one may have, for instance if the shop assistant says *Hola, ¿de dónde eres?* (*Hello, where are you from?*), in which case the answer is *Noruega* (*Norway*). B suggests thinking of sentences and getting used to them. B imagines improvisation of some kind. B states the intention to ask a friend or a fellow learner for help in case B ends up in a difficult situation.
	A (prompting, "B defines practice opportunities")
39. *Assessment of the planning process* (SP255-SP260)	A argues that practising the situation should not be revealed to the interlocutors. A states that B is able to plan these matters strategically at this point of the learning process. A states that if B meets a boy, B can say that B wants to discuss relevant topics, so that B thus has several topics as a back-up.
	B states that even if one plans a conversation, it does not mean that the situation is not worthwhile using, simply because it lacks spontaneity. The discussion has made B think about planning for relevant topics to talk about, as well as defining a back-up in the event of the learners being at a loss for words. A normal introduction, such as *Hola, ¿qué pasa?* (*Hello, how are you?*) would always be relevant. One way to plan for relevant topics is to imagine what the possible interlocutor could be interested in and then look for words and expressions on the Internet beforehand. It is also possible to practise with one's friends.
	A (prompting, "B assesses the planning process")
40. *Practice and preparation of the activity* (SP261-SP276)	A states that they would create a role play to practise. A states that they had worked with words based on topics they could continue with. A states that they may use what they can. A asks whether the learners would have any particular strategy when going into a disco, i.e. whether B would have planned for any particular expressions and words. According to A, a high level of metacognitive insight would imply that the learners are able to assess what one wants to achieve with one's actions, thus considering the use of real-life expressions instead of funny comments when preparing the activity. A asks if B would learn these *de memoria*. A asks if B would plan topics for a plan B. A asks if B would have everything in B's head, and not on a note in the pocket. A warns that it could be considered rude to simply state that the situation created was only *una broma* (*joke*), and then leave the place.
	B suggests that they can create a role play with one of the learners being the shop keeper and the other the customer, thinking that this kind of activity is rather easy since it is about themselves. B suggests that they

	should go to the disco and stand outside talking. B states that they should try to learn beforehand, for instance how to contact boys. B suggests that the question "*Would you like to sleep with me?*" can be used in a given situation. B states that B can find words and expressions on the computer, and listen to conversations. B confirms that words and expressions would not have been learned word by word, but instead by focusing on the most important aspects. B states that B would have a back-up in B's head and not on a note in the pocket. B states that B could find out how to get away afterwards in order to end the conversation in a polite way. B may simply state that the situation created was only *una broma* (*joke*), and then leave the place. A (prompting, "B plans the learning activity")
41. Definition of the place to carry out the activity (SP277-SP285)	A translates B's suggestions into Spanish: *en la playa* (*on the beach*), *en una parada de autobuses* (*at a bus stop*). A knows about good fashion stores in Málaga. A reminds B that one has to be 18 to get into the disco. A underlines that it is important to think through words and expressions, as well as the sources to find the relevant words and expressions. B also mentions activities, such as talking to people of the same age on the beach or at the swimming pool. B suggests specific places to go to in order to practise different situations, such as *en la discoteca* (*in the disco*), *en la playa* (*on the beach*), *jugar al voleybol en la playa* (*play volleyball on the beach*), *en un bar o una cafetería* (*in a bar or a café*), *en una tienda* (*in a shop*), and *en una tienda de moda* (*in a fashion store*). B states that B wants to go to the ice bar afterwards to relax. A (prompting, "B defines places for practice")
42. Plans for a trip abroad as a metacognitive activity (SP286-SP289)	A states that this session is the last one on theory, and that as of next time the focus will be on 11 metacognitive learning strategies. A states that the focus of the current session is on a trip abroad to see how B can use the concepts of *cognition* and *metacognition* in practical settings. A explains that metacognition is learning about how to learn, or thinking about how to think. In this way, metacognition provides a basis for learning strategies to facilitate learning. A uses the word *metaphysics* in relation to *physics* to compare the use of the prefix *meta-* with another setting in which it is used. A explains that *cognition* means thinking, and since *meta-* means beyond, *metacognition* means thinking about thinking. A instructs B to plan for a specific activity in Málaga and use the questions outlined for this session, i.e. plan for what one is going to do in this situation, which words one needs to get by with in the store, and what one has to do in order to carry out this procedure. Other questions to be asked are: How I remember the words? Have I practised beforehand? and Do I know them well enough or do I have to bring along a note? Finally, B is to define what they have learned from the situation, such as words that have been used several times without understanding their meaning. A states that the class is going to Spain in a few years' time, so this session's activity will lead up to a specific situation during the trip. B answers that metacognition means being able to use what one learns, and not just learning it by heart. A (explaining, "B understands the meaning of metacognition")
43. Emotional reactions to the language learning	A stresses the importance of combining cognitive strategies with social strategies, for instance by using Facebook in Spanish. A introduces the last strategy, namely affective learning strategies. A compares the

