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Author: James Thomson (Author's signature)
Supervisor: Milica Savic	
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Abstract

This aim of this thesis is to investigate the use of hedging devices in the English writing of year nine girls and boys in two Norwegian lower secondary schools. Hyland (2005: 52) defines hedges as devices that “indicate the writer’s decision to recognize alternative voices and viewpoints and so withhold complete commitment to a proposition”. These linguistic devices have been shown to be important to academic writing (e.g. Hyland and Milton, 1997). Hyland (1996) argues that hedges should be explicitly taught to language learners at an early stage of their learning process. This research focuses on how hedging devices in language learner writing interact with holistic grades, topic, formality and gender at the lower secondary educational level.

This thesis used mixed methods (Dornyei, 2007) in that it incorporated both quantitative and qualitative data, where the quantitative data was given priority at all stages of data collection and analysis. It consisted of 82 texts written as part of year nine English evaluations from two Norwegian schools. Hedges in this textual data were quantified in terms of hedging category and accuracy. Five categories of hedge were used for this analysis, including Adaptors, Rounders, Plausibility Shields, Explicit Markers of Author Involvement and Verbal Fillers (Holmes, 1986; Prince et al., 1980; Salager-Meyer, 1994). Hedges were counted as either accurate or inaccurate based on conventions of grammaticality, well-formedness and appropriateness (Fetzer, 2004). The frequency per one hundred words of each accurately and inaccurately used hedging category was calculated and used to compare how hedging use interacted with holistic grades, topic, formality and gender. The qualitative data included interviews with three teachers who allowed the researcher to use data from their English classes. The interview data was collected to provide information about the context in which the textual data was written.

The results of this study show that gender is generally not a significant factor in hedging use in pupil writing at this level. Instead, there was greater individual variation in hedging use among each gender group. In terms of holistic grades, hedging was significantly more accurate in texts that received the highest passing grade and less accurate in texts that received the lowest passing grade. The frequencies of each category of accurately and inaccurately used hedge tended to be homogeneous across the mid-range grades. The topic chosen by the school seemed to be a significant factor determining hedging use. The pupils

who wrote about sports used more hedges than pupils who wrote literary analyses. This implies that pupils have more personal experience and opinions regarding sports and recognise the need for hedging their statements in texts about this topic. Formality also affected hedging use, where texts written in an informal style contained a significantly higher frequency of accurate hedging devices than texts written in a formal style. This suggests that year nine pupils are more capable at using hedging devices in informal written contexts.

Overall, the data showed that year nine pupils in Norwegian schools have a good understanding of hedging devices, but more explicit tuition may be beneficial to guide pupils in using hedges (“can”, in particular) accurately, in using a wider variety of hedging devices and in recognising when hedges are appropriate to the written formality. Further research could compare language learners’ with native speakers’ hedging use in order to provide insight into what to expect of learners at this level.

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1 – Introduction

This study investigates how hedging devices are used in texts written by year nine pupils and whether their use correlates with holistic ratings, topic, formality and gender. Data consisting of 82 pupil texts from two Norwegian lower secondary schools were collected. The texts were written as part of a normal school test in English. The analysis of this data involved quantifying the frequency of five categories of hedging device. Each hedge was further considered for whether or not it was used accurately. The pupils' English teachers were also interviewed to provide insight into their teaching methods, their awareness of hedging devices and their perceptions of girls' and boys' writing. The research questions for this study are:

- 1- Does hedging use in year nine texts correlate with holistic ratings, topic and formality in terms of:
 - a. Frequency?
 - b. Hedge type?
 - c. Accuracy?
- 2- Do year 9 boys and girls in Norwegian schools use hedges differently when writing in English?

This chapter will present background theories and studies relevant to this research. Firstly, hedging will be addressed, providing a brief overview of some definitions and research. There will then be a discussion of English teaching in Norway. Following this, studies and statistics pertaining to gender in Norway will be presented to illustrate why gender was included as a factor in this research. Finally, there will be a brief presentation of the study's methodology and relevance.

1.1 Hedging

One of the earliest recognised (e.g. Skelton, 1988) definitions of hedging was put forward by G. Lakoff (1973: 471) who defined hedges as “words whose meaning implicitly involves

fuzziness”. Researchers have later adapted the term in a variety of ways and have used it to analyse both speech (e.g. Prince et al., 1980) and writing (e.g. Salager-Meyer, 1994). Hedges can have a variety of functions: they can be used as markers of politeness to minimize the face threatening aspect of statements (Brown and Levinson 1978); they can function to indicate that a statement may be epistemologically inaccurate (Salager-Meyer, 1994: 151); and they can also have an interpersonal function, helping to establish a relationship between a speaker and a listener, or a reader and a writer (Hyland, 1994: 479).

Studies of hedging in writing have tended to focus on academic writing, looking at how hedges are used (e.g. Hyland, 2005), why they are important (e.g. Skelton, 1988), and how they can be challenging for language learners to master (e.g. Hinkel, 2005). Hyland (e.g. 1998) has consistently argued that hedging is essential and has put forward that learners should receive explicit tuition in how to use hedging devices at an early stage of their learning process.

There is no single taxonomy of hedges to analyse speech and writing as researchers often devise their own taxonomies to specifically address their data set. Researchers may choose to utilise a formal taxonomy (e.g. Hinkel, 2005), where categorization is based on the grammatical classification of each hedge, or a functional taxonomy (e.g. Prince et al., 1980), based on the contextual use of each hedge. It may seem advantageous that the concept of hedging can be adapted to the needs of a given study, but Crompton (1997: 271) argues that without a universal taxonomy “there seems little hope of studying or teaching the phenomenon consistently”.

Few studies seem to have investigated how hedges are used in the writing of lower secondary pupils (e.g. Johansson and Geisler, 2011) or how written hedging use correlates with gender (e.g. Vold, 2006). No study seems to have investigated whether hedges are accurately used in second language writing, although Hinkel (2005: 41) provides examples showing that second language learners used hedging devices in writing with less lexical variation and reduced effectiveness. This study is unique in that it investigates how the accuracy of five hedging categories, in texts written by year nine learners of English in lower secondary schools, interacts with holistic ratings, topic, formality and gender.

1.2 English Teaching in Norway

This section will outline some aspects of second language (L2) learning and address the way English is taught and used in Scandinavia: Norway in particular. Some studies cited in this section are based on Swedish and Danish speakers, as these languages are similar to Norwegian (Delsing and Lundin Åkesson, 2005: 3).

Saville-Troike (2012: 4) distinguishes between learning a *foreign* language and learning a *second* language. A second language is one that a speaker needs to partake in arenas such as education and employment. Usually, migrants who live in a country where their native tongue is not dominant will have to learn that country's language as a second language. A foreign language is one not essential to a speaker's daily life, but is rather learned for travel purposes, or as a school subject, for example.

While English is arguably not essential to the daily lives of most Norwegians, the Norwegian school curriculum distinguishes between English (UDIR., 2015b) and other foreign languages (2015c). It is, however, debatable as to whether English should be classed as a second language or as a foreign language. English is taught in Norwegian state schools from year one (age six) and is an obligatory subject for all pupils until year ten, the end of lower secondary school (UDIR, 2013). In the time spent at school from years one to ten, pupils receive 557 hours of obligatory English tuition. Once they begin year eight, they can choose, instead of studying an alternative foreign language, to specialise in English, adding a further 227 hours of tuition (UDIR., 2011b: 7). After lower secondary school, upper secondary school programs may include English as an obligatory subject (UDIR, 2014). Furthermore, English is being used more and more frequently in tuition at higher institutions in Scandinavia (Thørgersen et al., 2013: 14).

In the Norwegian curriculum for English (UDIR., 2015b: 7), the focus prior to year three is primarily on acquiring oral skills, with just two basic goals for written communication. The Norwegian board of education seem to acknowledge, as in first language (L1) learning, that it is desirable for oral skills to be learned first and written skills to be learned second. The goals regarding literacy are more detailed for pupils at the end of year

four, roughly equal to those regarding oral skills. This balance between oral and literacy skills remains roughly balanced until the end of upper secondary school.

Goals for reading and writing are grouped under the subheading “written communication” (UDIR., 2013: 9). The goals generally focus on understanding content, developing analytical abilities and utilizing writing strategies. The goals are somewhat open to interpretation and, besides goals about understanding culture in English-speaking countries, do not prescribe topics for pupils to learn about, leaving teachers free to choose teaching methods and materials as they please. It is common for schools to purchase specialised textbooks that present a variety of texts within various topics, providing oral and written tasks related to these texts. Using these textbooks, teachers can cover all the goals in the curriculum with an array of texts that are adapted to the levels and general interests of the pupils. However, dependence on textbooks may reflect a feeling of insecurity and may lead teachers to feel reluctant to use self-made materials (Drew, 2007: 335).

Teachers in Norwegian lower secondary schools are obliged to evaluate pupils using grades as well as providing feedback at the end of each school term (Kunnskapsdepartementet, 2006). For English, pupils should receive a grade and feedback for both written and oral work. In evaluating written work, rubrics are often used to mark texts holistically (e.g. UDIR., 2011a). The grades range from 1 at the lowest end of the scale to 6 at the highest end, with grade 4 tending to be the average grade. In the rubric for assessing tenth grade writing, grade 1 is not mentioned, probably because 1 is not considered a passing grade. The scale begins at grade 2, which is used when pupils exhibit low competence (UDIR, 2011a). For each individual test, grades can be more finely adjusted using either a plus (e.g. 4+), showing a tendency towards a higher grade, or a minus (e.g. 4-), showing a tendency towards a lower grade. While such holistic grades are useful for their speed and relative reliability in school situations, they have limitations such as personal judgement leading to raters using different criteria (Goulden, 1994, as cited in Barkaoui, 2010: 515) and room for raters to be subjective (Song and Caruso, 1996: 176).

On an international level, Bonnet (2002: 70-72) reported that of seven European countries (Norway, Denmark, Sweden, Finland, Netherlands, Spain, France), 16-year-old pupils in the Scandinavian countries scored highest on oral, reading, literacy competency and written tasks in English. The European Commission (2006: 9) found that in Sweden and Denmark (Norway was not part of their report), the vast majority of people report that they are able to hold a conversation in a language besides their mother tongue (90% and 88% respectively; the European average was 56%). The most common second language in these

countries is English (2006: 13). Delsing and Lundin Åkesson additionally found that while Danish, Swedish and Norwegian are relatively similar languages (2005), speakers of these languages are better at communicating in English than in their neighbouring Scandinavian languages (2005: 145).

In Norway, the English curriculum acknowledges the universality of English and identifies areas (films, literature, songs, sports, trade, products, science and technology) in which it is used (UDIR, 2013: 2). The curriculum acknowledges the effect that English has had on the Norwegian language: “through these areas many English words and expressions have found their ways into our own language” (UDIR, 2013: 2). In a small study, Johannessen (2014: 25) found that her participants, from different educational and vocational backgrounds (2014: 19), code-switched¹ from Norwegian to English quite frequently. She concludes that there are likely to be two reasons that motivate code-switching in Norway. The first is to communicate: the speakers may wish to say something that cannot be fully expressed in Norwegian. The second motivation is to identify with a particular social group.

Scandinavia is generally infiltrated by English from both above (e.g. education and business) and below (e.g. subcultures, music scenes), giving English a strong position in Scandinavian society (Preisler, 2003, as cited in Norrby, 2014: 18-19). The motivations for code-switching and the status of English seem to contribute to the widespread English competence among Scandinavians.

1.3 Gender in Norway

Gender effects on hedging was chosen as a focus in this thesis based on various statistics and studies (Bjørnstad and Røthing, 2012; Bussey et al.: 1999; Gurian: 2001; Lauglo: 2008; Lee et al.: 1994; Newkirk: 2002; Severiens and Tem Dam.: 1994; SSB: 2016a, 2016b; Studenttorget: 2015) showing there are differences in the achievements, attitudes, and learning styles of girls and boys. The World Economic Forum (2015) rates Norway second in terms of gender equality, but there are a number of statistics that indicate gender inequality is still an issue. The statistics and studies investigating correlations between gender and education are discussed here.

¹ Trudgill (2000: 106) describes code-switching as a “rapid form of language-switching”.

In Norway, more women are receiving a higher education than men; 42% of women compared to 28% of men aged 19 to 24 were in the higher education system in 2015 (SSB, 2016a). Despite a higher number of women receiving a higher education than men, women still earn less and have fewer leadership positions (SSB, 2016b). In 1974, the Norwegian board of education explicitly addressed gender inequality on the labour market and included the word *equality* in the national curriculum. In 1997, twenty years later, gender inequality was seemingly less of an issue and the word *equality* was replaced with the concept “equal worth” (roughly translated from “likeverd”). This held the implication that either the board of education perceived gender equality had been achieved, or there had been a shift in perspective: instead of providing women and men with equal professional opportunities, there was an acceptance that all genders should be equally respected regardless of professional choices (Bjørnstad and Røthing, 2012: 407).

In Norwegian lower secondary schools, girls achieve, overall, higher grades in most subjects. On average, girls score more than boys in all written (Norwegian, English and mathematics) and oral evaluations (Norwegian, English, English specialization, social sciences, mathematics, religious education, French, Spanish, German, mathematics, science) in the final year of lower secondary school. Boys only achieve higher grades than girls in physical education (UDIR, 2015a: 4). Thus, girls are academically ahead of boys in all subjects dependent on literacy skills.

Further illustrating gender differences in literacy skills, a PISA (Programme for International Student Assessment, OECD, 2010: 57) study found that, among fifteen year olds in all the countries studied, boys are behind girls regarding reading skills. The difference between boys and girls in Norway is above the OECD average, ranking 48th on the list of countries studied. This trend is similar in all other Scandinavian countries where the gender differences in reading are more pervasive than those evident in mathematics or science (Kjærnsli and Roe, 2010: 21-22). Roe and Vagle (2012: 438) highlight that this difference in reading ability has increased over the past twenty years. They argue that reading is a key skill for mastering most school subjects, each of which have their own specialised language. Additionally, PISA has shown that while the gender gap has widened (Roe and Vagle, 2010: 68), both boys and girls received, on average, lower reading scores in 2009 than in 2000 (Roe and Vagle, 2010: 70).

Although many argue that gender equality issues tend to disfavour women, gender differences in schools often raise concerns about the welfare of boys. For example, Gurian (2001: 63) argues that while there has been greater focus on the disadvantages of girls, gender

inequality affects both boys and girls, “with the harshest gender disadvantage falling against boys”. One statistic illustrating Gurian’s argument in the USA is that, among all ethnicities, there are more men aged eighteen to twenty-four who have not completed high school (NCES, 2005: 17). Newkirk (2002) reports that boys receive more attention from teachers, thereafter pointing out that this fact is used to argue that teacher attention, regardless of being positive or negative, is advantageous for boys. Contrary to this view, Newkirk argues that receiving negative attention can be disadvantageous as it “reinforces the counterproductive ‘troublemaker’ or ‘clown’ identity the student has come to assume” (2001: 33).

As girls are achieving better grades than boys in most subjects, it may seem that Norwegian schools, in general, are femininely oriented (Bakken et al., 2008: 39). This is often thought to be because only 30% of teachers are male in primary and lower secondary schools (Bakken et al., 2008: 39). School culture is thus feminised by the total number of female teachers who value understanding, cooperation and care over more masculine values like respect, discipline and knowledge. This means girls are more easily able to adapt to the school system (Bakken et al. 2008: 40). Perhaps highlighting this point further, boys receive 68% of special needs tuition in Norway (Digre and Haugberg, 2014: 126).

Despite Norway being second in the world regarding gender equality, it seems that gender differences remain pervasive in schools. Understanding the reasons why boys are behind girls in all literacy-dependent subjects may provide insight into how to stimulate learning equally between both genders. One of the aims of this study is to investigate whether gender affects hedging use in pupils’ written English in Norwegian lower secondary schools.

1.4 Methods and Relevance

The aim of this study is to investigate how year nine pupils use hedging devices in written English in Norwegian lower secondary schools to see whether there are correlations with holistic ratings, topic, formality and gender. This research uses mixed methods (Dornyei, 2007) in that it combines quantitative and qualitative methods to answer the research questions. The quantitative data was given precedence at the stages of collection and analysis. This data consisted of 82 pupil texts written as part of a school test in English. These texts were analysed to quantify five categories of hedge. The hedging taxonomy was devised using previous studies (Prince et al., 1980; Salager-Meyer, 1994; and Holmes, 1986), and included

the categories of Adaptors, Rounders, Plausibility Shields, Explicit Markers of Author Involvement and Verbal Fillers. Criteria outlined by Fetzer (2004) were used to classify each hedge as being either accurate or inaccurate. The qualitative data consisted of semi-structured interviews held with three teachers about their teaching practices, knowledge of hedging and perceptions of gender achievements in written English. The qualitative data has been collected primarily to provide depth to the discussion of the quantitative results.

Hyland (e.g. 1998) postulates that hedging should be taught at early stages of second language learning, but little research seems to have been conducted on the use of hedges at the lower secondary school level. This study may provide insight into the relevance of explicitly teaching hedging at this level. This research may also provide insight into why boys are academically behind girls in English in lower secondary schools (UDIR., 2015a: 4).

1.5 Thesis Structure

In the next chapter, theories and research underpinning the research questions will be outlined. The theory chapter is divided into sections looking at hedging definitions and studies, accuracy and hedging, studies using quantifiable measures, and research that has investigated the role of gender in educational contexts. In chapter three, the methods used to collect and analyse the textual data and the methods used to collect qualitative data will be outlined. The findings from both the quantitative and qualitative data will be presented in chapter four. In chapter five, there will be a discussion of the implications of the quantitative findings linked to previous research and to the comments made by the teachers, followed by limitations and suggestions for future research. The final chapter summarizes the conclusions that may be drawn from the findings.

2 – Theory

This chapter will explore theory underpinning the research questions on which this thesis is based. This research has been carried out in Norway, a factor that is elementary to most of this chapter's discussion. The chapter is split into four sections. Hedging devices are the object of measurement in this study and will be discussed in the first section, looking first at definitions of hedging and then at research that has investigated hedging in speech, reading and writing among first and second language users. The second section looks at the linguistic factors constituting accurate hedging use. It can be challenging for learners to use hedges correctly, so this research includes an analysis of whether or not hedging devices have been used accurately in the data sample. As hedges are quantified in this study, the third section deals with studies that have tried to objectively judge the quality of written language using a host of different quantifiable measurements. In particular, studies that have looked at writing by second language learners will be described, providing a context for the quantifiable measures used in this study. Finally, relevant theories of gender will be outlined. By and large, society divides people based on their biological categorization as either female or male. Numerous theories and studies have addressed the causes and effects of gender differences with regard to a variety of arenas. There will be a particular focus on gender in lower secondary education. The sections in this chapter should contribute to creating a foundation on which the motivation and methodology of this research rest.

2.1 Hedging

The term *hedge* is elusive and is defined and applied in a variety of ways (Lewin, 2005: 165). The term has been used synonymously with *mitigation* (Holmes, 1984: 346; Hyland, 1998: 10) and *attenuation* (Hu and Cao, 2011: 2796), and generally refers to linguistic devices used for “withholding full commitment to statements” (Hyland, 1998: 3). The functions of hedging are often discussed in contrast to *boosting* or *intensifying* (Holmes, 1984; Hinkel, 2005). Boosting refers to an increase in the force of a speech act (Holmes, 1984: 346). Hyland and Tse (2004: 164) set hedges and boosters in opposition: “*Hedges* mark the writer’s reluctance

to present propositional information categorically while *boosters* imply certainty and emphasize the force of propositions”. While boosting and hedging represent two sides of the same coin, the scope of this study only permits an investigation of hedging. This section will first outline a handful of the numerous definitions and taxonomies of hedging and then address the way these definitions are applied to research investigating hedging use in spoken and written language.

2.1.1 Definitions and Taxonomies of Hedging

The various definitions of hedging are often similar, but theorists and researchers tend to adapt their definitions according to the academic context. In this section, the definitions of hedging associated with colloquial speech will be discussed first before looking at definitions of hedging associated with academic language.

G. Lakoff (1973: 471) defines hedges as “words whose meaning implicitly involves fuzziness”. This definition is narrow in comparison to succeeding definitions in that it refers essentially to the degree to which something could be categorized. He uses “birdiness” (1973: 459) as an example. While there would likely be little disagreement that a sparrow can be categorized as a bird, one may say of an ostrich that it is ‘*sort of* a bird’ as ostriches do not fulfil all the criteria for typical birds. The construction “sort of” acts as a hedge. These constructions thus become useful for linguistic conceptualisation when a speaker is unsure of the most accurate categorization for the concept in question.

Brown and Levinson (1987) categorize hedging as a form of negative politeness. While positive politeness often involves complimenting an interlocutor, negative politeness grants interactants “freedom from imposition” (1987: 61). Thus, a person can linguistically mark potential intrusion to acknowledge they are breaching their interlocutor’s right to this freedom. This form of politeness is more likely to be shared by strangers and is commonly considered to embody politeness in general (1987: 64, 129-130). Brown and Levinson’s (1987: 145) definition of hedging is similar to G. Lakoff’s: “a particle, word, or phrase that modifies the degree of membership of a predicate or noun phrase in a set”. They go on to point out that there are an indefinite number of forms that hedges can take (1987: 146). They present examples of hedges based on the Gricean maxims of quality and quantity (Grice, 1975, see section 2.5). Examples of hedges linking to quality, regarding the truth value of an utterance, include “I think” and “my best recollection”. Hedges linking to quantity, regarding the precision of an utterance, include “roughly” and “to some extent” (Brown and Levinson,

1987: 164). With regards to considering hedging a politeness device, the Norwegian curriculum specifically acknowledges the importance of politeness to oral communication: “[g]eneral politeness and awareness of social norms in different situations are [...] an important element” (UDIR., 2013: 3). Otherwise, there is no mention of hedging in the Norwegian curriculum.

There is a diversity of grammatical structures that can have a hedging function. Quirk et al. (1985) use the term hedge to describe a number of grammatical features, but only briefly define hedging under “type (i) comment clauses” (1985: 15.54). Under this subheading, they discuss the use of phrases like “I think”, “I believe” and “it seems”, which may have four semantic functions; hedging is named as one of the functions when these phrases “express the tentativeness over the truth value of the matrix clause” (1985: 15.54).