process (SP290-SP307)	anxiety level of two former learners. A asks how B reacts. A asks if B has had some cognitive elements B has made use of. A claims that B was gained confidence when B had something to say that could make B talk. A says that B had reduced the anxiety threshold, making it less scary. A states that B is much better at Spanish in Spain. A defines this session's topic as 'emotional processes', which makes it interesting. A wonders if talking about how to get through such an emotional crisis in class is a good idea. A asks about what to do in order to reward oneself, for instance upon completion of something one is pleased with.
	B has a mother who lives in Andorra. When B visits her mother, people around her are always told to speak Spanish to her. This makes the situation rather difficult, and she feels stressed. B states that confidence comes out of being prepared, and having prepared an adequate repertoire makes the situation less scary. Even though it is embarrassing to talk, B knows that they will not see the people again, so they can simply rattle on without feeling bad about the situation. B states that it is easier to speak Spanish in Spain than in class, as people in Spain expect less from you, whereas there are many good learners in the class. This makes it less scary to talk spontaneously in Spain and Spanish people like it when one talks Spanish to them. B refers to playing Tetris as a way of relieving the emotional stress in the language learning process when doing homework. After playing Tetris, B starts all over again with another exercise. If B feels bored, B decides to eat sweets, watch TV, or go out as a way to motivate oneself. Eating sweets is also used as a reward during exams or after finishing a paragraph.
	A (prompting, "B reflects on the use of affective learning strategies")
44. Topicalisation of the concept 'learning strategies' (SP308-SP325)	A asks what the learners have done in order to learn conjugation patterns, since words and rules have to be learned in some way if the language is not acquired naturally. A defines the goal of this session as that of the learners being able to differentiate between cognitive, social, and affective learning strategies. Talking about these theoretical concepts has been an eye-opener for A, and discussing the same topics with learners in the third grade is not possible to the same extent as with the learners in this group. A asks if B has developed any particular strategy when watching the TVE. A also remarks that it is possible to use subtitles in order to learn even more. A asks what B does when learning things by heart. A defines as a cognitive approach making songs with the verb conjugations as well as dividing the words into units or associating parts of the words with different things. A asks if B plays the song several times. A asks what the learners had discussed in the group work in terms of issues that were different from rote learning and other methods. A states that every Spanish teacher wants the learners to develop good social strategies in addition to the cognitive ones. A emphasises the importance of social media.
	B tries to understand the gist from the contexts and tries to listen to the pronunciation. B states that B has made songs with the different verb conjugations and B used to divide the words into units, or tried to associate parts of the words with different things in order to remember them better. B states that when singing the song in B's head, B learns the system. B has also used the old-fashioned method of learning by heart without any aids. B listens to songs when asleep and also tries to understand the logic behind what is read, trying to understand why things are organised the way they are. Sometimes comparisons are made with similar systems in Norwegian or English, emphasising the usefulness of comparing with something one already knows, and analysing its transfer value to other contexts. B also visits a Spanish friend and this friend's mother in order to speak Spanish, instructing