In relation to a variety of grammatical features, Biber et al. (1999) address hedging’s various uses more explicitly than Quirk et al. (1985). Hedging is mentioned in connection with an array of grammatical constructions such as tags, coordination tags, alternative questions, noun phrase expressions and quantifier expressions (1999: 1080, 114, 208, 1012, 1013). More specifically, hedging is identified as a subcategory of epistemic stance adverbs labelled *imprecision hedges* (one of three categories of stance adverbs, 1999: 557; see also Johansson and Geisler, 2.3). Their description of imprecision hedges is comparable to Lakoff’s concept, including phrases like “sort of”, “kind of” and “roughly”. Biber et al. write that, in conversation, hedges “can show the imprecision of word choice” (1999: 557). Another of the subcategories of epistemic stance adverbs is of “certainty or doubt”, including words like “probably”; they do not label this subcategory as hedging per se, but they point out that “the category of hedges also overlaps with stance adverbs that convey uncertainty” (1999: 558). Additionally, they acknowledge a category of hedges they call “approximators”, which includes words such as “like”, “typically” and “approximately” and “typically function as modifiers of numerical or other quantifying expressions” (1999: 557). They touch on potential difficulties in identifying hedges; a word (e.g. “like”) may be categorized as an epistemic stance adverbial (similar to a hedge) or as a discourse marker with no lexical meaning (1999: 858). Many of their references to hedging are connected with spoken language. They explicitly distinguish between conversation, in which hedges are used to express general uncertainty, and academic prose, in which downtoners (for example, “barely”, “mildly”, “particularly”) are used to express uncertainty to a more specific degree (1999: 44). Earlier research on hedging tended to focus on spoken language and later research applied hedging to the analysis of written language (see section 2.4.2).

In academic writing, hedging is commonly been perceived to be inappropriate. Hyland (1994: 251) argues that “coursebooks [...] tend to underrepresent the importance of hedging devices”, a shortcoming likely to stem from negative attitudes; Strunk and White (1959), for example, describe hedges as “the leeches that infest the pond of prose, sucking the blood of words” (as cited in Hyland, 1998: 223). Hyland counters such views, holding that “[h]edges are a crucial means for presenting new claims for ratification and are among the primary features which shape the research article [...] as the principal vehicle for new knowledge” (1998: 6).

Skelton (1988: 39) recognises that hedges are “a resource, not a problem”. To combat the confusion in defining hedging, Skelton (1988: 39-40) suggested distinguishing between proposition, “highly factual and impersonal”, and comment, “[modulating] the relationship between the speaker and the language”, to aid the teaching of secondary-level students. However, Crompton (1997: 274) points out that the term “comment” is too vague to be a useful replacement.

Hyland (2005: 3; Hyland and Tse, 2004) includes hedging as a feature of *metadiscourse*. Metadiscourse refers to features of language that make a communicative act more than simply an exchange of information, and involves “the personalities, attitudes and assumptions of those who are communicating”. Within this framework, hedges are defined as devices “which indicate the writer’s decision to recognize alternative voices and viewpoints and so withhold complete commitment to a proposition” (2005: 52). In his study concerning metadiscourse, Hyland found that “hedges and boosters accounted for 83 per cent of all metadiscourse [...], with hedges being four times more frequent” (2005: 67).

In other studies that focus solely on hedging, Hyland (1994; 1996; 1998; Hyland and Milton, 1997) consistently argues that the usefulness of hedging in academic writing is not widely recognised (e.g. 1996: 478). In arguing for the explicit teaching of hedging, Hyland outlines three reasons for why hedging is important in academia. Firstly, using hedges, scholars can accurately present their results, “recognising the impossibility of quantifying the world” (1996: 478). Secondly, using hedges allows authors to make claims without losing credibility. Thirdly, hedges contribute to establishing a relationship between a writer and a reader (1996: 479).

Researchers who have specifically studied hedging have treated these devices more sensitively detailing criteria for how devices fit into a variety of hedging categories. Taxonomies of hedges are often adapted based on the research context, making studies difficult to compare, and Crompton (1997: 271) claims that without a common definition of

hedging “there seems little hope of studying or teaching the phenomenon consistently”. Certain taxonomies can be described as *formal* in that they include categories of hedges based on their grammatical classification (Boston, 2002: 3). Crompton (1997: 277) points out two problems with formal criteria, the first being that certain forms identified as hedges may not always function as hedges. The second problem is that some structures may be overlooked despite having a hedging function. Other taxonomies can be described as *functional* in that hedges are categorised based on their contextual use (Boston, 2002: 3). Further, researchers have combined, to varying degrees, both formal and functional elements for their linguistic analyses.

Formal approaches are perhaps preferable for cross-linguistic studies in that grammatical features are arguably easier to compare than functional ones. Vassileva (2001) utilised seemingly more formal criteria (although she comments that her taxonomy “considers both formal and functional criteria”, 2001: 86) to compare texts written by English speakers in their L1 and by Bulgarian speakers in their L1 and L2. She used the words attenuation and hedging synonymously, referring to structures used for “decreasing the illocutionary force” (paraphrasing Holmes, 1984: 346) of communicative acts (2001: 85). She discusses hedges in the categories of modal verbs, semi-auxiliaries, adjectival/adverbial phrases and other. Modal verbs and semi-auxiliaries proved to be the most frequent forms in English (Vassileva, 2001: 91).

Hu and Cao (2011) conducted research to compare how hedging and boosting are used in empirical and non-empirical abstracts written in English and in Chinese. Their definition includes three factors: that hedging and boosting are features of metadiscourse (citing Hyland, 2005); that hedges and boosters express a writer’s attitude in modifying “entire propositions”; and that hedges and boosters can “express affective meaning” (2011: 2799). In their analysis, they included four categories of hedges: modal auxiliaries, epistemic lexical verbs, epistemic adjectives and adverbs, and miscellaneous (2011: 2800). Hu and Cao acknowledge the difficulties in translating hedging devices from one language to another (Holmes, 1982, cited in Hu and Cao, 2011: 2799). The researchers do not provide results for each category of hedge, but do comment that, in abstracts written in English, most hedges fall in to the categories of “epistemic lexical verbs and modal auxiliaries” (2011: 2802).

Yang (2013) compared hedges used in English and Chinese discourse, again based on formal criteria. The four categories used were: “modal verb; lexical verb; epistemic adjective, adverb, and noun; phraseological expression” (2013: 26). These categories prove to be useful for comparing the forms of hedges used in both languages and provided an interesting range

of results: modal verbs account for 16% of the hedges in the English corpus, and epistemic adjectives account for 46% (2013: 29). While formal criteria may be limited in some respects, the above research shows how more formally-oriented approaches may be useful to cross-linguistic analysis.

Taxonomies are seldom solely functional, but such approaches address the two issues with formal taxonomies identified by Crompton (that words only have a hedging function in some contexts, and that certain constructions with a hedging function may be overlooked) and are perhaps favourable for studies where a single language is represented in the data set. In studying spoken physician-physician discourse, Prince et al. (1980) utilized a functional taxonomy of hedging. They distinguished first between two broad types of hedge: *approximators* and *shields*. Approximators (cf. Biber et al., 1999) affect “the propositional content proper, but not the speaker commitment” (1980: 5). Approximators are further split into two subcategories: *adaptors* and *rounders*. Adaptors (e.g. “a little bit”, “somewhat”) are defined similarly to G. Lakoff’s (q.v.) definition: they “implicate prototypicalness” (1980: 8). Rounders (e.g. “approximately”, “essentially”, “about”) are used to show that “what one intends to convey is a range of items” (1980: 10). On the other hand, shields, distinguished from approximators, affect the “relationship between the propositional content and the speaker” (1980: 4). They divided shields into two sub-categories: *plausibility shields* and *attribution shields*. Plausibility shields convey “something related to doubt” and include words and phrases such as “probably”, “I think” and “as far as I can tell” (1980: 11). Attribution shields attribute “the belief in question to someone other than the speaker” and include phrases like “according to her estimates” (1980: 11). Some words and phrases fit into more than one category based on the context in which they are used.

Taxonomies have combined formal and functional criteria to lesser and greater degrees. Salager-Meyer (1994) analysed written medical discourse to investigate hedging use. Her definition of hedging was “three-dimensional” in that hedging expresses “fuzziness and vagueness (threat minimizing strategy)”; modesty and “avoidance of personal involvement”; and acknowledges the impossibility of “absolute accuracy” (1994: 153). She analysed texts for approximators and shields, acknowledging, but not using, the subcategories (Plausibility Shields, Adaptors, Rounders) outlined by Prince et al. (q.v.) for analysis. Modal verbs, probability adverbs, adjectives and epistemic verbs are recognised to function as shields, but such formal criteria are seemingly not deemed relevant to the other categories. In addition to approximators and shields, three further categories were used: “expressions [...] which

express the author's personal doubt and direct involvement" (e.g. "I think"), "emotionally charged intensifiers" (e.g. "surprisingly"), and "compound hedges" (1994: 154).

Hinkel's (2005: 30) taxonomy combines formal and functional elements based on her definition: "the employment of lexical and syntactic means of decreasing the writer's responsibility for the extent and the truth-value of propositions and claims, displaying hesitation, uncertainty, indirectness, and/or politeness to reduce the imposition on the reader". Her categories, which are accompanied by numerous examples, include *epistemic hedges* (e.g. "actually, indeed, likely"), *lexical hedges* (e.g. "kind of, a few, in a way"), *possibility hedges* (e.g. "hopefully, perhaps, possible"), *downtoners* (e.g. "a bit, almost, hardly"), *assertive pronouns* (e.g. "anybody, something") and *adverbs of frequency* (e.g. "frequently, monthly"). While her taxonomy is detailed, she does not explicitly define each category, but rather refers to among others, Brown and Levinson (1987) and Quirk et al. (1985).

Crompton (1997) reviews a number of hedging taxonomies, concluding with his own taxonomy that could potentially provide a common framework for researchers to work from. He acknowledges "that hedging cannot, unfortunately, be pinned down and labelled as a closed set of lexical items", further recognising that words classed as approximators are the only identifiable set of items (1997: 281). He argues that a functional approach is advantageous and borrows Lyons' (1977: 797) definition which states that a speaker uses hedges "to explicitly qualify his/her lack of commitment to the truth of a proposition he/she utters" (Crompton, 1997: 282). Additionally, he suggests the following test for identifying hedges:

Can the proposition be restated in such a way that it is not changed but that the author's commitment to it is greater than at present? If "yes" then the proposition is hedged. (The hedges are any language items in the original which would need to be changed to increase commitment.)

(Crompton, 1997: 282)

Instead of compiling a list of words or phrases, his taxonomy lists frequent sentence structures used to hedge the proposition. For example, "[s]entences with copulas other than *be*" and "[s]entences with modals used epistemically" (1997: 284). This structural focus seems to be unique, but no research reviewed here utilized this framework. Only Vassileva (2001: 86) compares her approach to Crompton's in that she also accounts for both semi-auxiliaries and modal verbs.

It is evident that hedging can be approached from many angles. Definitions and taxonomies are inconsistently utilised, which is a disadvantage for comparison and perhaps a factor contributing to negative attitudes towards hedging in academic writing. However, the flexibility of the concept may be advantageous in that it can be specifically adapted to a host of research situations. The next section looks at how the above definitions and taxonomies of hedging have been used in different ways to analyse spoken and written language.

2.1.2 Studies of Hedging in Speech

While this study looks at hedging in writing, hedging was initially analysed in speech, which will be discussed first. Prince et al. found that physicians in their sample uttered between 150 and 450 hedges an hour (1980: 3). They argue that these phrases are not simply used habitually, rather that they are consciously used to portray tentativeness; otherwise they would appear more often in questions and statements, as well as in assertions (1980: 22). They conclude that while hedges are likely to be commonly used by people in other professions, the high frequency of hedging among physicians may cause “frustration, depression, and/or anxiety”. This argument stems from the idea that the lay public often perceive physicians as omniscient, but physicians do not fulfil these expectations because of the tentativeness they are required to show when making statements (1980: 24).

R. Lakoff (1973: 54) refers to hedging in her theory about features that typify women’s language. Using her theory of *women’s language*, she argues that the way in which women spoke highlighted their sub ordinance. She argues, for example, that when adhering to the social norms of “women’s speech, strong expression of feeling is avoided, expression of uncertainty is favoured, and means of expression in regard to subject-matter deemed ‘trivial’ to the ‘real’ world are elaborated” (1973: 45). Her claims were based on introspection (1973: 47) and later research (for example, O’Barr and Atkins, 1998) shows that certain linguistic features Lakoff describes as belonging to women’s language did not correlate with biological sex, but rather correlated with social status. Additionally, Holmes (1993: 96) condemns Lakoff’s theory, arguing that it “portrayed women as hesitant, unconfident, spineless creatures, unwilling to assert their own opinions in case they offended others, or worse, because they had none”. Both Prince et al.’s conclusion and Lakoff’s theory further show how hedging may be negatively perceived and associated with unassertiveness (Prince et al., 1980: 24; Hyland, 1998: 8). These negative perceptions have been criticized by, for example,

Skelton (1988: 38) who pointed out that uncertainty has been discussed “as if uncertainty were a bad thing”.

Holmes (1990) sensitively analyses hedging use in speech, recognising the importance of accounting for an array of contextual factors, and for methods for quantification. She discusses some contradictory findings of a number of other studies that looked at hedging in speech, showing, for example, both women and men as being to be more tentative, (e.g. Brown, 1980, as cited in Holmes, 1990: 192). She argues that the inconsistent results may be caused by a lack of sensitivity regarding which linguistic devices have a hedging function and whether this function is affected by the given linguistic context. She thoroughly addresses these aspects in her own analysis, for which she uses speech corpuses representing an array of contexts to compare how women and men use five linguistic devices in speech (1990: 196). Her analysis reveals that women and men use certain particles to different degrees and with differing intent. For example, women and men use “sort of” in similar frequencies, but women have a tendency to utter it in its affective (interpersonal) sense rather than in its epistemic (imprecise) sense (1990: 197-198). The frequency of “I think” is similar between men and women, but women more often used it in its deliberative (certainty) sense, whereas men use it in its tentative sense (1990: 199-200). Holmes (1990: 202) concludes that, contrary to R. Lakoff’s claims, her results show women to be “confident, facilitative and supportive conversationalists”.

In another study, Holmes (1986) focuses on the frequency and various functions of “you know” in men and women’s speech. She acknowledges “you know” can be used with a hedging function. She writes further that all instances of this expression function as Verbal Fillers, which she describes as “giving the speaker time for linguistic planning or plugging” (1986: 6). Of the different functions of “you know” that convey uncertainty, she compares the “appealing” function to R. Lakoff’s original definition of hedging: that it gives “the impression that the speaker lacks authority or doesn’t know what he’s (sic) talking about” (Lakoff, 2004: 79). Holmes found, again contradicting R. Lakoff’s theory, that “you know” occurred at similar frequencies in women’s and men’s speech, but that men use the phrase more often with an uncertain function (1986: 13-14).

2.1.3 Studies of Hedging and Reading

While earlier studies seemed to focus on hedging in spoken discourse, a growing number of studies have focused on hedging in reading and writing. In terms of reading, research

(Crismore and Vande Kopple, 2010; Hyland, 2000; Lewin, 2005) has shown that the use of hedging present in a given text can affect a reader's attitudes and learning outcomes. Crismore and Vande Kopple (2010: 100) found that year nine readers in America were more positive to the authors of unhedged scientific texts, identifying them as both confident and knowledgeable. Hedged scientific texts were perceived as being "more informal, more connected, more biased, and had more of the author's personality present". An author of a hedged social studies text, on the other hand, was perceived to be more of an "interpreter" at the same time as seeming more respectful and warmer (2010: 100). Readers of hedged texts were more positive to themselves as learners as they felt they were more motivated to read the passages and were reading more actively. Readers of hedged texts also showed greater learning outcomes than those who read unhedged texts (2010: 101). Crismore and Vande Kopple (2010: 102) also analysed their results in terms of gender differences and found, for example, that boys were less likely to admire authors who showed uncertainty (i.e. those that used hedges; 2010: 106).

In an investigation of how L2 learners read, Hyland (2000: 19) found that they were more likely to be able to identify boosters than hedges and that they were even likely to interpret some hedges as expressing certainty. The participants in the study were undergraduates whose first language was Cantonese, thus their cultural background may explain the results, but Hyland argues that the proficiency of the speakers also contributed to the results and that such markers of attitude should be taught more explicitly to L2 speakers (2000: 20).

In addition to considering reader attitudes, Lewin (2005) investigated the attitudes towards hedges among authors. She notes that perhaps the most notable finding was that authors did not consider some items in their writing to be hedges, contrary to definitions put forward by linguists. For example, one of the authors did not consider "suggest" a hedge (2005: 171). The readers', who were PhD candidates, (2005: 163) interpretations were comparable to that of linguists, suggesting texts may be read as being more hedged than an author intended. One possible explanation for this discrepancy is that a number of forms are perceived to be unmarked in that they have become institutionalised and necessary to the written discourse. Writers only consider structures to be hedges when they feel that they are optional, whereas readers simply class structures as hedges based on their meanings (2005: 172).

2.1.4 Studies of Hedging in Writing

Studies analysing texts for hedges have been carried out for various purposes, but often with a comparative focus, rather than simply descriptive. The studies of hedging in writing reviewed here all looked at texts written by either university students or academics. Hyland (1998) has carried out research to describe use of hedging in texts written by L1 writers in English. This has helped him justify the necessity of hedging in academia and devise a detailed overview of the linguistic means a writer may use to hedge a proposition. Besides Hyland's research, investigations have generally focused on differences in hedging across disciplines, across cultures (often to investigate how second language speakers use hedges), and across genders.

Research looking at hedging across disciplines includes a study by Vold (2006: 65), whose study also incorporated cross-cultural and gender factors. Comparing articles within linguistics and medicine written in French, Norwegian and English, she investigated the use of epistemic modality markers, a concept she defined similarly to hedges: "linguistic expressions that qualify the truth value of a propositional content". Regarding the different disciplines, she found only small differences in the use of epistemic modality markers (2006: 77). Her findings support Markkanen and Schöder (1997: 10), who claimed that "the differences in the use of hedges between texts in different fields are not so great as has been often assumed".

Salager-Meyer (1994) studied medical writing exclusively, investigating the differences between research papers and case reports. Salager-Meyer (1994) found that hedging occurs to different degrees in different sections of such articles. Sections outlining a study's methods included few hedges, seemingly because such sections simply outline the procedures researchers undertake (1994: 161). Discussion sections were most heavily hedged; here, authors are required to interpret their findings while, at the same time, opening for potential rebuttals (see also Yang, 2013: 28). Tentativeness is key to achieving this balance (1994: 162-163). Salager-Meyer (1994: 157) found that approximators, shields and compound hedges accounted for over 90% of the hedges present overall. These results imply that the purpose of a text can determine how and to what degree hedging devices are used.

Intercultural studies have shown that people may differ in their understanding and use of hedging devices depending on their linguistic background. Studies of hedging in L2 writing (Hinkel, 1997, 2005; Hu and Cao, 2011; Hyland, 1998; Hyland and Milton, 1997; Vassileva, 2001; Vold, 2006; Yang, 2013) have shown that L2 speakers often hedge their writing

inappropriately when writing in English. Hyland (1998: 221) writes that “[L2] writing may appear as too direct”, or “too tentative”.

Hinkel (1997, 2005) found that linguistic forms intending to express indirectness, usually used in speech, are present in student essays written by native English speakers and speakers of Chinese, Korean, Japanese and Indonesian. Hinkel points out that non-native speaker writing may often seem vague to Anglo-American speakers (1997: 382). Of the indirectness markers studied, Hinkel (1997: 367) found that the non-native written texts often featured significantly greater numbers of many, but not all, indirectness markers. The median of the percentage of hedges was, for the most part, higher in texts written by the non-native speakers, with the exception of two categories of hedging (lexical and possibility), which were less frequent in Chinese-authored texts.

In another study, again analysing student texts written in English, Hinkel (2005) narrowed her focus, quantifying only hedges and intensifiers. Chinese, Japanese, Korean and Indonesian speakers used significantly more epistemic hedges than L1 speakers, but Arabic and Vietnamese speakers used fewer. Japanese, Indonesian, Vietnamese and Arabic speakers used significantly fewer lexical hedges than L1 speakers, but Chinese and Korean speakers used these with similar frequencies to native English speakers. Despite these mixed results, Hinkel concludes that overall “L2 academic prose contained fewer hedging devices than that of [native English] writers” (2005: 40). L2 speakers also used fewer downtoners, which are treated separately from hedges in the discussion (2005: 42); they are identified as devices that “restrict the meanings and reduce the qualitative and emotive implications of verbs, adjectives, and abstract nouns” (2005: 38). L2 speakers used more assertive pronouns, while adverbs of frequency were seldom used by either group (2005: 42-44). While the results show that the frequency of each device is quite different, Hinkel points out that further differences become evident when looking at which items within each category were used. For instance, her examples of hedging devices in her sample showed that those used by L2 speakers were less lexically varied and less effective in expressing an appropriate level uncertainty (2005: 41). She concludes that L2 speakers write using a limited set of hedging devices and a greater frequency of intensifiers that often stem from casual spoken discourse (2005: 47). The contradictory results in Hinkel’s studies may be due to the comprehensive nature of the first study, while the second is more sensitive in its analysis as it focuses only on hedges and intensifiers.

Other studies have supported Hinkel’s (2005) latter conclusion, showing that Chinese (Hu and Cao, 2013; Hyland, 1998; Yang, 2011), Bulgarian (Vassileva, 2001), Dutch

(Robberecht and Peteghem, 1982, as cited in Hyland and Milton, 1997: 185) and Arab (Scarcella & Brunak, 1981, as cited in Hyland and Milton, 1997: 185) speakers use fewer hedging devices in writing academic articles in English. This further supports the assumption that hedging devices are difficult for L2 speakers to master. One reason for hedging being so difficult for L2 speakers in English is that, compared to other languages, hedging is particularly prominent in English academia. Hedging is less pervasive in academic articles written by native speakers in Chinese (Hu and Cao, 2013; Yang, 2011), Bulgarian (Vassileva, 2001), French and Norwegian (Vold, 2006). In the literature reviewed here, only Finnish writing seems to contain more hedges than English (Crimmore, 1993; as cited in Hyland, 1998: 220). In comparing English, French and Norwegian, Vold (2006: 77) comments that “Norwegian researchers tend more towards the Anglo-American style of writing than towards the French style”. Additionally, while hedging tends to be more common to English academic writing, boosting devices tend to be less frequent (e.g. Hu and Cao, 2013: 2802).

Yang (2013: 27-28) found that, while the distribution of hedges across the sections of articles authored by Chinese speakers was similar to that of English speakers (similar to Salager-Meyer’s findings), Chinese speakers used less than half the total number of hedges. Both Yang (2013: 28) and Vassileva (2001: 87) discuss their results in terms of the interlanguage hypothesis, which states that L2 writing is likely to be characterised by a balance of features from both the writer’s L1 and their L2. A Chinese writer, for example, would thus hedge less in a Chinese article than in an English one, but hedging in their English article would be less frequent than would be evident in native English writing. Hu and Cao’s (2013) results support this hypothesis, but they do not consider it in their discussion. Neither Yang’s nor Vassileva’s results support this hypothesis in that both Chinese and Bulgarian authors of English articles hedged less than in their L1s. Vassileva (2001: 87-88) suggests this is perhaps either because learners do not know how to hedge their writing, or because they are not aware of the necessity to use hedges.

Hedging may be challenging for L2 learners to master for a variety of reasons including their mother tongue’s rhetorical traditions and the epistemological beliefs of an academic community. In the case of Asian learners of English, Hinkel (1997: 363) discusses the differences in rhetorical traditions “based on Confucian, Taoist, and Buddhist philosophical precepts” and on Anglo-American precepts; only Confucian rhetoric will be discussed of the Asian traditions here. The Anglo-American ideals are generally based on Socratic influence. Socratic rhetoric is considered to embody a search for rationally justified knowledge (as opposed to “true belief”) and idealizes doubting one’s own beliefs in finding

truth for oneself (Tweed and Lehman, 2002: 90-91). Confucian rhetoric values “acquiring and transferring knowledge rather than expressing personal hypotheses” under the notion that the essential truths are already known and may be learned from respected authority figures (2002: 92). Such differences in rhetorical traditions would explain the cross-cultural discrepancies in the use of hedges and boosters.

A second possibility regards the differences in the development of epistemological beliefs in America and China (Hu and Cao, 2011: 2805). Looking first at the use of how metadiscourse markers reflect the epistemological beliefs in American scientific abstracts, Gillaerts and Van de Velde (2010: 136) found that, over the past thirty years, boosters and attitude markers (which “express the opinion of the author”, 2010: 131) had become less frequent, while hedges had become more frequent in later articles. This change may be explained by two factors. Firstly, linguistic disciplines have shifted more towards the hard sciences, explaining a drop in boosting devices. Secondly, pluralism, the idea that phenomena may be interpreted from multiple standpoints, has become more highly valued in American academia (Hu and Cao, 2011: 2805). As a result, scholars have become more tentative when making claims, as opposed to making claims authoritatively, explaining the increase in hedges (Gillaerts and Van de Velde, 2010: 136-137). Regarding linguistic disciplines, Chinese research has tended to shift towards positivism (contrasting with the shift towards pluralism in America), described by Yihong et al. (2001: 12): “language learning/teaching as an objective ‘reality’ to be scientifically studied”. This could explain the more prominent use of boosters in Chinese writing, contrary to use of hedges in Anglo-American writing.

While metadiscourse markers can prove to be challenging for native English speakers to master, cultural differences can make it even more difficult for non-native English speakers to contribute to English academia (Hyland and Milton, 1997: 184). Some (e.g. Hyland, 1998; Hinkel, 2005) have argued that metadiscourse markers like hedges should be more explicitly taught in language teaching. Hyland (1994: 246) reviewed a number of English for academic purposes (EAP) textbooks and, based on his findings, argued that teaching materials need to address hedging more thoroughly. This lack of coverage in such materials may be because of the unwarranted negative connotations associated with hedging (Skelton, 1988). Hinkel (2005: 48) contends that such attitudes need to be addressed in the teaching of academic writing, guiding L2 writers so they may “expand their vocabulary and accessible ranges of lexicon that can provide them with means of expressing their ideas without relying on intensifiers to develop effective rhetorical persuasion”. Based on Vold’s (2006) findings that Norwegian writing uses a similar degree of hedging to English writing, and that Scandinavian

academic rhetoric seems to abide by Socratic rhetoric, it is arguable that such explicit tuition is not equally necessary for Norwegian students as it may be for students from other rhetorical traditions. However, some hedging devices in Norwegian may sound similar to English words that have a different meaning, also known as *false friends* (Gutknecht, 2001: 698), and thus do not directly translate to English, potentially causing confusion for learners (see section 3.3 for examples of false friends in the data sample).

The Norwegian school curriculum does not detail any particular linguistic structures that pupils should learn. By the end of lower secondary school, no goals for written communication seem to be related to hedging or other metadiscourse devices. A section describing the goals for written communication for pupils at all school levels includes as a goal, “adapting the language to purposeful objectives and to the recipient”, which requires developing an awareness of formal and informal genres, using a relevant vocabulary while “using orthography, idiomatic structures and grammatical patterns when writing”. Relating to this goal, Hyland (2005: 3) explains how, with metadiscourse markers, writers are “making decisions about the kind of effects [they] are having on [their] listeners or readers”. However, the goals in the Norwegian curriculum are somewhat open to interpretation and teachers may not explicitly teach anything about metadiscourse markers when addressing the goal in the curriculum.

One series of textbooks used in Norwegian schools is *New Flight* (Bromseth and Wigdahl, 2006-2007) and is designed to cover all the goals in the Norwegian school curriculum for English. These textbooks consist of a host of themed chapters. In each chapter, there are a series of texts and exercises linked to the given theme. Generally, the exercises in this series focus on self-expression, grammar and pronunciation. There is no explicit information about hedging or boosting, but a number of exercises teach pupil to use expressions that can be used with a hedging function. For example, *New Flight 3* (Bromseth and Wigdahl, 2007b) includes exercises to teach pupils “how to express that you don’t know or are unsure about something”. There are also exercises to teach pupils how to use devices like quantifiers that can potentially be used with a hedging function. The lack of explicit coverage of hedging devices may be down to a lack of awareness, or negative attitudes towards such markers. Alternatively, it may be down to a decision that pupils of this age are likely not proficient enough to benefit from such a focus, although Hyland (1998: 231) argues that learners should be exposed to such structures at an early stage of the language learning process. Finally, it may be based on the decision to include exercises that stimulate hedging use, but avoid using a term like *hedging*, as this may seem unnecessary, but the inclusion of a

book explaining grammatical terminology in the *New Flight* series (Bromseth and Wigdahl, 2006e) would suggest this is not the case.

Finally, of the studies reviewed here, only those by Johansson and Geisler (2011), and Vold (2006) compared structures comparable to hedging across genders. Vold found that overall, there are some differences in the use of hedging devices, but these are not significant. Additionally, there was more notable individual variation among authors within each gender (2006: 83). Overall, both studies' results revealed that gender does not affect the use of such metadiscourse markers. However, Johansson and Geisler focus on stance expressions rather than hedging devices, so looking more specifically at hedging devices may produce different results. Further, Vold's data sample was comprised of professionally written research articles, requiring of authors a higher proficiency than can be expected of lower secondary school pupils. She also comments that "more research is needed before one can draw definite conclusions" (2006: 83). While other studies have found that hedging-like devices do not account for differences between boys' and girls' writing, the approach used in this study is somewhat unique and may shed further light on the issue. This study is solely focused on hedging devices, allowing for a more in-depth analysis of the types of hedges used and whether they are used accurately or not (see section 2.1.5 for factors determining accurate hedging use).

Research has shown that the frequency of hedging can change the way readers interpret texts (e.g. Crismore and Vande Kopple, 2010), reflect the rhetorical traditions of a culture (e.g. Hu and Cao, 2011), and show how epistemic attitudes have changed (Gillaerts and Van de Velde, 2010). Effective hedging can be vital for a writer in order to acknowledge other viewpoints, to recognise any claims may be later disproven, and to establish writer/reader relations (Hyland, 1994). Despite its apparent importance, it seems that this feature of metadiscourse is challenging for both L1 and L2 learners to master (Hyland, 1998). For L2 learners, it can be challenging to adapt to the Anglo-American rhetorical and epistemic traditions while effectively using a variety of hedging devices (Hinkel, 2005).

Hedging is a challenging concept to research, as it apparently has neither a single definition nor a common approach to devising a relevant taxonomy. Hyland comments on this, arguing, "there is [...] a need for an explanatory framework which accounts for its pervasiveness in academic discourse by situating hedging in its socio-pragmatic context" (1998: 11). As no universal framework exists, the term hedging was adapted specifically for the purposes of this study, accounting for the study's context, in which participants wrote English texts as part of Norwegian lower secondary school tests (see section 3.3 for hedging

taxonomy). The framework for this study also includes criteria for deeming whether a hedging device is used accurately or not; this is something that has not been done in any of the studies reviewed here. The next section discusses the interactional factors that seem relevant to judging whether hedges are used accurately or not.

2.1.5 Hedging and Accuracy

Many of the studies of hedging reviewed above quantified total numbers of hedges, but none accounted for whether hedges were used accurately or not. Based on extracts from her data set, Hinkel (2005: 44) comments that “the frequencies and types of hedges in L2 academic writing are severely restricted and limited to those that are associated with casual spoken interactions”. Looking at whether hedges are used accurately could provide further insight into the challenges L2 learners face in mastering hedging devices.

The definition of accurateness for this study is similar to that used by Ishikawa (1995: 59): “[c]orrectness was defined as correct with respect to discourse, vocabulary, grammar and style”. Ishikawa’s focus was different to the focus of this research in that she used measures to test what kind of task for practicing writing best helped low proficiency learners improve their writing quality (1995: 51). While this study only investigates the accuracy of hedges, Ishikawa considered all linguistic aspects to count a variety of measures such as error-free production units (see section 2.2 for an explanation of quantitative measurements). She also analysed whether these units fit their “discourse environment” (1995: 59), while this study only looks at hedging use on a sentential level.

This section outlines factors that contribute to the effectiveness of communicative exchanges in general: context, grammaticality, well-formedness, acceptability, and appropriateness (Fetzer, 2004). Exploring these aspects should provide depth to what constitutes linguistic accuracy. These factors are used to distinguish whether hedges are used accurately or not in the data sample (see section 3.3 for taxonomy used for this study).

Context is difficult to define, but plays an important part in determining how interlocutors communicate. Fetzer (2004: 3-4) argues that “context is delimited to the global surroundings of the phenomenon to be investigated”. The complexities of context are further illustrated as she divides context into four sub-categories: linguistic context, social context, sociocultural context, and cognitive context. Linguistic context is determined by the

“adjacent contributions” to an utterance, determining the boundaries for what may be said (2004: 5). Social context refers to that which is immediately extra-linguistic, including factors such as who the coparticipants are and where the interaction is taking place (2004: 9). Sociocultural context is distinguished from social context in that it refers to extra-linguistic factors that are more remote, such as institutional setting and culture, but Fetzer points out this is still an “oversimplification” (2004: 9). Cognitive context includes “mental representations, propositions, contextual assumptions” that are individually understood (2004: 11).

Fetzer (2004: 12) claims that grammaticality is a broader concept than grammar, acknowledging the role of the native speaker in producing and recognising whether a sentence is grammatical or ungrammatical. Further, she points out that “it is the native speaker or the artificial native speaker who assign a sentence or a construction the status of a grammatical sentence or of a grammatical construction” (2004: 13). While specific rules are assigned to grammar, grammaticality accounts for the indefinite number of constructions possible in any given language (Haegeman and Guéron, 1999, as cited in Fetzer, 2004: 13-14). Thus, a “dynamic conception of constraints”, as opposed to a prescriptive, formal set of grammar rules, becomes useful for native speakers to judge whether a sentence can or cannot be deemed grammatical (2004: 15).

While a sentence may be deemed grammatical, it may be difficult to comprehend, in which case it would not be well-formed. Fetzer describes well-formedness as being “anchored to the domain of linguistic form and to the domain of comprehensibility thus supplementing the rules of grammar with psycholinguistic sentence processing” (2004: 15). A sentence may be both ungrammatical and well-formed, in that it breaks grammar rules, but is easily comprehensible, and vice versa. To provide a broader understanding of this concept, Fetzer links well-formedness to Grice’s (1975) maxims (see also section 2.4.1).

Grice (1975: 45) used four categories (quantity, quality, relation, and manner) to describe his Cooperative Principle which states “[m]ake your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged”. Each of the four categories is described using further sub-categories, or maxims, but only a brief description will be included here. Regarding *quantity*, one should be neither more nor less informative than is needed in a given situation; *quality* requires of a speaker to be truthful; *relation*, to make relevant contributions; and *manner*, to be brief while avoiding vagaries (1975: 45-47). Grice’s Cooperative Principle implies that optimal communication is infallibly efficient. Although this implication is

practically unrealistic, the criteria outlined for efficiency can contribute to understanding how linguistic formulations may or may not be appropriate or acceptable.

Fetzer (2004: 19) defines *acceptability* as when “an utterance is evaluated with regard to the nature of the connectedness between its linguistic form, sequential position and social context”. An utterance that is grammatically incorrect may be acceptable in certain social situations. Contrasting with acceptability, appropriateness has stricter constraints in that it relies on the speaker’s intent being clear, that the linguistic realization being well-formed at the same time as fitting into the social context (2004: 27). The terms *appropriateness* and *acceptability* are arguably similar, so only the term *appropriateness* will be referred to hereafter.

Writers who use hedging devices need to do so while abiding by grammaticality, well-formedness and appropriateness. Only one of the three criteria need to be violated for a hedge to be considered inaccurate. Perhaps this illustrates why hedging may be difficult for both L1 and L2 learners to master, especially seeing as it is not adequately addressed in teaching materials (Hyland and Milton, 1997). None of the studies reviewed specifically quantify hedges in terms of accuracy, making this study quite different. In describing the procedure used to carry out this research, the way the above factors have been applied to the analysis will be discussed in chapter three. In this study, the hedges present in the textual data are quantified based on their categorisation and whether or not they are used accurately. The next section outlines earlier studies that have used quantifiable measures.

2.2 Quantifiable Measures of Linguistic Features in L2 Writing

A number of studies have used a variety of quantifiable measures to investigate whether certain features are central to writing quality, and, if so, which factors quality is attributed to. Using such measures, Silva (1993) was able to conclude that language learners are likely to struggle more with writing than native speakers. He found that, in comparison to L1 writers’ texts, “L2 writers’ texts were less fluent (fewer words), less accurate (more errors), and less effective (lower holistic scores)” (1993: 668). Wolfe-Quintero et al. (1998) reviewed studies that had used quantifiable measures to investigate the quality of writing among second language learners. They group the measures used in studies into three broad categories:

fluency, accuracy, and (lexical/grammatical) complexity. Fluency and grammatical complexity are not measured in this research, but a brief outline of these terms seems necessary to put the quantitative aspect of the research questions into context.

Lennon (1989: 389) identifies two different senses of the term *fluency*. The broad sense of fluency is synonymous with oral proficiency. This sense is often used to describe the overall grasp one has of a foreign language. It is the narrow sense of *fluency* that is usually used to outline what may be quantitatively measured. In this sense, fluency refers to whether or not a person's speech production is "unimpeded by silent pauses and hesitations, filled pauses [...], self-corrections, repetitions, false starts, and the like" (Lennon, 1989: 390). Thus, the more unimpeded a learner's speech, the more proficient the learner may be. In terms of written fluency, Wolfe-Quintero et al. (1998: 14) discuss various fluency measures that generally focus on 'number, length or rate of production units'. Researchers may choose to use clauses, sentences, T-units ("one main clause plus whatever subordinate clauses are attached to that main clause"; Hunt, 1970: 197) as production units.

Studies of complexity often focus on either grammatical or lexical complexity. Grammatical complexity generally concerns a writer's variety and sophistication of grammatical structures (Wolfe-Quintero et al., 1998: 69). Kameen (1979: 343) utilized measures of grammatical complexity to investigate which measures could distinguish between essays that were holistically rated as either "good" or "bad". He found that a number of grammatical complexity measures significantly distinguished writing quality, implying the importance of grammatical prowess in written work. However, Astika (1993) found that, of five component writing skills (including content, organization, language use, vocabulary and mechanics), vocabulary was the most significant component in indicating an essay's quality.

Accuracy refers to "the ability to be free from errors while using language to communicate in either writing or speech" (Wolfe-Quintero et al., 1998: 33). Errors in writing are often measured in relation to production units. Two broad measurements of accuracy are error-free production units and errors per production unit (Wolfe-Quintero et al., 1998: 35-36). Bardovi-Harlig and Bofman (1989: 22) problematize using error-free production units because this measurement neither accounts for which types of errors are being made nor how errors are distributed. Measuring errors per production unit remedies this issues, but at the same time raises the issue of what should and should not count as an error.

Accuracy measures are often limited in that there is little agreement on what kinds of errors should be counted. Larsen-Freeman and Strom (1977: 128, as cited in Ishikawa, 1995: 57) counted units as error-free if they were "perfect in all respects, including spelling and

punctuation”. This criterion does not provide detail about what may or may not be linguistically “perfect”, and, not only does it then potentially leave error-analysis open to subjectivity, it is also likely to be too strict to be used for analysing L2 writing. Bardovi-Harlig and Bofman (1989: 21) counted errors at word and sentence-level, using the categories “syntactic, morphological, or lexical-idiomatic”. Ishikawa (1995: 59) used the categories “discourse, vocabulary, grammar, and style”, accounting not only for errors at word and sentence-level, but also for whether sentences and clauses appropriately fit into the text as a whole. These three examples of classifications exemplify the difficulty of measuring accuracy and suggest the importance for researchers to appropriate a taxonomy of errors to the proficiency level being studied (see section 2.1.5 for accuracy and hedging).

Ishikawa highlighted a further problem with accuracy measures, commenting that it is difficult to determine whether any of the measurements she used reflected “real developmental change” (1995: 64). Based on their review of accuracy measures, Wolfe-Quintero et al. (1998: 37) commented that errors relate to proficiency in a non-linear way in that some errors may initially become more frequent in a learner’s linguistic production, decreasing again once a certain proficiency has been achieved. This factor, among others, led them to tentatively conclude “that any analysis of errors in general won’t discriminate between developmental levels” (1998:37).

Quantitative measures have been used to compare the writing of boys and girls, but this does not seem to be a prominent area of study. Dahl (2012) looked at essay length, relative clause use, subject-verb agreement, and prepositional usage among Swedish learners of English at lower secondary school. Her results showed that the boys used marginally more relative clauses (2012: 11). This could potentially imply greater grammatical complexity in the boys’ writing. The girls wrote, on average, longer essays than the boys, indicating the girls were more fluent in essay writing (2012: 9). Prepositions were more frequently used incorrectly among the boys, implying superior prepositional accuracy among the girls (2012: 16). The girls also exhibited better accuracy regarding subject-verb agreement (2012: 19). Based on her results, Dahl (2012: 20) concludes that, in comparison to the boys, the girls generally excelled in language learning. However, her results are not analysed using any statistical measures; this is something Hogan claims is essential to studies addressing gender differences (1994: 245).

Johansson and Geisler (2011) investigated an array of measures to see if any could be used to predict which linguistic advancements are made from lower secondary to upper secondary school among Swedish learners of English. They also analysed the use of stance

expressions, which are used when a writer wishes to express “personal feelings, attitudes, value judgements, or assessments; that is, they express a ‘stance’” (Biber et al., 2009: 966), to see if there were any differences between boys’ and girls’ writing. The results of the analysis of stance expressions did not prove to be significantly different, but, nonetheless, they reported that “[b]oys have a more sparse and concise style of writing, whereas girls often show a preference for cautious, discursive, and synthetic approaches” (2011: 145).

The measures in this study account for the accuracy of the hedges used in the data set (see section 2.5 and 3.3). This should provide insight into whether pupils show they understand how to use various hedging devices. The measures used in this study can also be compared to lexical complexity. The variety of hedges used by participants links to lexical complexity in that each hedging device is categorized, but the sophistication and variety of hedging in each text is difficult to measure without a comparison to how native speakers use such devices. Furthermore, it does not seem as though these measurements have been used to analyse L2 writing before. The focus on gender also contributes to the novelty of this research. The next section explores theories of gender and studies of gender effects in education.

2.3.1 Gender Differences

This study includes gender as a factor to compare how lower secondary pupils in Norway use hedging devices in English texts. This factor was included based on differences in the achievements of boys and girls at this educational level. Boys are behind girls in all school subjects dependent on literacy skills (UDIR, 2015a: 4). A PISA study (OECD, 2010: 57) ranked Norway 48th regarding the differences in reading ability. This section outlines how the term gender is used in this study and outlines research² that has investigated gender differences in educational contexts.

The larger part of the general population in most societies are categorized as either female or male. While these categories are transcended by some, the vast majority of people conform to the gender ascribed by their biology. Bussey and Bandura (1999) write of gender’s social importance:

² The studies cited in this section originate from the United States of America unless specified otherwise.

Gender development is a fundamental issue because some of the most important aspects of people's lives, such as the talents they cultivate, the conceptions they hold of themselves and others, the sociostructural opportunities and constraints they encounter, and the social life and occupational paths they pursue are heavily prescribed by societal gender typing.

(Bussey and Bandura, 1999: 676)

The term *gender*, considered “an achieved status”, has often been used alongside *sex*, considered to be “ascribed by biology” (West and Zimmerman, 1987: 125). West and Zimmerman (1987: 125) problematized *sex* and *gender*, which had been used in gender studies. They pointed out that distinguishing between these two terms implies that *sex* is a fixed category whilst *gender* is flexible. However, *gender* can be just as fixed as *sex*; a person's achieved *gender* status is, after all, usually as static as their biology. Butler (1990: 7) writes that “perhaps this construct called ‘sex’ is as culturally constructed as *gender*” and that maybe “the distinction between *sex* and *gender* turns out to be no distinction at all”. Butler (1990: 24-25) introduced the idea of *gender* being “performative”, but while *gender* is constituted in an act of performing, or “doing”, the apparent freedom that this performance grants is limited by “the regulatory practices of *gender* coherence”. West and Zimmerman (1987: 127) present, as an alternative, three terms: *sex*, defined as “biological criteria”, *sex category* defined as “the socially required identificatory displays that proclaim one's membership in one or the other category”, and *gender*, defined as “managing situated conduct in light of normative conceptions of attitudes and activities appropriate for one's *sex* category”.

For this study, participants are categorized based on their *sex* (i.e. biological criteria), but the term *gender* will be used as this anticipates the social and psychological aspects that are expected of a person claiming affiliation to one or the other *sex* category. The terms “male” and “female” will be used to divide the participants (no pupils are registered as transgender pupils; see section 3.2). It should be noted that the terms “male” and “female” are crude and encompass groups that are very complex and varied. Moreover, the behaviour and biology of the people within these groups may overlap in many respects.