	these people to correct any mistakes made. B also writes Spanish to these people on Facebook. B informs that Facebook has been used to chat in Spanish with Norwegian words in between. B also has a sister who listens to a programme on Playhouse Disney, which mixes English and Spanish. On these occasions, B tries to learn words in the background. A (prompting, "B reflects on the use of cognitive learning strategies")
45. The transition from declarative to procedural knowledge (SP326-SP363)	A uses the example of a learner who said during a lesson *La mina derrumbó* (*The mine collapsed*). This learner had never heard the verb *derrumbar* (*collapse*) before, since it had never occurred in previous sessions. A wondered how it was possible that the learner could say *La mina derrumbó* without thinking much about it. A says that it would be interesting to see which five words one remembers, if there is any system, and that it sounds somewhat inefficient if one has to learn 20 words in order to remember five. Could there be a more efficient method to learn those five words? A argues that five words that are of practical value in everyday life are those very words, such as *Hola, ¿qué tal?* (*Hi, how are you?*) and *Buenos días* (*Good morning*), and that words such as *shoe heel* would not be represented among these words. A hinted at the fact that she might have uttered verbs in the third person many times, such as *Jaime tomó un taxi* (*Jaime took a taxi*), *Bailó* (*He danced*) and *El habló* (*He talked*). In this way, the learner might have practised so often that production came without thinking. Talking freely is very useful for B since the learners become less afraid of making mistakes in such a situation. A suggests that B is becoming more and more analytical about their learning, and confirms that practical activities related to specific declarative issues may be beneficial to learning. A suggests knowledge that had been acquired in this way and that B had much procedural experience. A tells B to write down *declarative* and *procedural* and then write down examples of what they had previously done in Spanish lessons. A defines as procedural the activity where B had gone to the beach to surf and to the disco after having vocabulary tests and games they had learned a good deal from. A reminds B of the benefits of rote learning of whole words and mentions that dividing the words into smaller units may be beneficial in order to learn the actual endings. People sometimes learn such completely unusual words, thus emphasising that one strategy is not better than another, but that it is important to be aware of the difference between them in order to choose the most efficient strategies at a later stage. One most probably wants to learn a language in terms of talking and writing that language, and one needs to learn many conjugations. Learning words is difficult, but when using songs, B has learned whole sentences. It is easier to learn the language with knowledge of whole sentences, not simply individual words. B also confirms that the knowledge they have acquired about how the Spanish celebrate holidays, insight into daily life in Spain, and the fact that they are polite, is declarative knowledge. B suggests that this learner might have remembered the rules she had learned declaratively. For B, it is also important to have some declarative knowledge, for instance about verb conjugation paradigms. These patterns may be used by recalling what the patterns contain. B uses previous examples from the school setting to illustrate this fact. On one occasion, the learners