Stereotypical notions of what it means to be feminine or masculine permeate many aspects of human life, three of which are occupation, consumerism and sexuality. Garland and Smith (1981: 574) found that students perceived the occupations of lawyer, physician and physicist to be stereotypically masculine, and the occupations of registered nurse, speech

pathologist and interior decorator to be stereotypically feminine. Popular media (such as books, television and film) provide further examples of gender stereotypes, as exemplified by Mazzella et al. (1992) who studied Australian television adverts. They found women were often portrayed as consumers, particularly of food or body products that provided social benefits, whilst men were portrayed as salespeople exhibiting expert knowledge and providing objective, career-oriented arguments for purchasing their products (1992: 255). Ward (1995: 610-611) showed that interactions in television shows watched by adolescents frequently conveyed stereotypical attitudes towards sexuality: that physical appearance is important for women and sexual promiscuity important for men. In a later study, Ward (2002: 12) showed that people who view more television are more likely to develop attitudes that “men are sex-driven, and that women are sexual objects”.

The reason for why numerous practices are perceived as being stereotypical of one or the other gender can be explained in terms of biological, developmental, and/or contextual factors (Hogan, 1994: 258). Hogan (1994: 258) points out that there is a common distinction between *biological* and *social* factors; for example, that men and women behave differently either because of their hormonal differences, or because of the difference in the way they are socialized during childhood. Hogan (1994: 258), however, argues that this distinction “is not as finely calibrated as is desirable”, leading him to distinguish *developmental* and *contextual* factors, besides those considered biological (see section 2.1.2 for further discussion). To take Hogan’s (1994: 259) example, an event where a man dominates a conversation with a woman may have one or more of three explanations. Firstly, men and women have inherently different hormonal levels (biological). Secondly, the interlocutors in question may have been exposed to various stimuli during childhood that have led to deep differences in their psyches (developmental). Thirdly, there may be economic factors, for example, contributing to the power relations between the interlocutors (contextual). While the three categories may overlap, the next section uses these categories to see how they affect gender differences from an educational perspective.

2.3.2 Gender Differences in Educational Contexts

As outlined in the introduction, there are a number of noteworthy gender differences in Norway regarding education. Despite international recognition of Norway’s societal gender

equality, girls and women are generally excelling in educational contexts. There are concerns regarding how boys are falling behind academically, literary abilities being a key factor contributing to this discrepancy. This section will outline some theories categorized as biological, developmental, or contextual that may potentially explain the differences in girls' and boys' school performance (Hogan, 1994: 258).

Biological Factors

Hormones and the brain are often discussed regarding the biological aspects of gender differences. Saville-Troike (2012: 72) documents the different areas of the brain responsible for language, most of which are in the left hemisphere. Gurian (2001) details the differences between how these parts of the brain are used differently by men and women. In both men and women the right hemisphere develops first, but the left develops earlier among girls, a factor perceived by some to be a source of their linguistic advantage (2001: 26). Girls also seem to have a learning advantage in that their brains are more active than male brains: “[t]he female brain, never at rest, has a true learning advantage” (2001: 29). He writes that differences in hormones make boys more dominant and girls more egalitarian, and that hormonal differences can also affect school performances (2001: 28). Burman et al. (2008: 1359) found more activity in the linguistic areas of girls' (aged 9-15) brains and concluded that these differences somewhat account for the differences in language ability.

While biology may have a part to play in gender differences, many (Bussey and Bandura, 1999; Chiarello, 2009; Eliot, 2011; Plante et al., 2006) do not give it precedence. Burman et al. (2008) argue that their findings only account for early differences and that evidence does not show that these differences continue into adulthood. In a study that used linguistic tasks to investigate gender differences in the activation of the language cortex during childhood, Plante et al. (2006: 1220) acknowledge that, in large enough samples, small differences may be detectable. However, they comment further that the results are not clear cut, so the “differences may be of little practical importance for predicting individual patterns of activation”. In a study investigating brain activity in completing reading tasks among college students, Chiarello et al. (2009: 210) found that only 2% of the individual variation was attributed to gender differences. Eliot (2011: 376) argues in her conclusion that neuroscience has shown that “children’s brains are far from ‘hardwired’” and suggests that promoting the concept of neuroplasticity in education is likely to be beneficial for children’s self-efficacy and learning capacity. Supporting this view, Bussey and Bandura (1999: 676)

write that human biology permits “a range of possibilities rather than dictate a fixed type of gender differentiation.” They (1999: 680) also comment that biological explanations do not account for the drastic changes gender roles have undergone in recent decades.

Developmental Factors

There are many factors that can be categorized as developmental (or cognitive), including pupils’ learning styles, their attitudes towards reading and writing, and their attitudes towards the type of school task they are asked to work with. According to the cognitive perspective, children essentially *learn* how to act according to their gender (Halim and Lindner, 2013: 3). Children develop conceptions of what gender is based on “what they see and hear around them” (Bussey and Bandura, 1999: 677). As children’s gender identities develop, they become more aware of gender-specific information that allows them to behave similarly to those of the same gender, and differently to those of another gender (Halim and Lindner, 2013: 2).

In terms of learning styles, there is a common perception that boys and girls learn in different ways: visually, auditorily, or kinaesthetically, for example (Eliot, 2011: 375; Paschler et al., 2008: 105). In a Dutch study, Severiens and Ten Dam (1994) conducted a meta-analysis of studies that have investigated gender and learning styles. Their results were homogeneous and they did not find many differences. Of the few differences they did find, one was that men prefer more abstract learning styles and women prefer more concrete learning styles. Further, there is a difference in motivation: women are more interested in “learning for learning’s sake” (1994: 498) whilst men choose courses to expand their occupational qualifications. Paschler et al. (2008: 105) point out that the learning-styles approach has become very popular, and that children and adults often exhibit an awareness of the learning styles that best suit them. However, they found that there is “no adequate evidence base to justify incorporating learning-styles assessments into general educational practice”. While children enter the school system with a variety of cultural backgrounds, attitudes and beliefs, they do not differ in their learning styles, so keeping options open for different teaching methods is likely to be more beneficial to pupil learning (Paschler et al., 2008: 117; Riener and Williamson, 2010: 35).

Attitudes that make a difference to academic success may regard the type of task pupils are given, or their perceptions of whether they are capable of completing a task, also called “self-efficacy” (Pajares, 2002: 116; Bandura, 1994: 71). Pajares and Valiante (1999:

390) argue that it is generally agreed that pupils perform better if they believe in their own capabilities. This self-efficacy contributes to their motivation and minimalizes feelings of apprehension.

Regarding task type, Jeffrey and Wilcox (2013: 1106) found that both high and low-achieving pupils are more positive to tasks that ask them to voice their own opinions. Norwegian researchers Roe and Vagle (2010) reported the gender differences in success on the PISA test (OECD, 2010), which consisted of 101 tasks. Norwegian boys were more successful than girls on just two of the tasks. Roe and Vagle (2010: 88) identify roughly 20 tasks that the girls completed significantly more successfully. These often required reflection (for example, understanding why a genre is chosen for the intentions of the text) and longer answers, meaning these tasks also needed more effort and a better understanding of advanced language. However, on two of the most difficult tasks, boys scored similarly to girls (Roe and Vagle, 2012: 436). This may be because the genre of the text, which was of a scientific nature and contained images, was more interesting to the boys (Roe and Vagle, 2012: 436).

In terms of pupil attitudes towards reading, German researchers, Retelsdorf et al. (2015: 191), found that reading is often perceived as a “stereotypically feminine domain”. Pottorff et al. (1996, as cited in Newkirk, 2002: 42) found that children perceived their mothers to read more books and their fathers to read more newspapers. This shows that, even though reading is not strictly feminine, the types of texts perceived to be favoured by women are those more commonly read in schools. While certain reading practices are attributed to each gender, Merisuo-Storm (2006: 113) argues that boys are more likely to react negatively to their male peers reading texts that are not masculine. A Norwegian survey (Roe and Vagle, 2010: 103) linked to the PISA test showed that boys tend to read only for useful information, or only if they have to. Girls, on the other hand, have a broader reading repertoire and more social freedom to cross the gender boundaries (Merisuo-Storm, 2006: 113; Roe and Vagle, 2012: 438).

Research that has looked at self-efficacy and reading (Solheim, 2011: 22; Lee and Jonson-Reid, 2015: 8) has found that the degree to which a pupil understands a text is affected by their self-efficacy beliefs. In Norway, Linnakylä and Malin (2003: 45-46) found that reading abilities are strongly correlated with attitudes: pupils’ interest and time invested in reading. Vagle (2005: 262) reported that girls have a more positive attitude towards literacy activities, using more of their free time reading and writing. Boys use more of their free time on television, video, internet and video games. These types of media seemingly do not contribute to literacy development to the same degree as traditional media (Vagle, 2005: 263).

Vagle (2005: 272-273) hypothesized that, in general, the gender differences in results on the PISA test may be associated, among other factors, with such reading and media habits. Linnakylä and Malin (2003: 46) claim that inspiring a more positive attitude towards reading among boys can lessen the gender gap.

In a study of attitudes towards writing among ten to eleven year olds in Finland, Merisuo-Storm (2006: 121) found that boys were significantly less interested in writing than girls. She found that girls were generally just as interested in writing as they are reading. Boys are less interested in genres of writing that do not serve a purpose (2006: 124), showing the importance for teachers to understand their pupils' interests when engaging them in writing activities.

Regarding links found between self-efficacy and writing, McCarthy's (1985: 470) research shows that pupils' writing performance will benefit if they have positive perceptions of their writing skills. Pajares and Valiante (2001) studied the effects of gender on motivation in writing. They found that gender differences are more strongly associated with gender orientation (whether they identified as being masculine or feminine), rather than with documented gender (2001: 376). They found that both female and male pupils who were femininely oriented tended to display self-efficacy, self-concept beliefs and were more successful in written tasks (2001: 376). The only gender difference not attributable to gender orientation was that boys were more concerned with using writing as a platform for showing off their knowledge. This factor became yet more evident among boys who exhibited more masculine behaviour (2001: 377). Pajares (2002: 118) suggests that girls and boys may have different standards for how they rate themselves academically in that "boys are more likely to express confidence in skills they may not possess and to express overconfidence in skills they do possess".

Contextual Factors

Contextual factors contributing to gender differences include sexism in schools, and the effects of teachers' and pupils' attitudes towards gender. Lee et al. (1994) conducted a study that looked at sexism in schools. They claim that schools are one of the main arenas where children learn sexist attitudes: "schools replicate the gender and social-class relationships inherent in the functioning of capitalist economy" (Lee et al., 1994: 93). They argue further that the promotion of such stereotypical views in education is a major societal issue. In their study they found that girls generally benefit more (than both girls and boys in either single-

sex or coeducational schools) in single-sex schools. Of the boys, those who attend coeducational schools benefitted more, whilst the most sexually explicit sexist events occurred in English classes in boys' schools (1994: 105). They also observed that "men talk more in class" and that they "reacted more impulsively to questions posed by teachers", regardless of the educational situation (1994: 97).

As girls are achieving better grades than boys in most subjects, it may seem that Norwegian schools, in general, are femininely oriented (Bakken et al., 2008: 39). This is often thought to be because only 30% of teachers are male in primary and lower secondary schools (Bakken et al., 2008: 39). School culture is thus feminised by the total number of female teachers who value understanding, cooperation and care over more masculine values like respect, discipline and knowledge. This means girls are more easily able to adapt to the school system (Bakken et al. 2008: 40).

In a German study, Heyder and Kessels (2013: 613), however, found that school is generally not perceived as being femininely oriented. In their study, only a sub-group of boys perceived school to be feminine. Hallinan (1988: 255) also argued that schools play a relatively small role in creating the gender gap, instead promoting the idea that familial aspects have more influence. Despite this, Legewie and Deprete (2012: 480) argue that research has not thoroughly addressed whether schools play a role in the gender gap. They show that schools have the potential to use resources to encourage academic engagement among boys, which would in turn reduce the gender gap in test scores.

Bussey and Bandura (1999: 701) claim that there are also differences in the way boys and girls are treated by teachers. One difference is that boys are likely to receive more attention in class than girls. However, while this includes praise for academic success, teacher attention is not necessarily advantageous as it also includes apprehension of misbehaviour. Girls on the other hand are more likely to be "praised for tidiness and compliance and criticized for academic failure" (Bussey and Bandura, 1999: 701). Dee (2007: 550) found that a teacher's gender can affect the learning outcomes of pupils in that boys learn better with male teachers and girls learn better with female teachers. Dee (2007: 532) hypothesized that this can happen either because a teacher actively treats the pupils differently based on their gender, or because pupils react differently based on the teacher's sex category. Thus, the number of female teachers (61%) in Norwegian schools may have a part to play in the gender differences in school achievement (Bonnet, 2002: 98). Teachers' attitudes can also affect their pupils' self-concepts, as shown in a German study by Retelsdorf et al. (2015: 191), who found

that boys' self-concept of reading was negatively affected by teachers who perpetuated gender stereotypes.

It is difficult to argue whether biological, developmental, or contextual factors have most bearing in contributing to gender differences in the educational context and the three categories often somewhat overlap in the studies discussed above. Bussey and Bandura (1999: 676) argue that some group-level gender differences may result from biology. However, to understand the vast diversity of individualities within each group, one must account for “how the relevant constellation of determinants operate in concert within the causal structure rather than try to compute the percentage of the behavior due to nature and the percentage due to nurture” (1999: 683). Their (1999: 676) social cognitive theory explains gender differentiation in terms of a variety of intertwined factors including experiences, motivation, self-regulatory systems, social influences and societal subsystems. Their theory is too comprehensive to be explained in detail here, but its complexity shows how difficult it can be to adequately define the gender gap.

2.4 Summary

This chapter outlined theories and research relevant to this thesis. Studies of hedging have used a variety of definitions and taxonomies to investigate hedging use in in speech and writing. In other research, quantifiable measures have been used to investigate whether certain features of language correlate with writing quality. Studies of gender have aimed at finding how and why gender affects pupils' achievements in school. This study combines these areas in that it quantifies hedges in texts written in English by lower secondary boys and girls in Norway. A functional taxonomy, including five categories of hedge and criteria for identifying whether a hedge is accurately used or not, was devised and applied to texts written by pupils at this educational level. This study may shed light on how hedging devices are used at this level and whether hedging contributes to the gender differences in academic achievements in Norway (e.g. UDIR, 2015a: 4).

3 – Methodology

In this chapter, the methods used to collect and analyse the data will be described. The methodology of this research has been designed to answer the following research questions:

- 1- Does hedging use in year nine texts correlate with holistic ratings, topic and formality in terms of:
 - a. Frequency?
 - b. Hedge type?
 - c. Accuracy?
- 2- Do Norwegian year 9 boys and girls use hedges differently when writing in English?

This study uses both quantitative and qualitative methods and can thus be described as using mixed methods, but more weight is placed on the quantitative procedures. The first section will explain how this study can be described as using mixed methods. This study's data incorporates both texts and interviews, so in section 3.2 there will be a description of the procedures used to collect the textual and interview data. The interview data is used in this research to contribute to understanding the context in which the textual data was written. The textual data has been analysed to quantify the number of hedging devices present. For this study, Hyland's (2005: 52) definition has been used to quantify words and phrases as hedges in instances where they "indicate the writer's decision to recognize alternative voices and viewpoints and so withhold complete commitment to a proposition". The hedging devices have been categorized in terms of type and in terms of whether or not they are accurately used. The criteria for this analysis will be outlined in section 3.3. In the following section, the pilot study used to develop and test the methodology devised for this research will be described. In section 3.5, the ethical considerations made in carrying out this research will be outlined. Finally, the reliability and validity of this research will be addressed.

3.1 Methods

Research methods can usually be described as either quantitative or qualitative and as mixed methods when these are combined. Quantitative methods involve “data collection procedures that result primarily in numerical data which is then analysed primarily by statistical methods” (Dornyei, 2007: 24). Rather than investigating individual people, quantitative measures are often used to investigate typical characteristics of different groups. Variables are used to capture group characteristics and are measured in a way that produces numerical or categorical results. The results are often statistically analysed and then used to make generalisations across groups with the goal of trying to find objective, universal laws (2007: 33-34). These methods have tended to dominate research carried out within the applied linguistics field (2007: 37).

Qualitative methods involve “data collection procedures that result primarily in open-ended, non-numerical data which is then analysed primarily by non-statistical methods” (2007: 24). Instead of numerical data, textual information is key to qualitative research, often derived from interviews, observational notes or images. The information is subjectively interpreted by the researcher with the goal of providing greater understanding of a range of phenomena (2007: 37-38). While such methods have been less commonly used in applied linguistics, recognition of their importance has grown in recent decades (2007: 36-37).

Quantitative and qualitative methods can be combined in what can be described as mixed methods research (2007: 24). Both approaches have their own strengths and weaknesses. Combining the two to study a single phenomenon can be described as “methodological triangulation” and can potentially emphasize the strengths of both methods (2007: 43).

This research incorporated both quantitative and qualitative data collection and can consequently be described as using mixed methods (Dornyei, 2007: 24). The quantitative methods have been used to answer the research questions, so the quantitative data has been given more significance. The quantitative aspect of this research involved analysing texts written by year nine school pupils in Norway to determine the frequency of five different categories of hedging device (see section 3.3). The qualitative aspect of this research involved holding interviews with the three English teachers whose pupils’ texts were analysed for this study. This qualitative approach has been utilised to provide details about the teachers’ pedagogical practices and the context in which the pupil texts were written. The qualitative

results do not directly answer the research questions, but provide useful information contributing to a deeper understanding of the results.

3.2 Data Collection

This section will present how the data for this research was collected. The first part describes the collection of the textual data. Included in this part of this section is the context in which the data was collected, the total numbers of texts collected, and the content of the texts. The second part of this section is about how the interviews were carried out as well as providing information about the interview guide.

Quantitative data

The participants for this study were 82 pupils from Norwegian state-run lower secondary schools. Each pupil wrote one text that was used for the quantitative analysis. The texts ranged from 27-1155 words and received grades ranging from one to six. The total word count of the data set was 39,685 words. The texts were written by 47 male pupils and 35 female pupils. The participants wrote their texts in the autumn semester of year nine and were thus between thirteen and fourteen years of age.³ The majority of the pupils were of Norwegian ethnicity, but some pupils had other ethnic backgrounds. While their mother tongue and previous education may factor into their English proficiency, such details have not been collected for this study.

This is a convenience sample in that year nine English teachers were contacted at seven schools that were proximal to the university (Dornyei, 2007:98). Three teachers (hereafter teacher X, teacher Y and teacher Z) from two different schools (hereafter school A and school B) agreed to help to collect data. The schools were both situated in towns in the county of Rogaland in Western Norway. The two schools have pupils that live in both urban and rural areas. Both schools are state-run lower secondary schools for pupils from year eight to year ten. Pupils begin these schools aged twelve to thirteen and finish aged fifteen to sixteen. Lower secondary school pupils were chosen because of their similar age to the

³ The Norwegian school system (different to the British system) organises each year-group based on the year they are born (i.e. all children born in 2016 will begin school in 2021).

participants in the PISA study on reading (OECD, 2010). Only year nine teachers were contacted: firstly, to guarantee that the participants would be roughly the same age and secondly, because it was assumed that they would have more time than year eight and year ten teachers at their disposal to help collect results. Year eight teachers tend to use a lot of time on getting to know their pupils and year ten teachers tend to focus their efforts on preparing their pupils for end-of-school exams.⁴

Altogether, there were 155 pupils in the year nine classes at both schools. This number does not correspond to the number of collected texts because, to use pupil work, parental consent was needed. In order to contact guardians/parents to obtain consent, the schools' administrations granted the researcher access to relevant contact details. Parents/guardians were only contacted via e-mail, but eight of the e-mail addresses listed did not work. Therefore, parents/guardians of 147 pupils were successfully contacted asking permission to use their child's work (for e-mail sent to parents, see appendix A). Those who did not respond within a month were sent the same e-mail a second time. Two refused permission to use their child's work. Of the parents/guardians contacted, 103 granted permission.

While 103 parents granted permission, the texts collected from their children were not all usable. Eleven pupils did not deliver their texts online making their work unavailable. Four pupils had individual tuition in English so they did not write texts for the test in question. Four pupils delivered texts that were not usable for this study because they were either too short (consisting of only a single sentence) or written in Norwegian. One pupil delivered two different texts, which have been treated as one. Consequently, 58 texts were collected from four classes at school A (written by 25 girls and 33 boys); at school B, 24 texts were collected from two classes (written by 10 girls and 14 boys).

The grades set by teachers for each text were also collected. The grades pupils received for these texts range from one (the lowest possible grade – usually not considered as a passing grade) to six (the highest possible) (e.g. UDIR., 2011). If necessary, a plus may be added to the grade to show that a pupil who receives, for example, a three was close to receiving a four; a minus may be added to show a pupil was close to receiving a two. For this study, the plusses and minuses have been disregarded. Usually, the average grade received for school evaluations is four. The average grade of the texts in the data sample was 3.8.

The teachers' cooperation was essential for preparing the tasks and for being able to collect this data efficiently. Prior to the test, the teachers were given instructions regarding

⁴ These observations are based the researcher's experience as a teacher.

what kind of texts the pupils should write (for instructions, see appendix B). It seemed important to interfere as little as possible with their teaching practices, so these instructions were kept simple. Alongside some practicalities, teachers were asked to prepare tasks that would elicit non-fiction texts. There were no other criteria for the content of the texts. While the original letter states that the researcher would visit the schools to collect the data, a different method was used: the teachers agreed to grant the researcher access to the relevant classes on the school's administrative website (with "teacher" status). On this website, teachers can communicate with their pupils and post anything from word documents to internet-based tests. Pupils deliver their computer-based work on this website and teachers can then provide grades and feedback. Thus, with "teacher" status, both the pupils' work and their grades became available. Subsequently, any downloaded material was only saved on password-protected hard-discs.

As requested by the researcher, the tasks were formulated to elicit non-fiction texts, as it seemed unlikely that many hedging devices would be used in fictional texts. Some of the texts produced were fictional in that the pupils wrote from somebody else's point of view, but all of the texts were written in a non-fiction style. Fictional texts in this data set were treated as non-fictional in that hedges were quantified as if they were written from the pupils' point of view.

At both schools, the pupils were given four or five tasks, from which they were to choose just one to write about. At school A, teachers X and Y used the same test and prepared the pupils in a similar way. The theme for this test was sports (for tasks, see appendix C). The pupils read a series of sports-themed texts prior to the test. The length of the test was one hour and thirty minutes, equivalent to two school lessons. The theme for the test at school B was based on a novel called *Holes* by Louis Sachar (1998). The tasks involved writing about one of the book's themes (for tasks, see appendix D). The pupils were given time to write over several lessons, as well being able to work at home: a method called "process-oriented writing" (Lee, 2006: 308).

The content and style of each of the texts was varied. The content of each of the texts was dependent on the pupils' choice of task. Between the two schools, nine different tasks could be chosen. The tasks allowed room for pupils to be creative and to choose their writing style. The style of some of the texts can be described as informal, while other texts were formally written. The intent of the writer has been accounted for when conducting the analysis. The level of formality of each text affected the way in which it was analysed. For example, speech-like hedges were considered inaccurate in texts that were written in a formal

style, but such hedges were considered accurate when a text was clearly intended to be informal (see section 3.3).

Qualitative data

The three teachers who agreed to help with this study were each interviewed in order to obtain the necessary information about how they prepared their classes for writing the texts used as the main data for this research. The interview guide has not been designed to answer the research questions for this thesis, but rather to provide supplementary information to add depth to the discussion of the results. The interviews were semi-structured, meaning a set of questions was prepared prior to the interview, but there was freedom for the ensuing discussion to stray from a question's topic if necessary (Patton, 2002: 343; for interview guide, see appendix E).

Five questions were devised for the interviews. Broadly, the first four questions were about the teaching methods and resources each teacher uses. This was based on Hyland's arguments (1994: 246; 1998: 231; see section 2.4.2) that hedging is not appropriately addressed in teaching materials and that learners should ideally be exposed to such structures early in the learning process. The first question is split into five sub-questions and is meant to avoid any leading questions to allow teachers room to describe their teaching practices freely. Questions two, three and four were more specifically about hedging devices: whether their teaching materials cover hedging and whether they explicitly teach pupils to use hedges when presenting either factual information or opinions. However, the word *hedge* is arguably not widely used and was not used in the interview guide to ensure teachers understood the questions. Instead, a description and an example of the devices were used to ask the question. The fifth question was about whether the teacher perceived there to be any differences in the writing of girls and boys.

Two of the interviews were audio recorded while the interviewer took notes. The interview with teacher X lasted seventeen minutes. The interview with teacher Y lasted eight minutes. The interview with teacher Z was not recorded because of a technical issue, but notes were taken. This interview lasted roughly ten minutes. Teachers agreed that they could be contacted at a later date if necessary.

3.3 Data Analysis

In this section, the methods used to analyse the data set will be described in detail. Firstly, the taxonomy used to analyse the textual data will be addressed. This study incorporated five categories of hedging device, which will each be defined with examples. Following this is an explanation of what constitutes accurate and inaccurate hedging use, again accompanied by examples. The analysis of the interview data will then be addressed.

Taxonomy for quantitative analysis

For the analysis of the textual data, words and phrases have been quantified as hedges in instances where they “indicate the writer’s decision to recognize alternative voices and viewpoints and so withhold complete commitment to a proposition” (Hyland, 2005: 52). Five functional categories of hedge have been adapted from previous taxonomies based on the hedges that were present in this data sample. The categories used to analyse the data set combine those used by Prince et al. (1980), Salager-Meyer (1994) and Holmes (1986). The categories used by Holmes and by Prince et al. were originally applied to spoken discourse. These frameworks were useful in analysing this data set because speech-like constructions were frequent in some of the texts in the data sample. This is perhaps because of the age and proficiency of the participants, or because of their chosen writing style. The choice of utilizing hedging categories originally designed to analyse speech seems also justified in that the categories coined by Prince et al. were later adapted by Salager-Meyer to analyse written texts.

The categories include two types of approximator (Adaptors and Rounders), Plausibility Shields, Explicit Markers of Author Involvement, and Verbal Fillers. These categories will each be described with examples taken from data collected for the main research and for the pilot study. Mistakes regarding spelling and grammar have not been corrected.

1. **Adaptors** (approximator) are discussed by Prince et al. (1980: 8-9) in terms of categorization. If someone wishes to categorize something, but knows of no category

exactly matching the item in question, they may use a category that almost bears the desired meaning accompanied by an Adaptor.

[1a]⁵ it rarely snows here so that is *kind of* sad

[2a] USA is *one of* the most powerful countries in the world

Other Adaptors in the pilot study included: *usually, sort of, quite*.

2. **Rounders** (approximator) are words used when precise numbers are not available or when someone wishes to describe a “range of items” (Prince et al., 1980: 10). Also categorised as Rounders are devices that affect scale in an abstract sense: when there is no literal numeric scale involved in the statement. Such devices are comparable to Hinkel’s (2005: 38) *downtoners* in that they “reduce the qualitative and emotive implications of verbs, adjectives, and abstract nouns”.

[3a] *about* 65 percent

[4a] All the other tips that I don’t want to do because they are *not that* easy.

Other Rounders in the pilot study included: *almost, sometimes, just*.

3. **Plausibility Shields** are words used to indicate various levels of uncertainty. A person may be unsure whether their information is correct and can thus use a Plausibility Shield to convey that a statement is only possibly true (Prince et al., 1980: 13).

[5a] they would *probably* be dead

[6a] the air *might* not be clean anymore

Other Plausibility Shields in the pilot study included: *could, maybe, may, have a chance*.

4. **Explicit Markers of Author Involvement**, also described as “expressions [...] which express the author’s personal doubt and direct involvement” (Salager-Meyer, 1994: 154). detract from the strength of a statement by conveying the author’s explicit involvement. Hedges in this category differ from Plausibility Shields in that they involve the use of personal pronouns such as “I”.

[7a] *I think* what Mahatma Gandhi means

[8a] *I would like to say* that I have always loved nature

Other Explicit Markers of Author Involvement in the pilot study included: *in my opinion, I find, who knows*

⁵ The “a” in [1a] shows this example is used for the methodology chapter. In the results chapter, a “b” is used instead. This has been done to make the discussion chapter easier to read when previous examples are referred to.

5. **Verbal Fillers** are usually considered features of speech and have not been used as part of hedging taxonomies for analysing writing in any of the literature reviewed in chapter two. In speech, they are used to give the speaker time to formulate or reformulate what they want to say (Holmes, 1986: 6). This category has been included because of the noticeable presence of these devices in pupil texts. These devices act as hedges when they are used recognise other viewpoints or withhold commitment (Hyland, 2005: 52). Verbal Fillers do not necessarily have a hedging function and therefore have only been quantified where it is clear that they have a hedging function.
- [9a] *Well* let's start of by saying

Other Verbal Fillers in the pilot study included: *actually, anyways*.

Prince et al. (1980) and Salager-Meyer (1994) include further categories, but these have not been included in this study as they do not seem relevant to the analysis of this data. Prince et al. define two different types of shield: plausibility and attribution. Attribution shields are used to show that a speaker is stating facts or beliefs conveyed by someone other than themselves (Prince et al., 1980: 12). The data for the pilot study was analysed for these kinds of hedges, but none were found. Two further categories used by Salager-Meyer (1994: 154) were emotionally-charged intensifiers and compound hedges. Emotionally charged intensifiers can be used to indicate a researcher's reaction in medical case studies or research papers. It did not seem necessary to include this category for the analysis of this data as pupils were not carrying out research and such reactions were unlikely to be present in their writing. Compound hedges are several hedges used one after another in a sentence. Instead of counting two or more consecutive hedges as a single hedge, all hedges have been counted and categorized individually. This decision was made because two adjacent hedges arguably modify a sentence's meaning in two different ways. One example is "I *could maybe* overreact" where both "could" and "maybe" are both Plausibility Shields where only one would be needed to hedge the statement; the presence of both adds intensity to the degree the statement is hedged.

Categorising hedging devices can be problematic in that certain words and phrases may act as hedging devices in some linguistic contexts, but not in others. In order to quantify hedging devices, the texts were read closely to identify the words and phrases that had a hedging function. A list of hedges belonging to each category was compiled after conducting the pilot study to guide the main analysis. An indefinite number of devices may have a hedging function (Crompton, 1997, 281) and it was therefore expected that the main analysis

would reveal further hedges belonging to each category. This functional analysis was used instead of electronically searching the texts for a predetermined list of words and phrases. An electronic analysis would not account for the linguistic context in which each device is used, so such an analysis would likely be insufficient for this study. Vold (2006: 69) criticises previous studies that have “select[ed] *a priori* some markers and then submit[ted] these to a quantitative analysis”. A number of studies discussed in section 2.4 analysed the contextual use of each hedging device in a similar way to what has been done for this study (e.g. Hinkel, 2005). The data for this study was analysed by one rater only, so to try to compensate for this, the entire data set was read twice over. The supervisor for this thesis has also acted as a rater for some texts to help guide the analysis.

Some researchers devised tests to deal with instances where it was challenging to identify whether a linguistic devices had a hedging function or not. Vold (2006: 72) used a “substitution test” which involves testing whether a statement is hedged by replacing a potential hedge with other devices that have a more definite hedging function. Another test is to try to make the statement more certain by replacing the potential hedge with a device that does not have an intrinsic hedging quality. Crompton (1997: 282) also used the following question to identify hedging devices: “[c]an the proposition be restated in such a way that it is not changed but that the authors’ commitment to it is greater than at present?” These tests have been used in this study where categorisation proved to be challenging.

Criteria Deeming Accurate Hedging Use

Once a hedge was identified and categorised, it was then classified according to whether it was accurately or inaccurately used. The criteria for what constitutes accurate hedging use have been devised specifically for this study. Researchers have commented on the use of hedges in the writing of L2 speakers, but have only analysed their data in terms of the frequencies of each category of hedge. Based on excerpts from her sample of academic student texts, Hinkel (2005: 29, 44) observes that, compared to L1 writing, hedges in L2 writing are lexically limited and tend to be more speech-like. It is arguable that a higher level of English may be expected in her data compared to that expected in the writing of year nine lower secondary school pupils in Norway, so using hedges accurately is likely to be yet more challenging for the participants in this study.

Considering whether a hedge is accurately used or not can be subjective, so a clear outline of what constitutes accurate hedging was needed. Ishikawa’s (1995: 59) definition of

accuracy is closest to the criteria used for this study: “[c]orrectness was defined as correct with respect to discourse, vocabulary, grammar and style”. Her study had a different focus to that of this study, so concepts outlined by Fetzer (2004; see section 2.1.5) prove useful in providing detail to what constitutes accurate hedging use. This part of the analysis involved analysing each hedge’s grammaticality, well-formedness, and appropriateness.⁶ Only one of these criteria needed to be broken for a hedge to be quantified as inaccurate.

To reiterate briefly, the texts were written as part of a school test. The tasks were designed to elicit non-fiction texts, centring on either sports or on the novel *Holes* by Louis Sachar (1998). The pupils were learning English as a second language and were aware that the tests would be graded and count towards their overall end of term grade. These contextual factors affected the considerations for what constitutes accurate hedging.

While the term grammar implies prescriptive structures available to language users, *grammaticality* encompasses the infinite number of potential linguistic constructions and acknowledges native speakers as those who can deem a sentence as grammatically correct or not (Fetzer, 2004: 13). However, while pupils may construct new sentences, it was expected that grammatical constraints would be adhered to in a school test situation. It follows that any hedges that clearly broke grammatical rules were considered inaccurate. To be considered accurate, hedges should follow syntactic rules and be correctly conjugated. Hedges were considered correct when other parts of the same sentence were incorrectly ordered or conjugated. They were considered inaccurate if they were part of a structure that was incorrectly formulated. One way of testing this was to see if the hedge itself could be changed or moved to correct the structure, in which case it would be inaccurate. If the hedge could not be changed to correct the structure, but rather a different part of the sentence needed to be changed, the hedge was considered accurate. For example, the hedges in [10a] and [11a] have been counted as accurate, but the hedge in [12a] has been counted as inaccurate.

Accurate:

[10a] *Maybe* the most of those who goes skiing is like me

[11a] *I think* is too much sport on TV.

Inaccurate:

⁶ In section 2.1.5, a distinction between appropriateness and acceptability was made, but this distinction seems to be most useful when analysing speech patterns among different groups. In this educational, written context, it seems necessary only to include the concept of appropriateness.

[12a] If you broadcasted real sports [...] *could* there be a chance that some games producers would watch the match.

The term *well-formedness* refers to whether a sentence is easily comprehensible or not (Fetzer, 2004: 15). This concept is more dependent on subjective interpretation than grammaticality, which has certain rules and structures that can be expected in written language. Hedges have been deemed inaccurate if they are clearly used in a way that detracts from a sentence's comprehensibility (see [13a]). Well-formedness is often inhibited when an author uses a hedge to modify something that would usually be modified with a different hedge, (see [14a]).

Inaccurate:

[13a] I had enough Sport on my TV it is *almost* sports the hole day

[14a] This is the parts *I thought* Louis Sachar used the lack of water in a way it created a existing, dramatic and interesting reading experience.

Considering the hedges for well-formedness has been particularly pertinent to the analysis because many Norwegian hedges sound similar to English hedges, but their meaning is slightly different. This relates to the idea of *false friends* (Gutknecht, 2001: 698): words in two language that sound the same, but have two different meanings leading to misunderstandings between native and second language speakers. For example, “can” and “I mean” are used in [15a] and [16a] in their Norwegian senses, affecting the well-formedness.

Inaccurate:

[15a] In Africa and other hot countries there will just become hotter and their water will dry and that *can* make the people die and the animals *can* die. (The Norwegian word “kan” is phonetically similar to the English word “can”, but often translates more closely to the English word “may”).

[16a] *I mean* the options are endless here. (The Norwegian phrase “jeg mener” sounds similar to “I mean”, but more accurately translates to “in my opinion”).

Hedges have also been considered as detracting from the well-formedness of a sentence in instances where they are used superfluously: creating a tautology, for example (Szuchman, 2014: 16-17). The planned nature of written language should make it possible for

writers to avoid such superfluity. Examples [17a] and [18a] show examples of hedges that create tautologies.

Inaccurate:

[17a] If you ask me, *I would say* that he isn't but that's *my opinion*. (*my opinion* is counted as inaccurately here).

[18a] just a *little bit* different (both *little* and *bit* are counted as inaccurate here).

With regards to *appropriateness*, the chosen formality of a text affected whether certain hedges were considered accurate or inaccurate. Conventions of speech are generally perceived to be inappropriate to formal writing (Szuchman: 2014: 17-18). Speech-like hedges were therefore considered inaccurate in texts that were written in a formal style. In example [19a], the hedge does not fit into the otherwise formally written text.

Inaccurate:

[19a] We don't shower in *like* 1 hour.

All the texts written about *Holes* at school B were written in a formal style. At school A, the tasks about sports gave more room for the pupils to be creative. Six pupils at school A chose to write in an informal style. In one text, for example, a pupil chose to write from the perspective of a sports commentator. In this case, it was clear that the author intended for the text to be written in an informal style, meaning spoken conventions were appropriate. Speech-like hedges were therefore considered accurate when the text was clearly written in an informal style.

[20a] it's *kind of* a dangerous sport all in all

[21a] it's very stupid when you watch a show or a move or *something*

The accuracy of Verbal Fillers functioning as hedges was also dependent on the intended formality of a text. Unless the text is clearly meant to be speech-like, Verbal Fillers were not considered appropriate to written discourse and have been consequently quantified as inaccurate. In examples [22a] and [23a], Verbal Fillers are used in otherwise formal texts.

Inaccurate:

[22a] We Norwegians, *well* some of us

[23a] That can give more power than burning coal or burning stuff *anyways* because that isn't good for the environment

The criteria outlined above were used to deem whether hedges in the data sample were accurately used or not. Judging the grammaticality of a hedge is often objective, but judging the well-formedness and appropriateness of a hedge may be more subjective. For a hedge to be considered inaccurate, it had to clearly break with one of the three criteria outlined. If there was any doubt regarding the accuracy of a hedge, it was simply counted as accurate.

Other factors that have not been accounted for in the study include spelling and punctuation. If a hedge is incorrectly spelled or incorrectly punctuated, it has still been deemed accurate. It is argued here that judging a hedge to be inaccurate based on its spelling or punctuation is problematic because the texts were written on computers which may potentially correct spelling and punctuation in a way that does not reflect the author's intention. Rather than focusing on typological errors, it seemed of more interest to focus on errors regarding linguistic meaning.

Statistical Analysis

After the hedges in the data were quantified, the frequency of each type of hedge and the other relevant variables were entered into SPSS (IBM, 2012): a program designed for calculating statistical significance. According to Hogan (1994: 245), calculating the statistical significance of data is essential to studies investigating gender differences. Based on the needs presented by the variables, three tests were conducted to calculate whether the results showed statistical significance using a p-value of 0.05. The results for the following tests are presented in chapter four.

To test whether the differences in the average grades received by boys and girls in the data set were statistically significant, an independent variables t-test was conducted. This kind of statistical test is used to compare the effects that one variable has on two groups (Pallant, 2013: 247). Some general assumptions are made as a prerequisite for this test: the dependent variable should be measured using a continuous scale; no other observations should interfere with the measurement in question; the results should be normally distributed; and the results should be equally varied, rather than homogeneous. The data for this test fulfilled all of the above criteria (Pallant, 2013: 213-214). One criterion, that the data should be collected from a

random sample (Pallant, 2013: 213), was not fulfilled as the sample for this research is considered a convenience sample (Dornyei, 2007: 98).

For comparing the total frequency per one hundred words of each hedging category across topic and gender, a Mann-Whitney U test was conducted. Like an independent variables t-test, a Mann-Whitney U test compares the difference between groups based on one measure. Instead of using an independent variables t-test, this test was chosen because the distribution of the data was not normal. To account for data that is not normally distributed, this test compares medians instead of means, so the medians for this test are presented in the results chapter (Pallant, 2013: 235).

To compare the total frequency per one hundred words of each accurate and inaccurate hedging category across grades, a one-way between-groups analysis of variance (ANOVA) was used. This test is used to compare the means of a dependent variable, in this case this was the frequency of hedges, at the different levels of an independent variable, in this case these were the groups at each grade level. Post-hoc tests were conducted for the tests that revealed significant results to show between which groups the difference was present (Pallant, 2013: 258).

A two-way ANOVA was conducted to compare each hedging category across both grade and gender. This test is similar to a one-way ANOVA, the difference being that this test accounts for two independent variables, instead of one (Pallank, 2013: 274). The dependent variable was the frequency of hedges and the independent variables were the gender of each group and the grades each group received.

Interview Data

The analysis of the interview data is more straightforward than the analysis of the textual data. Two of the interviews were recorded while notes were taken. During the third interview, only notes were taken due to a technical issue. The interviews have not been transcribed as this did not seem necessary. The interview guide consisted of five main questions. The notes and recordings from the interviews have been reviewed to find the answers that are most pertinent to this study. In the results chapter the order of the questions in the interview guide was used to organise the presentation of the data. The answers given by all three teachers to each question are presented before addressing the next question (see section 4.2).

3.4 Pilot Study

The pilot study was carried out prior to conducting the main part of the research in order to test the procedures and develop the taxonomy. This was important, as none of the reviewed research has analysed texts written by the demography that this study focuses on. The pilot study made it possible to trial the categories outlined in section 3.3. After two trial analyses, the categories were adapted based on the hedges identified in the pilot study texts.

This was a convenience sample in that the participants were pupils at a school proximal to the university. The data consisted of ten texts written by lower secondary year nine pupils in Norway: four female and six male. The texts had been written in the spring semester of year nine, so the pupils were fourteen to fifteen years old. The pupils who participated in the pilot study were part of an English class that the researcher taught, so the data was easily accessible. Parents were contacted to ask for consent using the same e-mail mentioned in section 3.2 (for e-mail, see appendix A).

These non-fiction texts were written as part of a test, which involved writing answers to three tasks that all centred on environmental issues. The first two tasks elicited non-fiction texts only, while the third task allowed pupils to write either a non-fictional or fictional text. Any texts that were fictional were not analysed for the pilot study. The pupils had prepared for the test by reading a series of texts with an environmental theme. The test lasted up to five hours, where pupils could choose to leave when two hours and fifteen minutes had passed. The total number of words in each text ranged from 523 to 1,330 words (9,666 words in total).

The texts were analysed to see which words or phrases functioned as hedging devices. In the first analysis, a total of 60 different types⁷ of hedging device were found. This result made it evident that a categorical taxonomy was needed. The findings of the first analysis provided a foundation for a taxonomy to be devised based on the literature that had been reviewed. This taxonomy was used in a second analysis of the same texts, which revealed a total of 76 types of hedging device across five different categories. The hedges were also quantified in terms of whether they were accurately used or not. Total numbers were calculated based on each hedging device found, how many accurate and inaccurate hedges

⁷ The term *type* is used to refer to each linguistic construction that has a hedging function. For example “I think” is one type of hedging device.

were found in each text, and how many hedges each gender used. The results provided useful information for dealing with potential difficulties in conducting the main part of the research. For example, solutions were found for organising the data, for accurately identifying hedges and for reliably storing the results.

3.5 Ethical Considerations

This section outlines the ethical considerations that have been made in carrying out this research. These considerations include consent, anonymity, data processing and the intent underlying the research.

This study required collecting details about the pupils' gender, age and grade for their texts. It was therefore necessary to register this study with the Norwegian Social Science Data Services (NSD, 2016). Due to the participants being under 16, parental consent was also needed (for e-mail sent to guardians/parents, see appendix A). Only the parents/guardians have been informed of the study and the pupils themselves have not been contacted about the use of their schoolwork.

Personal details about pupils, parents/guardians and teachers participating in this study have been anonymised. The names of the schools involved have also been anonymised. This has been done to respect the privacy of the participants.

During the course of the research, the data was kept as securely as possible. The digital data was stored on a password-protected computer with a back-up version saved on a password protected memory stick. The texts were printed to aid the analysis and were kept privately. The digital data was deleted at the end of the project and the printed data was shredded.

Regarding researcher integrity (Dornyei, 2007: 66), I have tried to remain unbiased in conducting this research and no attempt has been made to alter the results in any way. The analysis has been carried out with the goal of producing results that represent a realistic picture of hedging use in the written English of Norwegian year nine pupils.

3.6 Reliability and Validity

In this section, the reliability and validity of this study will be discussed. Dornyei (2007: 50) describes reliability as “the extent to which our measurement instruments and procedures produce consistent results in a given population in different circumstances”. Rather than considering the reliability of the tools used for analysing data, reliability concerns the results that these tools produce. None of the studies reviewed in chapter two have used exactly the same taxonomy as that used in this study making it difficult to compare results and produce a reliability score. Thus, further studies using this taxonomy would need to be carried out to compare results and test reliability. Regarding interrater reliability, only one rater analysed the data, so this could not be calculated. There was, however, a high level of agreement between analyses of three texts carried out by the researcher and the supervisor for this thesis.

Validity concerns the relevance of a study’s conclusions. Validity concerns the researcher’s interpretations of the results, rather than the measuring instruments or the results themselves (Dornyei, 2007: 52). The concept of validity is often divided into two types: internal validity and external validity. Internal validity is achieved when “the outcome is a function of the variables that are measured, controlled or manipulated in the study” (2007: 52). In chapter four, the results are shown in different ways to try to understand as best possible the relationships between the different factors measured. The use of hedges will be considered in relation to holistic ratings, topic, formality and gender.