	were in the school-yard, and had to assess whether the sentence uttered by the teacher was right or wrong. If they thought it was right, they had to run over to the other end of the school-yard. If they thought it was wrong, they had to stand still. Another method B had experienced was that texts were placed in the window of the classroom. The learners would use these texts as a basis for talking in the classroom.
	B uses these examples to illustrate experiences of a declarative or procedural nature. The problem with vocabulary tests is that one trains for such tests, but after the test one forgets the words again before the next test, which is based on another topic and which requires another vocabulary focus. One way of coping with this problem would be, for example, to learn how to order medicine and then go to the doctor's, and the following week to go to the beach. On one occasion, B had gone to Spain and had bought a Spanish music magazine. When reading the magazine the first time, B had not understood anything at all. However, after studying Spanish for a while, B had recently read the magazine again, had then understood many words and the gist of the content. B feels that it is useful to watch movies or listen to songs, while it is less useful to learn things by heart. It is important to talk freely. When one has to remember sentences, they are stored in one's memory. First, they are learned declaratively and secondly they are carried out procedurally. B also says that this person had once experienced the opposite, i.e. that they had studied topics related to themselves. B felt that it was great fun to do something different from simply working with exercises. B had felt that the learner had learned a good deal on that occasion, but looking back the learner does not remember very much.
	B also refers to previous learning situations in which they felt that they had learned words and expressions that had been less useful and that were not that easily transferable to other fields. During learning experiences where B had simply read texts, saying the content by heart, B had only acquired declarative knowledge. When B struggles with tests, they write the verbs down and divide them into smaller units in order to remember the endings. Finally, these endings are placed at the end of the verbs. It is easier to remember these endings when talking Spanish, as it is easier to conjugate the verbs when knowing this rhyme. B refers to a presentation about Spain and Mexico, during which they had felt that facts had been learned, but not that much about the words that had been used. B defines this kind of knowledge as declarative knowledge about the country. B had learned much about Spain, yet was unable today to say in Spanish *the biggest mountain chain is ….* B remembers the name of the mountain chain, but not the actual word for it in Spanish. B feels that it is difficult to transfer declarative knowledge.
	B says that rote learning of grammatical rules may be useful for later practice in the language. B asks about declarative knowledge being a basis one can use if one is not able to do something procedural. There should be a balance between these two kinds of knowledge. B uses the example of tests in which one has to conjugate the verb *IR* (*to go*) in the present tense, stating that the actual conjugation is an example of declarative knowledge, but that the conjugation is more difficult procedurally. When learning 20 words, one might forget most of them, but even if one remembers five, it may be beneficial.
	A (prompting, "B reflects on the transition from declarative to procedural knowledge")

46. Inherent skills in the language learner (SP364-SP370)	A states that A had once spent a whole winter training soccer, and then another boy came along in the spring and did much better than A. A asks whether natural talent is important, such as the ability to play soccer. A emphasises the importance of making full use of one's capacity. B comments on the difference between natural talent and having a certain interest; knowledge is something one has or does not have. B remarks that natural talents are good motivating factors. B says that it is possible to improve, within certain frames and limits, the skills one is born with. B says that people are born with certain skills, and one does not have to practise natural talents to the same extent as other kinds of talent. At the same time, B claims that it is important to develop one's innate talents. A (prompting, "B reflects on the nature of skills")
47. The importance of clear goals (SP373-SP374)	A claims that clear goals make it easier to reach one's learning goals. A also says that it is more difficult to learn something when one is not interested in the subject, such as a situation experienced by A in mathematics. A had only started to learn it well when A had to use mathematics for work purposes. A had experienced the same with the learning platform It's Learning. A had learned how to use it by sending messages. A claims that this situation shows how the setting of goals is important for achieving those goals. One needs a reason for wanting to learn something such as mathematics. B states that goals are important, as well as being able to understand the matter. B claims that discussing with others is important. A (prompting, "B reflects on the importance of clear goals")
48. The importance of interest (SP375-SP377)	A asks how we achieve things when we want to learn something, specifying that it depends on the kind of knowledge at hand. A states that computer technology is an example of something that requires interest for a particular topic in order to learn it. B comments that interest is an important factor in addition to practising, and that it is important to make mistakes in order to learn. A (prompting, "B reflects on the importance of interest")
49. The nature of acquisition (SP378-SP381)	A comments that the interesting part about learning is that one learns something, and then one learns more as a consequence of the initial learning that has taken place. This is how people construct learning, building upon others' knowledge. A asks at which point acquisition takes place. A also asks if the expression *learning by doing* concerns the declarative or procedural side of learning. A says that one has some previous knowledge, and then one wants to test things out in the sense of having some declarative knowledge one tries out. A states that different learning methods would be the topic at a later stage in the instruction programme. A says that at this point, the different mechanisms are the topic, i.e. what actually happens. A states that the challenge a language teacher faces is how this perspective relates to the learning of languages, claiming that these perspectives make B good at learning languages. A also states that during the year, B will learn the tactics that can be used to achieve something. A asks what the learners have to do during this process in different aspects of life. One thing is to learn concepts, but something quite different are the kinds of conditions that need to be fulfilled in order to learn something properly.