External validity, on the other hand, refers to whether findings can be generalised to “a larger group, to other contexts or to different times” (2007: 52). The generalisability of the results from the quantitative analysis carried out for this study is limited to year nine school pupils in Norway, if not further limited to only pupils at the schools involved. The extent of this generalisability is limited because of the size and type of sample used for this study. To expand the external validity, further research could be carried out using a random sample with greater numbers of participants writing about a wider variety of topics and from schools in other countries.

3.7 Summary

The methods used for this study were outlined in the chapter. Both quantitative and qualitative data were used, so this study can be described as using mixed methods (Dornyei, 2007: 24). For the quantitative analysis, 82 pupil-authored texts were closely read to identify linguistic devices that functioned as one of five hedging categories and to identify whether or not these devices were used accurately. The frequencies of all the hedging types present in each text and the frequencies per one hundred words of each accurate and inaccurate hedging category were entered into SPSS (IBM, 2012). These data were used to compare hedging use across holistic ratings, topic, formality and gender. Each comparison was tested for statistical significance. The qualitative data consisted of three interviews with the English teachers of the classes involved in the study. To conduct the interviews, a semi-structured interview guide consisting of five questions was used (Patton, 2002: 343). The results of the textual analysis and the answers given to each of the interview questions will be presented in the next chapter.

4 – Results

In this chapter, the results of the study will be presented. The results from the quantitative part of the study have been split into two parts. First are the results regarding how hedging use interacts with holistic ratings, topic and style. Following this are the results showing how each gender's hedging use interacts with holistic ratings and topic. Results showing the individual differences in hedging use among pupils of each gender will also be shown. The second section of this chapter will present the results from the qualitative part of the study. Each question asked in the teacher interviews will be addressed in turn, along with the answers from each of the three teachers.

4.1 Quantitative Results

In this section, the results of the tests carried out on the quantifiable data will be presented. SPSS (IBM, 2012) was used to analyse the data and calculate statistical significance where necessary. The frequencies presented express the total number of hedges per one hundred words (100 divided by total number of words multiplied by the number of relevant devices). The frequencies of each hedging category and the most common device belonging to each category will be discussed to indicate which types of hedges were identified in the data. Then the results showing how hedging use correlates with holistic ratings, topic and formality will be presented. Following this are the results showing how each gender used each category of hedging device compared with holistic grades and topic. This begins with an overview of the boys' and girls' use of each of the hedging categories at each holistic level, followed by results regarding the topic of literary analysis. Finally are results showing that there is considerable diversity in hedging use within both gender groups.

Interactions of Hedging Use with Holistic Grades, Topic and Formality

Table 1 shows how many texts received each grade. To reiterate, the lowest grade a pupil may receive is 1 (not usually considered a passing grade); the highest grade is 6 (UDIR., 2011; see

also section 2.2). It is also possible to evaluate work more sensitively adding pluses or minuses to grades: a 4+ would be considered to be closer to a grade 5, for example. In this data set, a number of the texts had been given grades with pluses or minuses, but grades have been rounded to the nearest whole grade to avoid overcomplicating this analysis. Table 1 shows that the data set conforms to the typical distribution of grades in that fewer texts received the lowest and highest grades, while the majority of texts received grades considered average (i.e. closer to 4). Only one text in the data set received a 1 and of the twenty seven words written in the text, no hedging devices were identified.

Grade	Total number of texts
1	1
2	8
3	24
4	26
5	17
6	6

Table 1. The number of texts that received each grade.

The total number of hedges present in the data was 1.6 hedges per one hundred words. Overall, the texts exhibited more accurately used hedges than inaccurately used hedges. In total, the mean number of accurate hedges per one hundred words was 1.18, higher than the mean frequency of inaccurate hedges per one hundred words, which was 0.42. Table 2 shows the frequencies of both accurate and inaccurate devices belonging to each hedging category. The frequency of accurate hedges was higher than inaccurate hedges in four of the five categories. These figures indicate that generally, pupils showed they were largely able to accurately use hedges of each category. This implication does not apply to Verbal Fillers. The same frequency of accurate and inaccurate Verbal Fillers was present in the data set. Verbal Fillers and Adaptors were the least frequently used categories of hedge. The most frequently used category is Rounders both when accounting for accurate and inaccurate hedging devices.

Adaptors		Rounders		Plausibility Shields		EMAI		Verbal Fillers	
Acc.	Inacc.	Acc.	Inacc.	Acc.	Inacc.	Acc.	Inacc.	Acc.	Inacc.
Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
0.05	0.03	0.69	0.19	0.21	0.12	0.19	0.05	0.04	0.04

Table 2. Frequencies per one hundred words of accurate and inaccurate devices belonging to each hedging category.

In order to provide more insight into what types of hedges were present in the data, Table 3 shows the most frequent type of hedge from each category of hedge. Regarding the categories least frequently used, there were eleven types of Adaptor (e.g. “kind of, almost, basically”) and seven types of Verbal Filler (e.g. “just, sort of anyway”) in the data set. The low frequency of Verbal Fillers may suggest that the participants had an understanding of the differences between speech and writing. However, the Verbal Fillers without a hedging function have not been counted, so these frequencies may not realistically reflect the pupils’ ability to distinguish between conventions of speech and writing. The low frequency of both of these categories is exemplified in the low frequency per one hundred words of each of the types “kind of” and “just”. Examples [1b] to [4b] show typical situations in which pupils used these hedges accurately and inaccurately.

[1b]⁸ the Chinas military used a *kind of* ball kicking game (accurate Adaptor)

[2b] The six out players are *kind of* protecting the six meter (inaccurate Adaptor)

[3b] I *just* really want to watch my good ol’ sport (accurate Verbal Filler)

[4b] It’s *just* a really fun to play with friends. (inaccurate Verbal Filler)

Adaptor – “Kind of”		Rounder – “Some”		Plausibility Shield – “Can”		EMAI – “I think”		Verbal Filler – “Just”	
Acc.	Inacc.	Acc.	Inacc.	Acc.	Inacc.	Acc.	Inacc.	Acc.	Inacc.
Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
0.02	0.01	0.23	0.04	0.07	0.06	0.12	0.01	0.03	0.03

Table 3. Frequencies per one hundred words of the most common type of hedge from each hedging category.

⁸ The “b” in [1b] shows this example is used in the results chapter, where an “a” was used with each example in the methodology (see section 3.3).

There were twenty types of Explicit Marker of Author Involvement (marked EMAI in the tables in this chapter; e.g. “I feel, I believe”) present in the data, where “I think” was by far the most common. This hedge was used accurately 0.12 times per one hundred words, contrasting with the second most common Explicit Marker of Author Involvement “my opinion” which was used 0.02 times per one hundred words. This perhaps suggests the participants were only aware of a limited variety of Explicit Markers of Author Involvement. Nonetheless, they generally showed good knowledge of how to use “I think” accurately, rarely using it inaccurately. Example [5b] and [6b] show accurate and inaccurate examples of “I think”.

[5b] *I think* it’s amazing how the author made us feel all of these different emotions (accurate Explicit Marker of Author Involvement)

[6b] then they can become something useful like a queen or anything else *I don’t think* a king though. (inaccurate Explicit Marker of Author Involvement)

Of the eleven types of Plausibility Shield (e.g. “maybe, could, indicate”) present in the data, “can” was used most frequently, both accurately and inaccurately. It was the single most inaccurately used hedge in the data set. It is also noticeable that the frequency of “can” is similar when comparing its accurate and inaccurate usage. This suggests the participants tended to struggle to use the modal verb “can” when writing in English. This may be because of the phonetic similarity with the Norwegian word “kan”, which is perhaps more often translated to the English word “may”. In example [7b], “can” is used accurately. In examples [8b] and [9b], “can” is used inaccurately, acting as a false friend.

[7b] This object *can* be manmade, or it *can* be a natural one. (accurate Plausibility Shield)

[8b] you *can* be under very much pressure (inaccurate Plausibility Shield)

[9b] you *can* know, the word zombie come from Africa (inaccurate Plausibility shield)

Rounders (e.g. “only, at least, sometimes”) were the most frequent category with forty-three different types. Overall, “some” was by far the most frequent hedge in the data set and the second most inaccurately used hedge after “can”. The high overall frequency of “some” seems to account for its frequent inaccurate usage. There did not seem to be only a

single reason for “some” to be inaccurately used as it occurred in various situations breaking rules of grammar, well-formedness and/or appropriateness. Example [10b] includes an example of “some” being accurately used. Example [11b] includes an example of “some” counted as inaccurate because it detracts from the well-formedness of the sentence and [12b] shows “some” used in an inaccurate grammatical formulation.

[10b] Stord had *some* chances to score (accurate Rounder)

[11b] We have a team that is *some* of the best golfer in Sweden (inaccurate Rounder)

[12b] This is just *some* of the situations (inaccurate Rounder)

The second most common Rounder was “almost” which was used 0.07 times accurately and 0.01 times inaccurately, three times less frequently than “some”. While there were forty-three different types of Rounder, pupils often seemed to depend on the flexibility of the word “some”, where other words could have been used. One example is the hedge “few” (used accurately 0.03 times and inaccurately 0 times per one hundred words in the data set), which was much less frequent than “some”. There are a number of instances where “few” (among a range of other alternative hedges) could have been used instead to vary the vocabulary in the text. Sentence [13b] is from a text where “some” was used as a Rounder four times and where “few” did not appear at all.

[13b] I would like to share *some* thoughts

This suggests that pupils at this level use hedges most frequently to show that exact numbers are not available or to express a “range of items” (Prince et al., 3980: 10) and that they often depend on the word “some” to express this function.

Table 4 presents the frequency of accurately used hedges in the texts based on the grades received. At each grade, the total number of accurately used hedges is quite similar, besides grade 1 where no hedges were present. A one-way ANOVA showed no significant differences between any of the variables. Based on the results presented in Table 4, it seems that the frequencies of Rounders and Verbal Fillers across grades are homogeneous.

Grade	Accurately used hedging devices					
	Adaptors	Rounders	Plausibility Shields	EMAI	Verbal Fillers	Total
	Mean	Mean	Mean	Mean	Mean	Mean
1	0.00	0.00	0.00	0.00	0.00	0.00
2	0.03	0.63	0.05	0.45	0.06	1.23
3	0.03	0.62	0.16	0.13	0.01	0.94
4	0.04	0.75	0.25	0.18	0.01	1.22
5	0.06	0.76	0.26	0.26	0.10	1.44
6	0.18	0.67	0.36	0.04	0.05	1.31

Table 4. Mean frequency of each category of accurately used hedge based on holistic ratings.⁹

Adaptors and Plausibility Shields increase in frequency with each grade. While the one-way ANOVA showed no significant differences were found in these increases, the tendency here may imply that pupils showing the greatest written proficiency use accurate Adaptors and Plausibility Shields more frequently than those exhibiting weaker written proficiency. A larger data sample would be needed to investigate this further. In contrast, the frequency of Explicit Markers of Author Involvement per one hundred words seems to decrease from noticeably grade 2 to grade 6, but the results at grades 3, 4 and 5 seem to be randomly distributed. Again, while no statistical significance was found, the difference between grades 2 and 6 could indicate that the weakest pupils may use more Explicit Markers of Author Involvement, while the strongest use fewer. This may imply that pupils who receive lower holistic ratings tend to explicitly mark when a statement is their opinion whereas pupils who received higher holistic ratings are able to be mark statements for tentativeness more subtly.

In order to illustrate the differences between accurately used hedges in grade 2 and grade 6 texts shown in Table 4, examples will be given from texts given both grades. In example [14b], the writer (awarded a grade 6) accurately used an Adaptor to describe a piece of gym equipment. The author (awarded a grade 6) of example [15b] accurately used “might” to tentatively make a claim about the different kinds of sport people like. In [16b], the author (awarded a grade 2) had written a letter complaining there was too much sport on television.

[14b] They use the bounce from the springboard, and push their hands from an object called a horse ([.] *almost* square-shaped [.] (grade 6; accurate Adaptor)

⁹ The results that showed significance are marked with an asterisk in the tables in this chapter. Results were considered statistically significant when the p-value was equal to or less than 0.05.

[15b] A person that loves dancing *might* not be well suited for, for example boxing.
(grade 6; accurate Plausibility Shield)

[16b] *I think* it's too much sport when they talk about after the match in the stadium and on the news. (grade 2; accurate Explicit Marker of Author Involvement)

Examples [14b] and [15b] show how these pupils were able to add the element of tentativeness into well-formed, grammatically correct constructions. Example [16b] shows that the pupil is able to use “I think” to mark that the statement is their opinion. The rest of the sentence contains grammatical errors and is arguably not well-formed based on the sentence structure. This shows that while a pupil may use a hedge correctly, other factors can detract from writing quality, indicating why accurately used hedges do not significantly correlate with holistic ratings.

Grade	Inaccurately used hedging devices					
	Adaptors	Rounders	Plausibility Shields	EMAI	Verbal Fillers	Total
	Mean	Mean	Mean	Mean	Mean	Mean
1	0.00	0.00	0.00	0.00	0.00	0.00
2	0.14	0.26	0.43	0.13	0.00	0.95
3	0.01	0.22	0.04	0.05	0.05	0.37
4	0.01	0.15	0.13	0.03	0.06	0.37
5	0.05	0.23	0.10	0.04	0.05	0.47
6	0.00	0.04	0.03	0.03	0.00	0.10
p-value	*0.042	0.590	*0.006	0.549	0.659	*0.019

Table 5. Mean frequency of each category of inaccurately used hedge based on holistic ratings.

The frequencies per one hundred words of each category of inaccurate hedge based on grades received are shown in table 5. A one-way ANOVA showed significant differences between groups regarding inaccurate Adaptors ($p = .042$), inaccurate Plausibility Shields ($p = .006$) and total inaccurate hedges ($p = .019$). These differences seem to be a product of cumulative effects as Tamhane’s post-hoc test revealed no significant differences between each individual variable.

When scrutinizing the results, it seems apparent that the texts that received grades 2 and grade 6 exhibit the largest differences in the frequency of inaccurate Adaptors, inaccurate

Plausibility Shields and total inaccurate hedges per one hundred words.¹⁰ This implies that the texts exhibiting low written competence tend to contain more inaccurate Adaptors, Plausibility Shields and total inaccurate hedges than those exhibiting high written competence. However, this is only a valid implication when considering texts that received the lowest and highest passing grades as the frequencies of each of these categories seem to be homogeneous when comparing grades 3, 4 and 5. The frequencies of all the inaccurately used hedging categories are low in the texts graded as 6. This is also noticeable regarding Rounders, where texts at all grades contain around 0.20 inaccurate Rounders per one hundred words, besides those at grade 6 which contain 0.04 inaccurate Rounders. These results imply that using hedges inaccurately at any frequency may be linked to factors preventing pupils achieving a 6. In contrast, a large frequency of inaccurately used hedges may contribute to reasons for awarding a grade 2.

		Adaptors	Rounders	Plausibility Shields	EMAI	Verbal Fillers	Total
		Median	Median	Median	Median	Median	Median
Accurate	School A - Sports	0.00	*0.72	*0.20	0.00	0.00	*1.17
	School B - <i>Holes</i>	0.00	*0.28	*0.00	0.05	0.00	*0.50
Inaccurate	School A - Sports	0.00	0.00	*0.00	0.00	0.00	*0.37
	School B - <i>Holes</i>	0.00	0.00	*0.00	0.00	0.00	*0.00

Table 6. Median frequencies per one hundred words of each category of accurately and inaccurately used hedge based on the topic.

The median frequencies of each category of hedge per one hundred words based on the topic set at each school are shown in Table 6. At school A, the pupils were given tasks that had a sport theme. At school B, the pupils were given tasks that were grounded in analysing the book *Holes* by Louis Sachar (1998). The distribution of the data in each of the groups was not normal, so a Mann-Whitney U Test was used to test the frequencies for statistical significance. This test showed that the total frequencies per one hundred words of accurate hedges ($p = 0.00$) and inaccurate hedges ($p = 0.02$) present in the texts from each school were significantly higher in texts written about sports. Of the accurate categories, Rounders ($p = 0.00$) and Plausibility Shields ($p = 0.01$) were significantly higher. Regarding the inaccurate

¹⁰ The single text that received a grade 1 exhibited zero hedging devices. It was not included in the statistical tests and will not be discussed further due to it only containing twenty seven words

categories, Plausibility Shields ($p = 0.04$) were significantly higher. These results suggest that pupils were less dependent on using hedging devices when writing a literary analysis of *Holes*. This is perhaps because sports are integral to the everyday lives of most pupils, meaning they are more likely to be able to share personal experiences and to have formulated personal opinions about the topic.

The texts at school A written in an informal and formal style were compared and these results are presented in Table 7. Only the texts from school A were included in this part of the analysis as no texts written at school B about *Holes* were written in an informal style. Of the pupils at school A, six wrote texts in an informal, speech-like style. These six texts received grades ranging from 2 to 6. Five of these pupils chose to write a letter to complain about sport on television. One pupil chose to write from the perspective of someone presenting different kinds of sports for a television or radio program. Hedges were considered accurate when they fit into the writer’s intended style, so the hedges in these speech-like texts were considered differently to those in the texts that were more formally written. In the following examples, the hedges “little” and “bit” are considered differently.

[17b] I should probably explain a *little bit* about golf (informal)

[18b] My best friend started a *little bit* later (formal)

Excerpt [17b] is taken from a text that was clearly written in a speech-like style so “little” and “bit” have been considered accurate. The author of excerpt [18b] wrote with a more formal style, so the hedges “little” and “bit” were considered to create a tautology, showing a lack of awareness of avoiding redundant words (Szuchman, 2014: 16-17), and were thus counted as inaccurate.

Style	Total Accurate Hedges	Total Inaccurate Hedges
	Median	Median
Informal	*3.14	0.60
Formal	*1.06	0.35

Table 7. Median frequencies per one hundred words of total numbers of accurate and inaccurate hedges in informal and formal texts at school A.

The total frequencies per one hundred words of accurate and inaccurate hedges in formally and informally written texts from school A are shown in table 7. The data among the

two groups were not normally distributed so a Mann-Whitney U test was conducted. No significant differences were found between the frequencies of inaccurate hedges used. The frequency of accurate hedges was significantly higher in the informally written texts ($p = 0.001$). Besides accurate Plausibility Shields, the same test showed all accurate hedging categories (Adaptors: $p = 0.011$; Rounders: $p = 0.030$; Explicit Markers of Author Involvement: $p = 0.003$; Verbal Fillers: $p = 0.000$) were significantly higher in the informally written texts. This shows that all the pupils who chose to write in an informal style tended to use more hedges in their writing and showed an understanding of how to use hedges accurately based on their chosen style. It should be noted, however, that these results are questionable based on the small number of informally written texts in the data set.

The results presented in this section show that hedging use may be linked to holistic ratings, topic and style. Overall, the participants seemed to show a good understanding of how to use hedging devices accurately regarding grammar, well-formedness and appropriateness. Regarding holistic ratings, it seems that there tends to be a difference in the frequency of hedges at grades 2 and 6, but hedging does not seem to be a key factor in determining whether pupils receive grades 3, 4 and 5. Hedging seems to be linked to the topic the school chooses to focus on. In writing texts to analyse literature, pupils seemed to show less tentativeness than when writing about sports. Of those written about sport, the texts containing most hedges were those written in an informal style. This may suggest that pupils are able to determine whether hedges are appropriate when writing in a formal or an informal style. Finally, pupils use Rounders most frequently, but while there was a vast variety of Rounders present in the data, pupils frequently resort to using the word “some” when exact numbers were not available or when they wanted to refer to a “range of items” (Prince et al., 1980: 10). There were often only one or two hedges that were frequently used from each hedging category, implying a lack of awareness of the variety of hedges available.

Interactions of Each Gender's Hedging Use with Holistic Grades and Topic

In this section, the results will be presented showing the similarities and differences between girls' and boys' hedging use in the data set. The participants were 35 girls and 47 boys. To try to account for the uneven representation of each gender in the data, frequencies of hedges per one hundred words are used. To compare the results to the general pattern of academic achievement in written English among girls and boys in Norwegian high schools, the grades pupils received will first be presented. Following this will be the frequency of hedges per one

hundred words used by boys and girls both in total and based on the holistic ratings they received. Following this will be results regarding the use of accurate Plausibility Shields in the texts written at school B. Finally, the results to show the diversity of hedging use among pupils of each gender will be shown.

The number of boys and the number of girls that received each grade are shown in Table 8. Here, the distribution among both genders is quite similar to the overall grade distribution reported in table 1 in that most pupils received grades 3 and 4. While the grade distribution across genders is similar, there seems to be a trend for girls to receive slightly higher grades than boys. The grade averages reflect this trend: the mean grade for boys is 3.7 and the mean grade for girls is 4. This difference is similar to the average grades achieved by each gender in written English at Norwegian high schools in 2014-15 (UDIR, 2015a: 4). While the results imply a difference in the way holistic grades were distributed across genders, an independent variables t-test revealed that the average grade differences reported here are not statistically significant ($p = 0.240$).

Gender	Grade					
	1	2	3	4	5	6
	Count	Count	Count	Count	Count	Count
boy	1	4	16	15	9	2
girl	0	4	8	11	8	4

Table 8. Total number of girls and boys that received each grade.

Table 9 shows the median number of accurate and inaccurate hedges per one hundred words identified in the data sample based on gender. The mean numbers of both accurately and inaccurately used hedges per one hundred words are remarkably similar among girls and boys. A Mann-Whitney U test showed that there was no significant difference between either the median of accurate hedges ($p = 0.31$) or the median of inaccurate hedges ($p = 0.35$) present in boys' and girls' texts.

Gender	Total accurate hedges	Total inaccurate hedges
	Median	Median
Male	0.99	0.29
Female	1.16	0.26

Table 9. Median frequencies of accurate and inaccurate hedging devices present in girls' and boys' writing.

A two-way ANOVA was conducted to test how boys' and girls' hedging use interacted with holistic ratings. Table 10 presents the hedging categories that showed significance when the two-way ANOVA was conducted. The hedging categories excluded from table 10 did not show significance when conducting a two-way ANOVA. The two categories of accurate hedge that showed significance were Adaptors (grade interaction with gender: $p = 0.028$) and Verbal Fillers (grade interaction with gender: $p = 0.026$).