	A provides examples, such as boiling eggs, learning languages, cycling, etc. B comments that humans are curious; we start at one point and continue from there. B also states that sometimes you fall when you walk, and sometimes you are not able to sleep. B says that people learn things in different ways, such as doing, reading, etc. A (prompting, "B reflects on the nature of acquisition")
50. Difference between declarative and procedural knowledge (SP382-SP389)	A asks B how B had learned Norwegian. A explains the difference between declarative and procedural knowledge as the difference between learning about something and being able to use it. An example used is the paradigm for conjugating *to go* in English, i.e. that one learns grammar and how to conjugate verbs. A uses the verb *IR* in Spanish and wonders if it is enough simply to know the paradigm, and whether one is able to use it properly just because one knows how to conjugate the verb. A uses the example of boiling eggs and explains that A possesses the necessary knowledge to do so. A uses water, boils it up, and reflects over the fact that A does not have to think much about how to do it, since it happens automatically. A asks B about cycling. A states that cycling is a very difficult skill. A asks B what B does automatically without thinking very much about it. A asks how B had previously learned languages at school. A explains that acquisition is when one knows something very well. When a person boils eggs without any problem, or cycles, acquisition has been achieved. Reading is another example of the acquisition of skills. First, one learns the letters, and then this learning is converted into reading skills, even if there are some words that one cannot read. A states that the kind of knowledge that one can explain to others, such as how to cycle in terms of grabbing your bike, sitting up on it, and so on, is declarative knowledge. This means that it is possible to explain how to do things also after acquisition has taken place, at the same time as one is able to do it on one's own. A mentions basic skills, such as walking, talking and singing. These skills have been procedural from the start since nobody has informed one how to develop these skills in detail. Young children do this automatically, and learning takes place when children watch the adults doing the same. A poses the question of whether we would all have been creeping around if we had not seen how adults do things. Even with talking and walking, a learning process has taken place; one does not wake up one day simply knowing how to do it. B uses the concept *declarative* for this. B focuses on previous experience with declarative knowledge and remembers that B has filled in verbs. B wonders if this declarative knowledge became procedural automatically. B was told to think through situations in B's daily life where B has to relate to declarative and procedural knowledge in some way. B wants to discuss further the difference between declarative and procedural knowledge. B defines the difference as declarative being what one has to learn, procedural being that one knows how to do it, and acquisition as knowing it completely. B states that it has got into one's head at that point and is a part of one's behavior. One knows how to cycle and does it automatically. B states that it is not enough to know how to do things, as one also has to learn to do them oneself. One needs to start thinking logically and then understand how to do things. B states that instinctive activities, such as eating, sleeping and going to the toilet, are acquired directly. The instinctive part of the human psychology is interesting. B states that physical basic needs have been acquired. B uses the example of some poor young people who had used computers without being told how to use them. After some weeks, they were able to download music, etc., going straight to the procedural part without

	being told by others. B states that people need some kind of knowledge prior to this development. Another example used by B is switching on computers. B discusses whether one has to know how to read instructions or not. In those kinds of situations, people learn through trial and error. They have pressed a button, and then they have understood how that button works, which is learning. A (prompting, "B reflects on the difference between declarative and procedural knowledge")
51. *Difference between learning and knowing* (SP390-SP391)	A discusses with B the difference between learning and knowing something. There is a focus on what it implies to know English, Spanish or Norwegian, and if it is enough to know a word like *hola* (hello). A tells B to reflect over what it means to know how to cycle, make waffles, drive a car, and so on. B states that it is important to be able to use what one learns, and that one first has to learn about the matter at hand, and then actually do it. One needs input, and then one learns something for output. B also defines knowing something as being able to explain it to others. A (prompting, "B reflects on the difference between learning and knowing")
52. *The transfer value of linguistic skills* (SP392-SP398)	A comments that specific linguistic knowledge is of less value if it cannot also be applied to other settings. A encourages B in terms of the practical value of the topics that are covered during the language learning sessions. B comments on the use of specific situations vs. generalisable situations when selecting topics for the learning sessions. B compares experiences from lower and upper secondary school and expresses a judgment in terms of the practical value of these pedagogical settings. B comments on the difficulty of practising verbs simply based on their form, mentioning that it is important to be able to use them in new settings. B states the necessity of combining the conjugation of verbs with transferable skills to new situations. A (prompting, "B reflects on the transfer value of linguistic skills")
53. *SLA acquisition and declarative and procedural knowledge* (SP399-SP400)	A defines B's comment about basic skills. B comments on the fact that second language acquisition is a combination of declarative and procedural knowledge. B also expresses the view that Spanish grammar is easier than Norwegian grammar. A (prompting, "B reflects on basic aspects of SLA")
54. *Exposure to Spanish* (SP401-SP403)	A asks about ways to improve such a deficit in situations of linguistic exposure for Norwegian learners of Spanish. A acknowledges B's suggestion about ways to compensate for the fact that Spanish is a language that the learners are not often exposed to in their daily lives, in contrast to English. B suggests that the classroom situation is important, as well as the learner's own initiative in terms of reading Spanish books in order to be exposed to the language. A (prompting, "B reflects on ways to ensure exposure to Spanish")

Appendix 4B: Pragmatic Analysis of the Spanish Case (SP)

55. *Comparative issues* (SP404-SP410)	A asks about the relevance of the use of the concepts "comparative" and "comparative challenge", writing the latter on the blackboard. A comments on the fact that English is a tool that can be used to make the acquisition of Spanish easier for Norwegian learners, something that is also based on A's own experience with previous learners. A claims that B has a good working knowledge of English, and that this knowledge may be an asset when learning Spanish.
	B also comments on the different linguistic roots of Spanish and Norwegian as an important issue in the learning process. B compares the utility of German vs. Spanish for Norwegian learners. B remarks that German is a language that is more similar to Norwegian, something that makes this language easier to learn for Norwegian learners. B comments on the similarities between English and Spanish and the relevance of this for learners of Spanish. B states that basic declarative knowledge may be acquired during lessons, but that more advanced procedural knowledge is not that easily acquired simply through theoretical insight. The situation is easier in the case of English.
	A (prompting, "B reflects on linguistic challenges for Norwegian learners")
56. *Exposure to the language* (SP411-SP414)	A acknowledges the fact that Spanish is mostly learned at school.
	B comments on the difference between learning the mother tongue, in this case Norwegian, and the foreign language, in this case Spanish. B states that the mother tongue was learned in natural surroundings, whereas Spanish is learned in rather artificial surroundings, with a teacher and working on exercises. Learning the foreign language requires a more conscious attitude towards learning compared to learning one's mother tongue, which comes naturally. B comments on the importance of being exposed to the language in order to learn it well.
	A (prompting, "B reflects on the importance of exposure to the language")
57. *The importance of regularity* (SP415-SP416)	A states that regularity is an important issue.
	B states that regularity is an important characteristic of the language learning process in terms of the importance of using words and phrases on a regular basis in order to learn them properly.
	A (prompting, "B defines regularity as an important issue")
58. *Acquisition of words* (SP417-SP418)	A asks about differences and similarities between Spanish and Norwegian, especially in terms of relevant factors for Norwegian learners. A comments on the possibility of using the title of a movie in relation to its content to make one remember words and expressions.
	B uses a specific example from the Spanish session in order to illustrate how it is possible to provide words and expressions with meaning in the foreign language.
	A (asking, "B reflects on the acquisition of words")
59. *Performance* (SP419-SP423)	A remarks on the need for long-terms strategies to improve one's learning curve. A asks how languages are learned.
	B comments on the importance of being active in the language learning process, especially in terms of finding opportunities for practice. B