Gender	Grade	Accurate Adaptors	Accurate Verbal Fillers	Inaccurate Plausibility Shields	Total inaccurate hedges
		Mean	Mean	Mean	Mean
Male	1	.00	.00	.00	.00
	2	.06	.00	.79	1.72
	3	.04	.01	.03	.37
	4	.01	.02	.11	.40
	5	.04	.20	.14	.37
	6	.00	.00	.00	.11
Female	1
	2	.00	.13	.06	.19
	3	.00	.00	.06	.36
	4	.08	.00	.15	.34
	5	.07	.00	.06	.58
	6	.26	.08	.05	.09
p-value (grade*gender)		*0.028	*0.026	*0.000	*0.000

Table 10. Categories of accurate and inaccurate hedge that showed significance when conducting a two-way ANOVA testing the interaction between grade and gender for each hedging category.

Regarding accurate Adaptors, the mean frequencies per one hundred words present in grade 6 texts seem to stand out. In texts that received a 6 written by girls, the mean is 0.026

per one hundred words and 0.00 for boys. These figures seem to have contributed to the statistical significance in the two-way ANOVA, but these mean frequencies are based on texts written by just four girls and two boys, making it difficult to draw further conclusions.

The statistical significance shown in relation to Verbal Fillers seems to stem from the frequencies fluctuating from grade to grade. At grade 2, boys used 0.00 accurate Verbal Fillers, while girls used 0.13. The opposite is evident at grade 5 where boys used 0.20 accurate Verbal Fillers while girls used 0.00. The fluctuating frequencies are likely a result of there being very few occurrences of accurate Verbal Fillers in the data set.

The total number of inaccurate hedges used by girls and boys showed significance when conducting a two-way ANOVA, regarding gender ($p = 0.007$), grade ($p = 0.020$) and the interaction between grade and gender ($p = 0.000$). This statistical significance seems to stem from the high mean frequency of 1.72 inaccurate hedges per one hundred words in texts written by boys that received a grade 2. In comparison, girls who received a grade 2 used in total only 0.19 inaccurate hedges per one hundred words. The differences are less prominent at other grades. One possible implication of this is that boys who receive a grade 2, the lowest passing grade, have a tendency to use a higher frequency of inaccurate hedges when writing in English. Boys' inaccurate hedging use perhaps contributed to their receiving a grade 2. Girls who received a grade 2 seemed to have less problems in using hedges accurately and seemed to exhibit other linguistic issues that led them to receive a grade 2.

Of the inaccurate hedging categories, boys who received a grade 2 used more of every category of hedge inaccurately, besides Verbal Fillers (none were present in any of the texts at this level). Only inaccurately used Plausibility Shields showed statistical significance when conducting a two-way ANOVA. This significance applied to gender ($p = 0.007$), grade ($p = 0.020$) and the interaction between grade and gender ($p = 0.000$). Again, these results seem to be linked to the grade 2 texts written by boys. The frequency of inaccurate Plausibility Shields per one hundred words in grade 2 texts written by boys was 0.79, while the corresponding frequency was 0.06 in girls' texts. This implies that boys who receive a grade 2 struggle to accurately use Plausibility Shields; this difficulty seems to contribute to their low grades. It should be noted that of the four boys that wrote grade 2 texts, one boy used no Plausibility Shields at all. The remaining three accounted for the high frequency of Plausibility Shields.

Examples [19b] and [20b] are taken from grade 2 texts written by boys. Both include inaccurately used Plausibility Shields, although it is clear that it is not only Plausibility Shields that are challenging for these pupils. While the frequencies may suggest boys are struggling with Plausibility Shields more than girls, the examples show that their texts were

probably given a low grade based on other factors besides hedging use. In other words, the inaccurate hedging seems to result from challenges the pupils face writing in English in general.

[19b] Take instead some popular for around the world and take it in the channel and *mite* get more worship on the channel. (inaccurate Plausibility Shield)

[20b] the *can* be a relacioned a fysich of the person or a habilite *maybe* a irony with someone dificult. (inaccurate Plausibility Shield)

As shown above in Tables 6 and 7, topic and level of formality seem to be significant factors affecting hedging use. Also tested was each gender's use of accurate and inaccurate hedges to investigate interactions with topic and formality. Only one of the tests conducted showed significant results. This test compared the total frequency per one hundred word sof accurately Plausibility Shields present in boys' and girls' texts written at school B using a one-way ANOVA ($p = 0.03$). A two-way ANOVA produced no significant results when testing how gendered use of accurate Plausibility Shields interacted with holistic ratings at school B. However, the frequencies per one hundred words of accurate Plausibility Shields exhibited in texts at each grade level at school B are presented in Table 11. This is to illustrate that there are gender differences in the use of accurate Plausibility Shields in the textual data at each grade level.

Grade	Accurate Plausibility Shields use by each gender	
	Male	Female
	Mean	Mean
1	.	.
2	0.00	0.00
3	0.00	0.19
4	0.00	0.07
5	0.10	0.61
6	.	0.31
Total	0.02*	0.24*

Table 11. Frequency of Plausibility Shields per one hundred words in texts that received each grade written by male and female pupils at school B

Table 11 shows that girls tended to use more accurate Plausibility Shields than boys at grades 3, 4, 5 and 6, where boys used almost none at all. This is especially noticeable when comparing accurate Plausibility Shields at higher grades and when comparing the total accurate Plausibility Shields used. This suggests that girls writing about the book *Holes* were more capable in using Plausibility Shields accurately. This may imply that girls are more adept at tentatively making claims when writing a literary analysis, but not when writing about sports. Examples [17b] and [18b] show how accurate Plausibility Shields were used in subtly in girls' texts to express tentativeness; a feature largely absent in boys' writing at school B.

[21b] That's *probably* why he took the chance to go up the mountain, after he and zero ran away. (accurate Plausibility Shield)

[22b] *Maybe* this was what he had been talking about, and *maybe* there where water up there? (accurate Plausibility Shield)

In comparison with the results presented in table 11, inaccurate Plausibility Shields were rare at school B in both boys' (0.04) and girls' (0.02) texts. The one-way ANOVAs and two-way ANOVAs that were conducted to compare how each gender used hedges based on topic and formality did not produce significant results. The non-statistically significant results from these tests are not presented here. The limited number of statistically significant results suggests that, overall, year nine boys and girls in Norwegian schools do not tend differ in their use of hedging devices when writing in English.

While comparing hedging use across gender did produce a handful of significant results, individual differences among each gender seem more prominent. To exemplify this, Table 12 presents the mean number of accurate and inaccurate hedges per one hundred words used by two boys and two girls who all received a grade 4 for their formally written texts answering task one (see appendix C for task) at school A. These texts have been chosen to show the biggest differences present when accounting for these variables.

Compared with male 1, male 2 used over three more accurate hedges per one hundred words. Male 2 also used more inaccurate hedges per one hundred words than male 1. The frequency of inaccurately used hedges per one hundred words in male 2's text is notably higher than the total average for boys (0.48). The difference in the number of hedges between the two female pupils is less striking than that between the two male pupils, but it is nonetheless clear that female 2 used considerably more accurate and inaccurate hedges than

female 1. These results show that within genders, pupils answering the same task may differ in their use of hedging devices regarding frequency and accuracy, without affecting the grade a text receives.

Pupil number and gender	Total Accurate Hedges	Total Inaccurate Hedges
	Mean	Mean
Male 1	0.22	0.44
Male 2	3.37	1.20
Female 1	0.47	0.47
Female 2	1.97	1.13

Table 12. The mean frequency per one hundred words of the total number of accurate and inaccurate hedges used by four pupils.

The results presented in this section show that generally girls and boys used hedging devices to similar frequencies in the data set. One notable difference was the number of inaccurate hedges used by boys and girls who received a grade 2. This suggests that the inaccurate hedges in these boys' text may have contributed to their low grades, while hedging was not a factor that detracted from the quality of the grade 2 texts written by girls. A second notable difference was that girls at school B used significantly more accurate Plausibility Shields than boys. This suggests that when writing literary analyses, girls are more capable at tentatively making claims using this category of hedge. None of the other variables compared showed statistical significance, implying that gender does not play a large role in determining the hedging use among year nine boys and girls in Norwegian schools writing in English. The results above also show that individual variation seems to be a more important factor than gender in determining hedging use.

4.2 Qualitative Results

The data from the interviews with teachers will be presented based on the order in which the questions were asked (see appendix E for interview guide). Teachers X and Y both worked at school A, so their answers were similar and will be presented together where relevant.

The first question posed was “how did you prepare the pupils for this writing test?” In the four classes at school A, teachers X and Y used a textbook called *New Flight* (Bromseth and Wigdahl, 2006). Prior to the writing test, they worked with the “Sports” chapter in this textbook with their classes. The pupils received the tasks for the test three to four days in advance and, as homework, created mind maps to plan what they wanted to write. The pupils in these classes also held a presentation with a sports theme to be evaluated orally. These presentations were held prior to the writing test. Teacher X did not have time for written tasks in class prior to the test. This was partly because the year nine pupils at school A only had two 45-minute lessons of English a week, in contrast to year eight and year ten who have three 45-minute lessons a week. Additionally, teacher X mentioned that they were still getting to know the pupils as the two classes had a different teacher during year eight. Teacher Y, on the other hand, did manage to find time to include writing tasks in class as practice.

At school B, the English teachers use a different textbook called *Crossroads* (Heger and Wroldsen, 2007). However, the textbook was not used prior to the written text. Instead, teacher Z used a novel for young adults called *Holes*, written by Louis Sachar (1998). The pupils read the book and watched the film (adapted from the novel, 2003) at school. The pupils read the novel partly in class and partly as homework. Teacher Z commented that most managed to finish the book before the evaluations. The pupils also worked with relevant vocabulary in class. Prior to the written test, the pupils had an oral evaluation in the form of an individual conversation with the teacher about the book. No writing practice was done prior to the written test.

Questions two to four were oriented to find out whether hedging has been explicitly taught to the pupils. The word *hedging* was avoided as it was assumed likely that the teachers would not be familiar with the term. The first question related more to the categories Adaptors, Rounders and Plausibility Shields: “do you teach the pupils that it is OK to show they are unsure about facts?” At school A, teacher X discussed with pupils that they are unlikely to have access to all the relevant facts, so they should adjust their statements appropriately. They mentioned that it was important for pupils to write in a way that is believable. Otherwise, teacher X commented that they had not taught their classes about the specific forms that can be used to adjust factual information in this way. Teacher Y did not teach these forms and commented that instead, they encouraged their pupils to focus on the content of their texts rather than the linguistic features. At school B, teacher Z noted that all the pupils have their own tablet computers and can look up factual information at any time.

Teacher Z expected pupils to avoid imprecise information, but if they needed to be imprecise, teacher Z advised that they use words such as “roughly”.

Question three relates more to Explicit Markers of Author Involvement: “have you explicitly taught pupils how to write about their opinions contrary to facts?” At school A, the end of school exams require pupils to reflect and give their own opinions. With this in mind, teacher X does not teach pupils different ways of writing their opinions until their final year of high school (tenth grade). In contrast, teacher Y teaches pupils that it is important for pupils to show explicitly when something is their opinion or someone else’s. At school B, teacher Z encourages pupils to share their opinions. They also commented that as a reader it could be more interesting to read texts where pupils share their own opinions. Further, while content and general language use were perhaps the most important factors considered by teacher Z when marking the texts, pupils can improve their grade by using a more academic vocabulary. For example, instead of writing “I think”, it seems more academically acceptable to write “in my opinion”.

Question four was asked to find out whether the teacher has knowledge of whether devices used to show uncertainty or to give opinions were explicitly covered in the textbook used in English lessons: “do you know if either of the issues from the two previous questions are covered in the textbook?” The teachers at school A were aware of some exercises in the textbooks that involved hedging. Teacher X was aware that the version of *New Flight* (Bromseth and Wigdahl, 2006) used for the tenth grade pupils also explicitly covers giving opinions. Teacher Y mentioned that there are various writing tasks that ask pupils to “reflect” and are thus likely to elicit such forms. At school B, teacher Z said that there probably were no specific exercises for such linguistic forms in *Crossroads* (Heger and Wroldsen, 2007). Teacher Z commented instead that many of the exercises focus instead on conjugation of verbs.

The final question asked was to find out what kinds of perceptions teachers have about the writing of boys and girls: “do you think there are any general differences between the way boys and girls write in English?” At school A, Teacher X said some boys there have a tendency to use more inappropriate vocabulary and colloquial vocabulary in their writing. Girls and boys tended to show an interest in different kinds of sports. Teacher X mentioned football and boxing in relation to male interests and horse riding for female interests. Further, boys can seem childish in their writing style while girls may seem more reflective. Teacher Y did not think there are differences in the way boys and girls write. At school B, teacher Z also noticed that boys are more likely to swear when writing in English. Teacher Z further

observed that while some boys exhibit good linguistic skill, many struggle to elaborate, often using fewer words to make their arguments. Boys seem both to spend less time on editing their texts and to pay less attention to punctuation and spelling. Girls, on the other hand, were described as dutiful and their writing, generally speaking, seems to be more thoroughly edited with more attention paid to punctuation and spelling.

4.3 Summary

The results presented in this chapter showed that some of the variables tested affect hedging use. There were some differences evident in the use of hedges in grade 2 texts and grade 6 texts, but correlations were largely not evident in texts at other passing grade levels. Pupils used more hedges in texts written about sports than in texts analysing *Holes* (Sachar, 1998), implying that a given topic can affect hedging use. A greater frequency of accurate hedges was present in informally written texts, implying that pupils had a good understanding of how to use hedges in speech-like texts, although only six texts in the data set were informally written. The majority of tests used to compare hedging across gender did not show significance. This implies that gender generally does not affect hedging use. Instead, individual differences within each gender were more noticeable than differences across gender. Based on the answers given to interview questions, it seems that the three teachers have different attitudes, knowledge and practices regarding hedging use. In the next chapter, these findings will be discussed, comparing quantitative results with the qualitative results and with findings from previous studies.

5 – Discussion

In this chapter, the findings of the quantitative analysis will be discussed in detail. There will be a comparison of the quantitative findings with the qualitative data and with previous studies. First, the findings regarding holistic rating, topic and style will be discussed in relation to hedging use. This will be followed by a discussion of how hedging interacted with gender. The limitations of this study will then be outlined, followed by suggestions for future research.

5.1 How Hedging Interacted with Holistic Grades, Topic and Formality

In this section, the findings regarding how hedging correlates with holistic rating, topic and formality will be discussed with regards to answering the first research question (does hedging use at this educational level correlate with holistic ratings, topic and formality?). The implications of the findings will be linked to previous research and to comments teachers made during the interviews. The section will begin by comparing the total number of hedges with findings from previous studies. Then there will be a discussion of whether the total frequencies of accurate and inaccurate hedging devices correlated with holistic ratings. This will be followed by how holistic ratings correlated with each hedging category. Finally, the findings regarding how hedging correlated with topic and style will be discussed. Only one text containing twenty-seven words received a grade 1 in the data set and is not considered in this discussion.

The total number of hedges in the data was 1.6 hedges per one hundred words. Previous studies (e.g. Yang: 2013, Vold: 2006, Salager-Meyer: 1994) have quantified hedges with varying results using different taxonomies and analysing different kinds of writing. Compared with the total frequency in this data set, Yang (2013: 27) reported similar frequencies of hedging in English academic scientific writing, authored by English and Chinese speakers. The English speakers used 1.97 hedges per one hundred words, while the Chinese speakers wrote using 0.9 hedges per one hundred words. The total frequency of hedges in this data set is in between the frequencies reported by Yang. This reflects Vold's

(2006: 100) findings, which showed that Norwegian writers used slightly less epistemic modality markers than English writers in academic articles, but more than French writers. It seems plausible that Norwegian learners, whose academic culture is arguably akin to that evident in English speaking countries (Tweed and Lehman, 2002), would use hedges at more similar frequencies to native English speakers than would Chinese speakers. However, comparison is problematic as this study used a different taxonomy to analyse a characteristically different data set to those utilised by Yang and Vold. The questionable nature of comparing this data set with others is illustrated by Salager-Meyer's (1994: 156) findings. Using a taxonomy that is similar to the taxonomy used for this study, she found different sections of research articles were hedged to different degrees. Discussion sections in research papers contained 13 hedges per one hundred words, remarkably higher than the figures reported by both Yang and Vold. In the methods sections of research papers, only 0.8 hedges per one hundred words were used. This shows how a study's taxonomy and a text's purpose potentially affects the results produced when analysing texts for hedging devices.

Overall, the pupils wrote texts containing on average more accurate (1.18) than inaccurate hedges (0.42). This finding suggests that year 9 pupils in this sample tend to understand how to use hedging devices while abiding by the rules of grammar, well-formedness and appropriateness. The total frequency of inaccurate hedges per one hundred words in the data sample suggests nonetheless that hedging is a feature of written English that can cause problems for year nine pupils. Silva (1993: 668) found that "L2 writers' texts were [...] less accurate (more errors)" than texts written by L1 speakers. A study could compare accurate hedging use in L1 and L2 writing among this age group to shed light on what expectations can be had of hedging in learners' writing at this level. A further point here is that the concepts of well-formedness and appropriateness were considered mainly on a sentential level, but looking at accuracy based on a text's overall discourse (as done by Ishikawa, 1995) may have produced different results.

The total frequency of accurate hedges per one hundred words was similar across all holistic ratings, suggesting that accurate hedging use does not affect the grade a text may receive, but rather other linguistic features are of more importance to writing quality. Inaccurate hedges were used more frequently in texts that received a grade 2 and less frequently in texts that received a grade 6, while similar frequencies were present in texts that received grades 3, 4 and 5. Thus, these findings suggest that frequencies of inaccurate hedges present in a text contribute to the reasoning behind why the lowest and highest passing grades

are awarded. A text may be of lower quality if many inaccurate hedging devices are present and of higher quality when few inaccurate hedges are present.

The taxonomy used to categorize the hedging devices proved useful for providing further insight into how pupils used hedging devices. This supports Holmes' (1990: 192) point that quantifying hedges requires more sensitivity than simply lumping "all pragmatic particles together and [labelling] them hedges". Each category will be addressed based on the order as presented in the methodology chapter: Adaptors, Rounders, Plausibility Shields, Explicit Markers of Author Involvement and Verbal Fillers (see section 3.3).

Adaptors were one of the most infrequently used hedging categories and there were a limited number of different types of Adaptor in the data. This contrasts with Prince et al.'s (1980: 9) finding that these kinds of hedges were the most frequent in physicians' speech when describing symptoms. This also differs from Salager-Meyer's (1994: 157) findings which showed approximators, a term covering both Adaptors and Rounders (1994: 154), were one of the most commonly used hedging categories in medical English discourse. This is perhaps because different categories are more useful in some contexts and less useful in others. It is also perhaps that the use of Adaptors is linked to high proficiency, which is a prerequisite for contributing to medical discourse, where such high proficiency is not exhibited in this study's textual data. However, Salager-Meyer treats Rounders and Adaptors in a single category so the high frequency of approximators in written medical discourse may be accounted for mostly by Rounders. When comparing Adaptors with holistic ratings, it was found that the frequency of accurately used Adaptors increased modestly with each grade, again hinting that proficient writers use higher frequencies of Adaptors. Inaccurately used Adaptors were most frequent in grade 2 texts and least frequent in grade 6 texts. This implies that Adaptors might correlate with holistic ratings, but a larger data set would be needed for further evidence. If accurate use of Adaptors is closely linked to writing quality, it may be of interest to teach pupils about how to use them accurately. This finding also supports the idea that the infrequent presence of inaccurate hedges may contribute to reasons for rating a text as a grade 6.

The most commonly used hedging category was Rounders, implying that pupils recognise a need to hedge their statements when exact numbers are not available or when they want to express a "range of items" (Prince et al.: 1980). This reflects Prince et al.'s (1980: 10) and Salager-Meyer's (1994: 157) findings also indicating this hedging category was very frequent in spoken and written medical discourse. This category of hedging device seems thus to be versatile, proving useful in a wide variety of contexts. Of the forty-three different types

of Rounder quantified, the word “some” was by far the most frequent in the data set. While the hedges categorized as Rounders were generally used accurately, the high frequency of “some”, instead of other types of Rounders (such as “few”), suggests that pupils may benefit from learning to use a wider array of Rounders so as to vary their vocabulary. Regarding holistic ratings, Rounders were used accurately and inaccurately at similar frequencies across almost all grades. The exception was grade 6, where they were used inaccurately less frequently than at all other grades, again demonstrating that the highest quality texts rarely contain inaccurately used hedges.

Plausibility Shields were the second most frequent category in the data set. While Prince et al. (1980: 9) found Adaptors to be most frequent in spoken medical discourse, Salager-Meyer (1994: 157) found shields to be the most frequently used hedges in written medical discourse. The finding in this study suggests that Plausibility Shields useful in a variety of contexts. However, these hedges were more frequently inaccurate than any other category, indicating that, while these hedges are useful, learners in this study did not show a good understanding of how to use them. The word “can” was the most frequent Plausibility Shield and most frequently inaccurate of all hedges in the data. This seems to stem from the word acting as a false friend in that it is phonetically similar to the Norwegian word “kan” (perhaps functioning more similarly to the English word “may”). Of the hedges pupils struggle to use, teaching pupils to use “can” in its English sense may be the most beneficial teaching implication for improving writing quality. Regarding holistic ratings, accurate Plausibility Shields were more frequent with each grade, although these increases showed no statistical significance. Inaccurate Plausibility Shields were most frequent in grade 2 texts and least frequent in grade 6 texts. Overall, this implies that Plausibility Shields correlated loosely with holistic ratings, but a larger sample would be needed for more evidence.

Explicit Markers of Author Involvement proved to be quite frequent and were the third most frequent category of hedge present in the data set. Of twenty types of Explicit Marker of Author Involvement, the device “I think” was by far the most commonly used in the data set. Salager-Meyer (1994: 157) found that this category of hedge was the among the least frequent in written medical discourse. She cites, however, earlier research that found this kind of hedge to be “quite frequent in editorials and review articles” (Salager-Meyer, 1991; 1993 in Salager-Meyer, 1994: 157). This suggests that this category of hedge is appropriate in some genres but not others. In academic discourse the importance of avoiding personal pronouns is widely recognised (e.g. Nygaard, 2015: 50-51). Contrary to this, tasks included in the *New Flight* (2006-2007) textbooks tend to focus on giving pupils room to express their own opinions.

Some of the tasks set for pupils at both schools A and B also asked the pupils to write their opinions. These factors seem to account for the fairly high frequency of Explicit Markers of Author Involvement.