	comments on the performance in the language learning process and its assessment by the teacher. A (prompting, "B reflects on performance in the language learning process")
60. The role of the teacher (SP424-SP434)	A states that motivation is also an issue. A asks about B's possible reaction to a teacher who always gives good grades, even if the learners had not learned anything at all, compared to a situation where they learned a good deal from a strict teacher, but with lower grades as a consequence. A comments on the qualities a good language teacher should possess in terms of subject knowledge, motivational skills, or other factors. A comments on A's own attitude during the lessons in terms of phone calls being allowed as long as they are conducted in Spanish. A also asks whether the learners need to like the teacher in order to learn the language at hand. B comments on B's experience with activity issues in the classroom setting expressed. The experience referred to is related to the learners engaging in all sorts of activities during the lessons without the teacher interrupting, in order to make the learners concentrate on the task to be performed. B makes a comparison with the present teacher, who is considered to be more motivating. B states that a positive attitude towards the teacher may be an asset for the learner. B remarks on the fact that teachers have to be able to motivate in order to make learners learn, and that good grades should only be given to good learners who actually perform well. B comments on motivation and learning, stating that there is a relationship between motivation and the teacher's choice of learning activities. B makes a comparison between strict and less strict teachers and the consequences for grading in the subject. The later use of linguistic knowledge will also have consequences for one's attitude towards grading procedures. A (asking, "B reflects on the role of the teacher")
61. Early start issues (SP435-SP440)	A comments on age in the language learning process. A refers to the "early start" project. A refers to research on starting to learn languages at an early age and the extent to which doing this is beneficial for the learners. B claims that people should start learning languages at an early age since learning is then easier, especially if one of the parents speaks a foreign language. B makes a comment in terms of lower secondary school being a good place to start learning languages. B comments on family members who have taken part in an early start project. A (prompting, "B reflects on early start issues")
62. Reasons for the language learning process (SP441-442)	A acknowledges motive being important for learning. There must be a need for the new word for it to enter the long-term memory. B states that it is important to have a reason for learning things. Reason is an important motivational issue, as well as an interest in the country where the language is spoken. A (prompting, "B reflects on the reason for the language learning process")
63. Methodology (SP443-SP446)	A makes a summary of B's comments on the importance of using varied methods in the language-learning classroom. A focuses on the importance of avoiding too much rote learning and reading. A makes a remark about learning psychology in terms of knowledge disappearing

	from the short-term memory if it is related to too much rote learning for tests, without paying attention to the actual relevance of the knowledge.
	B comments on the importance of using varied methods in order to create interesting language learning sessions. B comments on the relationship between too much rote learning for tests, without paying attention to the actual relevance of the knowledge. This teaching method is related to the teacher's poor pedagogical skills and the consequences for B's language learning process.
	A (asking, "B reflects on the nature of methodology")
64. Learning context (SP447-SP449)	A encourages B to reflect further on the context for learning. A comments on the psychological perspectives of the stimulation of learning processes, with focus on ways of stimulating subconscious learning.
	B makes a claim about the context of learning. B comments on the fact that the use of music in the language learning classrooms can be beneficial to the learning process.
	A (prompting, "B reflects on beneficial learning contexts")
65. Transfer value (SP450-SP451)	A asks about the possibility of transferring language learning principles to other areas of learning as well.
	B defines the context of learning in general terms.
	A (asking, "B reflects on transfer value")
66. Language learning psychology (SP452-SP458)	A comments on personality and the language-learning process, with a special focus on anxiety and the lack of motivation to learn. A comments on personality and language learning, focusing on being open to challenges and the ability to seek opportunities for practice as part of the language learning process.
	B introduces the concept of "anxiety" and the fact that such emotional blocks may be an obstacle to learning processes. B also comments on the importance of using mistakes as a source for learning. B makes a remark about anxiety being a factor that can hinder learning and that the willingness to speak is an important asset when trying to learn foreign languages. B points to the fact that time is an important factor in the language learning processes. B makes a remark about methods for remembering words and other linguistic elements when the learning process is combined with positive experiences.
	A (prompting, "B reflects on coping with emotional blocks")
67. Responsibility (SP459-SP460)	A comments on the learners' responsibility for their own learning outside the school setting in terms of seeking opportunities to be exposed to the language in natural settings.
	B comments on the role of the school setting in the language learning process in terms of the school being the place where basic skills are acquired. However, further skills can only be developed as a consequence of the learners' own efforts outside the school.
	A (prompting, "B reflects on issues pertaining to responsibility")

Appendix 4B: Pragmatic Analysis of the Spanish Case (SP)

68. Listening skills (SP461-SP462)	A comments on the importance of being exposed to the language if one wants to learn it properly. The word "listen" is also used as an important factor in the language learning process. B remarks on the importance of listening to the language even if one does not fully understand it, and the relevance of being forced into using the language in natural settings, for instance in countries where English is not widely spoken. A (prompting, "B reflects on the importance of listening practice")
69. Interest (SP463-SP468)	A comments on the role of interest in the language learning process, with a focus on how to create such interest. A confirms B's remark about interest and its roots in fields of interest identified by the learners themselves. A asks if interest is a skill related to personality, or whether it is a skill that has to be acquired. B remarks that interest may be created by engaging in relevant language learning activities not necessarily organised in the school setting. B claims that interest may create opportunities for learning languages. A (asking, "B reflects on the nature of interest")
70. Practice opportunities (SP469-SP472)	A asks about the necessity of sending learners abroad as a compulsory part of the language learning process organised by the school. A defines the concept "target language" and the relevance of spending time in the target language country in order to enhance learning as a consequence of regular exposure to the language. B reflects on the relevance of living in the country for language learning purposes. A (asking, "B reflects on the access to practice opportunities")
71. Overall metacognitive insight (SP473-SP477)	A focuses on the distinction between mother tongue, English, and foreign languages seen from the perspective of Norwegian learners. A provides B with information about the overall nature of the research project and B's role therein. B asks about the extent of the research project. A (informing, "B reflects on the overall nature of metacognition")

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4036 STAVANGER

Vår dato: 05.11.2014   Vår ref: 40345 / 3 / LMR   Deres dato: Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 17.10.2014. Meldingen gjelder prosjektet:

40345	The emergence of metacognitive production systems in systematic metaconversations in the foreign language classroom
Behandlingsansvarlig	Universitetet i Stavanger, ved institusjonens øverste leder
Daglig ansvarlig	Hans Erik Bugge

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/meldeplikt/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://pvo.nsd.no/prosjekt.

Personvernombudet vil ved prosjektets avslutning, 03.03.2015, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Katrine Utaaker Segadal

Linn-Merethe Rød

Kontaktperson: Linn-Merethe Rød tlf: 55 58 89 11
Vedlegg: Prosjektvurdering

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Personvernombudet for forskning

Prosjektvurdering - Kommentar

Prosjektet ble i utgangspunktet innmeldt til Datatilsynet, og meldeplikten er slik sett overholdt. Ettersom NSD er personvernombud for Universitetet i Stavanger, meldes prosjektet, som nå er i sluttfasen, til NSD.

Utvalget er informert skriftlig om prosjektet og har avgitt frivillig samtykke til deltakelse. Det er ombudets vurdering at elever ved videregående skole på selvstendig grunnlag kunne samtykke til deltakelse i dette prosjektet.

Forventet prosjektslutt er 03.03.2015. Ifølge prosjektmeldingen skal innsamlede opplysninger da anonymiseres. Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:
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