While hedges in this category tended to be used accurately, they were most frequently used both accurately and inaccurately at grade 2, while being least frequent at grade 6. This may imply that pupils who receive lower grades exhibit less subtlety when expressing their opinion. Marking a statement to show it is the author's opinion is not necessarily dependent on the use of Explicit Markers of Author Involvement. Any other category of hedge could be used to do this. While some tasks asked pupils to give their opinion, the findings suggest that a pupil may receive a lower grade if they frequently acknowledge other viewpoints or withhold commitment (Hyland, 2005: 52) using Explicit Markers of Author Involvement. This reflects the aforementioned ideals of academic argumentation, in that it is generally advised that authors avoid personal pronouns to remain as objective as possible in their argumentation (Nygaard, 2015: 50-51). Teacher Z supported this notion by commenting that pupils may raise their grade by using more academic vocabulary, although the example given was "in my opinion" as an alternative to "I think", which is an alternative Explicit Marker of Author Involvement, not a marker of tentativeness from another hedging category. However, these observations are based on the raw data as the statistical tests showed no significance concerning the use of Explicit Markers of Author Involvement.

The data sample contained equal frequencies of accurate and inaccurate Verbal Fillers. There were no apparent correlations between Verbal Fillers and holistic ratings. This category of hedge was overall relatively infrequent and only categorized as accurate when the text was clearly intended to be written in an informal style. However, Verbal Fillers were only counted when they had a hedging function, so this result does not comprehensively reflect the use of Verbal Fillers in the pupils' texts.

Of the statistically significant findings regarding each category of inaccurate hedge and holistic rating, the most notable differences were between grades 2 and 6. Grade 2 texts overall contained the highest frequencies of inaccurate Adaptors, Plausibility Shields and Explicit Markers of Author Involvement. This suggests that these pupils faced challenges when linguistically acknowledging the viewpoints of others and when withholding commitment (Hyland, 2005: 52). Perhaps these pupils need the most explicit tuition in using hedging devices. Grade 6 texts contained more accurate Adaptors and Plausibility Shields, fewer Explicit Markers of Author Involvement and fewer inaccurate hedges of all categories. These features seem to correlate with high quality writing, but a study using a larger sample

would be needed to gain further insight. Furthermore, Wolfe-Quintero et al. problematize accuracy measures in that errors may reflect proficiency in a non-linear way. A higher frequency of inaccurate hedges may reflect that an otherwise relatively proficient pupil may try to use new hedging forms to broaden their hedging vocabulary, committing a higher frequency of errors as a result. This may explain the homogeneous results between grades 3, 4 and 5 and also support the notion that “any analysis of errors in general won’t discriminate between developmental levels” (Wolfe-Quintero et al., 1998:37).

The topic chosen for the written assignment was different at the two schools involved in the study. This factor seemed to have an effect on the way pupils used hedging devices. This contradicts Vold’s (2006) findings, which showed only small inter-disciplinary differences medical papers and linguistics papers. This is perhaps because of her focus on academic writing, where certain hedging conventions may generally be expected of writers of such high proficiency. On the other hand, this finding supports Salager-Meyer (1994) who found that different sections of case reports and research papers were hedged to different degrees. She writes that, among other factors, “the general communicative purpose of the written discourse” (1994: 166) seems to affect the frequency of hedging devices. It may be that topic affects the communicative purpose and therefore affects the frequency of hedges in year nine learner writing. This is perhaps the first study that has looked at hedging across different topics in texts written by year nine L2 speakers, where previous research has only investigated hedging use in academic writing. Further research could look at how pupils use hedges in texts about a wider variety of topics, across a wider variety of formats like articles, letters, and opinion pieces, and within popular publications like magazines and newspapers. This would provide insight into what kind of hedging expectations can be had of pupil texts belonging to different genres. It may also be of interest to look at whether individual pupils vary their hedging use in different texts.

Of the topics focused on at each school, pupils who wrote texts about sports used a higher frequency of both accurate and inaccurate hedging devices per one hundred words than pupils who wrote about the book *Holes* (1998). This difference may be attributed to several factors. Two factors link to the organisation of the English tuition. The pupils who wrote about *Holes* had access to tablet computers and were able to use these to look up information whenever they wanted. Teacher Z commented that they did not expect pupils to include imprecise information because of the resources available to them. The second practical factor is that the pupils at school B wrote their texts over a number of days whereas pupils at school A wrote their texts as part of a timed school test. The pupils at school B may therefore have

had more time and better resources for editing the information they included in their texts. They may wish to seem more certain in their writing and thus use time to edit out linguistic devices, like hedges, that convey uncertainty.

The different nature of each task may explain the differences in hedging use. The researcher observed that the pupils at school B organised their texts to include a section to retell the story and a section to give opinions. With this structure, they had a tendency to write long passages retelling the story, which often required no hedging devices. Hedging was limited to the section devoted to their own opinions. The structures of the texts about sports were more varied and hedging devices were often used in all sections of these texts.

The pupils' interests could have affected the topic-dependent difference in hedging use. It may be that more pupils have personal experiences and opinions regarding sports than they have with literature. Their more frequent use of hedges would therefore reflect their extra-curricular involvement in sporting activities. This loosely relates to research conducted by Pajares and Valiante (2001: 116) showing that a pupil's self-efficacy, whether they feel they can successfully complete a task or not, may determine the quality of their performance. In this case, it is perhaps that having previous knowledge and opinions about a topic affects hedging use. This notion endorses the teaching practices at both schools where pupils prepared for writing their assignments by reading texts about the school's chosen topic, providing them with relevant knowledge and vocabulary prior to written tests.

The most significant factor affecting hedging use seemed to be formality. This again supports the notion that "the general communicative purpose of the written discourse" (Salager-Meyer, 1994: 166) affects hedging use. Comparing the informally written texts with the formally written texts at school A revealed that accurate hedges were significantly more frequent in informally written texts, although the frequency of inaccurate hedges was similar. Pupils in this study used more accurate hedges in informally written texts, possibly reflecting their knowledge of speech-like conventions. This would reflect the school curriculum's initial focus on oral skills when pupils in Norwegian schools begin to learn English (UDIR., 2015b: 7). This trend was apparent regarding all categories of hedging except Plausibility Shields. Plausibility Shields were perhaps less frequent as they tend to be used to show an author is unsure of the factual content of a statement and were thus not needed in the informal texts. The informally written texts received a range of grades, showing that good texts written in this style are still able to receive a high grade. These texts also allowed greater creativity in hedging use. While some hedging structures may be too colloquial to be appropriate in formally written texts, they may fit in well in an informally written text.

The findings discussed above support, to an extent, Hyland's (1996) argument that hedging is a feature of written language that should be explicitly taught to language learners. Hinkel (2005: 40-41) found that not only did L2 student texts contain a lower frequency of hedging devices, they also contained a restricted range of hedging types. This study produced seemingly similar findings, although no comparison with L1 writing was conducted. While there were a number of different types of each category of hedge present in the data set, only a handful were commonly used. Thus, the variety of hedging types present in the data set seemed limited, so it may be beneficial to work to work with vocabulary that allows pupils to acknowledge the opinions of others and withhold commitment. Comparing L2 writing with L1 writing at this level would be needed to further support any teaching implications. While this data suggests that it may be important to teach pupils to use a wider variety of hedges and to use them accurately, it may be that this result was produced because, in general, hedging use is something both L1 and L2 year nine pupils need to develop. If this is the case, there is a possibility that pupils develop their hedging skills as part of the learning process and without explicit hedging tuition.

5.2 How Hedging Interacted with Gender

The second research question for this thesis asked whether year nine boys and girls use hedges differently when writing in English in Norwegian schools. When comparing the total number of accurate and inaccurate hedges present in the data, no significant gender differences were found. When testing how each gender's use of each hedging category interacted with grade, topic and style, only a few statistically significant results were found. The data shows that hedging use seems to show greater individual variation within, rather than between, each gender group. The factors that did significantly interact with gender will be discussed first, followed by a discussion of what the non-statistically significant results may imply.

Looking first at the hedging categories that were used accurately, Adaptors were only statistically significant when comparing boys' and girls' texts that received a grade 6. Boys who received a grade 6 used no Adaptors, while girls used some. This finding suggests that girls are more capable in using Adaptors accurately. The grade 6 texts in the sample exhibited

a higher frequency of Adaptors somewhat emulating Salager-Meyer's (1994:157) finding that approximators were one of the most frequent hedging categories in written medical discourse, which is a genre dependent on high written proficiency. Thus, it seems that Adaptors are associated with high written proficiency, therefore implying higher proficiency among girls. The grade 6 texts were written by only two boys and four girls, so further research using a larger data set would be needed to further investigate whether girls deploy Adaptors in greater frequency and with greater accuracy than boys.

Accurate Verbal Fillers seemed to show significance because the frequencies were randomly distributed across grades. This random distribution probably resulted from accurate Verbal Fillers appearing in only a handful of texts in the data set. Overall, participants in this study rarely used Verbal Fillers as hedges, undermining any potential comparisons across gender. The implication is nonetheless that boys and girls do not seem to differ in their use of Verbal Fillers that had a hedging function. Instead, the frequency and accuracy of Verbal Fillers seems dependent on whether a pupil chose to write in a formal or informal style.

The most notable finding concerning accurately used hedges was found when comparing Plausibility Shields in boys' and girls' texts written about *Holes* at school B. Accurate Plausibility Shields were found to be significantly more frequent in girls' texts. This finding loosely supports the findings of Roe and Vagle (2010: 88), who looked at which tasks on the PISA (OECD, 2010) test of reading ability boys and girls were more successful at answering. They found that the tasks girls completed more successfully tended to involve more reflection. While girls in this data set did not receive significantly higher grades than boys in the texts analyzing *Holes*, they seemed to be more able to subtly express tentativeness by using Plausibility Shields. While girls did not, on average, achieve higher grades than boys for this seemingly reflective assignment, this finding may imply girls exhibit greater linguistic prowess when writing literary analyses. Accurate Plausibility Shields seem to correlate with higher proficiency as they tended to increase with each grade in this study, and were frequent in Salager-Meyer's (1994: 157) study of written medical discourse. However, this is perhaps the most striking result concerning how accurate hedging use interacted with gender, but it was based on only fourteen texts written by boys and ten written by girls, so a larger sample would be needed to draw firmer conclusions. Furthermore, it was the only result of all the tests conducted to compare how each gender used each accurate and inaccurate hedging category and whether these factors interacted with both topic and formality. This implies that, generally, boys and girls use accurate hedges at similar frequencies in texts concerning both literary analysis and sports.

Looking at how each gender's inaccurate hedging use interacted with holistic ratings, only two results proved to be significant. The first was found comparing the total number of inaccurate hedges in grade 2 texts. In this data set, boys who received a grade 2 used a higher total frequency of inaccurate hedges than girls who received a grade 2. Boys who received a grade 2 used more of every category of hedge inaccurately besides Verbal Fillers. The second of the two significant findings was that the category of inaccurate Plausibility Shields were significantly higher in grade 2 texts written by boys. Considering that accurate Plausibility Shields were more frequent in texts that received higher grades, more frequent in girls' texts concerning literary analysis, and most frequent in written medical discourse (Salager-Meyer, 1994: 157), it is possible that inaccurate use of this hedging category can detract from the quality of a text. This suggests that the higher total frequency of inaccurate hedges, Plausibility Shields in particular, in boys' texts may have contributed to the low grade they received. Linguistic aspects besides hedging use seem to have contributed to the girls' texts receiving a grade 2. This hints at the idea that boys who exhibit low written proficiency perhaps need more explicit help to use hedging devices accurately, particularly Plausibility Shields. However, any conclusions must be tentatively made here as only four boys and four girls wrote texts that received a grade 2. Additionally, one of the four boys who received a grade 2 used no Plausibility Shields in his text, illustrating the questionable nature of these implications.

The teachers were not asked whether they consciously considered hedges when marking texts, a question which could have helped shed light on this finding. Some of their other answers may nonetheless prove to be relevant here. Teacher Y commented that it was important for pupils to focus more on content rather than linguistic features, perhaps reflecting this teacher's attitude when marking pupil texts. Teacher X commented that they teach year ten pupils how to write opinions, which may imply this teacher does not look at features concerning how pupils express opinions in writing prior to year ten. Teacher Z may have considered hedging based on their comment that texts are more interesting when they include the pupils' personal opinions, although this teacher did not specifically spend time in class teaching linguistic forms for giving opinions. The results from the interviews generally imply that teachers do not specifically focus on how pupils use hedging devices when marking their texts, but further interviews would be needed to clarify this.

The statistically significant results showing gender difference in this study may be comparable with some of Holmes' (1986; 1990) findings. Investigating speech, Holmes (1990: 198) found that while women and men used the particle "sort of" in similar

frequencies, they tended to use the particle with different functions, where men more frequently used it in its epistemic, imprecise sense. Another of her findings was that women tended to say “I think” (an Explicit Marker of Author Involvement in this study) in its deliberative sense, while men used it in its tentative sense (1990: 199-200). She also showed that men use “you know” (Holmes recognises that this can function as a Verbal Filler) more often in uncertain senses, while women use it using its certain senses (1986: 14). With these findings, Holmes (1990: 202) concludes that women are “confident, facilitative and supportive conversationalists”.

In this study, the factors interacting with gender that showed significance seemed to support the idea that female pupils exhibit higher English proficiency. Grade 2 texts written by girls exhibited lower frequencies of inaccurately used hedges than boys. Accurate Adaptors were more frequent in grade 6 texts written by girls, and accurate Plausibility Shields were more frequent in texts concerning literary analysis written by girls at school B. Based on the findings of this study and on Salager-Meyer’s (1994) study mentioned above, it seems that accurately using Adaptors and Plausibility Shields seems to relate loosely with higher proficiency. This indicates that, in a similar vein to women being capable conversationalists (Holmes, 202), girls showed tendencies of being more adept than boys in subtly acknowledging alternative viewpoints and withholding commitment (Hyland, 2005: 52). Using a larger sample of year nine texts, especially those graded 2 and 6, written by boys and girls would be needed to confirm these findings. It may also be problematic to compare studies of hedging in writing with studies of hedging in speech. Furthermore, the categories that showed significance in this study were not the same as the categories affected by gender in Holmes’ (1986; 1990) studies.

While this study produced a handful of results that showed statistically significant gender differences, the majority of the statistical tests conducted produced non-significant results. The tests compared how each accurately and inaccurately used category of hedge in boys’ and girls’ texts interacted with holistic ratings, topic and style. This implies that, overall, gender does not play a considerable role in hedging use among year nine pupils writing English in Norwegian schools. The findings showing that boys and girls use hedges similarly seem to outweigh the findings showing that they use hedges differently.

These findings contradict those of some previous theories and studies. In claiming that women use more hedging devices, R. Lakoff (1973; 1975; 2004) seemed to act as an instigator for research into hedging use. For her theory of *women’s language*, she (1973: 54) argued that in “women’s speech, strong expression of feeling is avoided, expression of

uncertainty is favoured, and means of expression in regard to subject-matter deemed ‘trivial’ to the ‘real’ world are elaborated” (1973: 45). As Lakoff’s theory concerned speech, it may be problematic to apply her claims to writing. Nonetheless, this study looked at how hedging use in texts written by girls and boys interacted with a host of variables and consequently produced very few significant results. This implies that, concerning hedging devices, year nine boys and girls in Norwegian schools express themselves in writing with similar levels of certainty, undermining the concept of *women’s language*.

In terms of reading skills, PISA (OECD, 2010) found boys did not perform as well as girls on tasks designed to test reading ability. Roe and Vagle (2010: 103) found that boys tended to lag behind girls in terms of literacy skills because of reading habits. While girls have a broader reading repertoire, boys limit their reading only to texts they perceive as useful and tend to spend more time on video games, television, video and internet (Vagle, 2005: 263). In this study, there were no significant differences between boys’ and girls’ grades and few significant differences in their use of hedges. This could imply either that the gender gap in reading skills in Norway has decreased since the last PISA survey of reading or that reading habits generally do not affect how pupils use hedging devices in writing.

Also relating to reading, Crismore and Vande Kopple (1997: 102) found that an author who conveyed uncertainty would be less likely to be respected by boys. In this study, the findings imply that, in their written work, boys do not convey different attitudes to girls regarding uncertainty. This may support Lewin (2005: 163) who found that a reader might perceive a text to be more heavily hedged than the author intended. In this study, one possibility is that, when writing their texts, the pupils did not perceive certain forms as having a hedging function.

Looking at studies of writing, Merisuo-Storm (2006: 121) found that Finnish ten to eleven year old boys were less interested in writing than girls. Their interests were limited to the genres that they perceived to serve a purpose. Any potential gender differences in attitudes towards writing do not seem to affect written hedging use in texts about sports and literary analysis. It is possible that boys perceived the topics for their texts to serve a purpose and were more engaged than they would be when writing texts about other topics. Alternatively, considerable technological developments have been made since some of the studies (e.g. Merisuo Storm, 2006; Vagle, 2005) reviewed in this thesis were conducted. It could be of interest to see whether these technological developments have affected reading and writing habits among year nine boys and girls.

The results also potentially contradict some of the teachers' comments. Most specifically, while teacher Y noted no differences, both teacher X and teacher Z made comments implying boys are generally less apt at writing reflective texts in English. These teachers' views are reflected neither in the grades nor in the hedging use in this data set. This suggests that two of the three teachers interviewed may have preconceptions of what they expect of girls and of boys. The qualitative results here suggest such gender preconceptions may affect teacher attitudes when marking tests. This potentially reflects Bussey and Bandura's (1999: 701) claim that teachers treat boys and girls differently. This perhaps also illustrates the idea that Norwegian schools are femininely oriented (Bakken et al., 2008: 39). However, the teachers may have also been considering other linguistic features when commenting on the differences in boys' and girls' writing and texts. Additionally, only around half the total number of pupils from each class involved were collected, so looking at the written work of all the pupils in these classes may have produced different results. Further qualitative and quantitative data would be needed to investigate this further.

While the abundance of statistically non-significant findings contradicts conclusions of some studies, the findings support those of studies that have compared gendered tentativeness in writing. Johansson and Geisler (2011) looked at whether stance expressions were used differently by male and female pupils in Swedish lower and upper secondary schools and found no significant differences. Vold (2006: 83) quantified epistemic modality markers in academic articles within medicine and linguistics and found some gender differences, but these were not significant. This study similarly found few significant differences regarding gender, finding instead that topic and style played a bigger role in determining the way in which pupils used hedging devices.

The lack of statistical significance when comparing hedging use across gender perhaps illustrates that the distinction between male and female is a crude one. This contradicts researchers (e.g. Saville-Troike, 2012; Gurian, 2001) who promote biology as a cause for gender differences, and supports those (e.g. Bussey and Bandura, 1999; Eliot, 2011) who criticise the use of biological factors to explain gender differences. This study showed, furthermore, that individual differences within each gender seemed more prominent than differences across gender, linking to the idea that biology opens for "a range of possibilities rather than dictate a fixed type of gender differentiation" (Bussey and Bandura, 1999: 680). Similarly to this study, Vold (2006: 83) produced findings showing that, regarding the use of epistemic modality markers, individual differences were larger than gender differences.

To approach gender more sensitively, it may be of interest to account for gender orientation (e.g. Pajares and Valiante, 2001) in future investigations of hedging use. The gender divide in this thesis is based on superficial, biological differences. In that some researchers do not acknowledge biological theories accounting for gender differences (e.g. Bussey and Bandura, 1999; Eliot, 2011), it could be of interest to see whether accounting for developmental factors would produce different results. To illustrate this notion, Pajares and Valiante (2001: 376) looked at how gender correlates with motivation and writing. They found that biological gender did not reveal any differences, but instead that looking at pupils' gender identities did reveal differences. Further research could use qualitative data to learn about the participants' gender orientation to see whether this more strongly correlates with hedging use.

5.3 Limitations

This research faced a number of limitations that make it difficult to draw firmer conclusions from the data collected. The limitations are discussed based on two main themes here, the first relating to the quantitative and qualitative data that was collected; the second relating to the methods used to quantify hedges in the data. Many of the limitations discussed here resulted from the limited scope of this study and these issues might have been approached differently under different circumstances.

The sample of texts that was collected was limited both in terms of the actual data collected and in terms of the way the data was collected. The sample can be described as a convenience sample in that the data was collected based on geographical convenience; the schools that participated were proximal to the university (Dornyei, 2007: 99). This means that the generalizability of the results may be limited to the region in which the data was collected and perhaps only to the two schools where the data was collected. However, the texts were written as a part of a standard school evaluation, contributing to the authenticity of the data. Furthermore, all grade levels were represented in the textual data, which reflected the national average grades for each gender (UDIR, 2015a: 4), arguably contributing to the external validity of this study's findings.

The amount of data collected was limited in the textual data consisted of eighty-two texts. The number of parents/guardians that granted permission for their children's work to be used reduced the number of texts collected. The classes that were involved consisted of 155 pupils in total, but only 101 parents/guardians granted consent. The sample was then cut down by further factors like undelivered texts and texts that were too short to be analysed (see section 3.2). A larger sample would have contributed to drawing firmer conclusions.

The sample size was especially limiting when investigating how hedging use interacted with gender. There was a much greater representation of boys in the sample. This was accounted for by presenting the frequencies of hedging categories per one hundred words. However, the number of texts was limited when breaking down the sample into smaller groups based on holistic ratings. Comparing how grade 2 texts interacted with gender produced statistically significant results in this study, implying that, when writing English texts, boys who receive a grade 2 tend to use more inaccurate hedges than girls. However, only four boys and four girls wrote texts that received a grade 2, meaning further evidence would be needed.

Included in the data were details concerning the year group the pupils belonged to and the grade they received. Details that were not collected include mother tongue and gender orientation. A pupil with a mother tongue besides Norwegian may have grown up with a rhetorical tradition where hedges are used differently than the Socratic tradition that characterises English and Scandinavian academia (e.g. Hinkel, 1997; Tweed and Lehman, 2002). If many of the pupils come from different traditions, the results might have been interpreted differently. Understanding more about the gender identities (e.g. Pajares and Valiante, 2001) of pupils and using this information to compare hedging use may also have produced different results to those presented in this thesis.

The qualitative data was collected for this study mainly to provide detail about the way the classes were taught before writing texts. Further qualitative data could have enriched the findings of this study. Only three teachers were interviewed. Involving more classes and interviewing more teachers about whether they explicitly teach hedging could have produced richer data. By involving more classes with different teachers, it could have been interesting to see whether the teachers' gender affects the way pupils write. However, as Dornyei (2007: 188) notes, "teachers can be very busy and stressed out, and they have their own distinctive beliefs and styles as well as professional and personal agendas". Thus, using more of the teachers' time than was used here could have proved to be problematic.

Collecting more qualitative data about each of the classes could have proved useful. Interviewing the pupils to learn about their knowledge and understanding of hedging could have been of interest, as well as learning about their gender orientation. Observing the environment in each of the classes could also have contributed to a more in-depth interpretation of the quantitative data. However, to reiterate, working with classroom-based research may be difficult because of the conflicting interests between the teacher and researcher (Dornyei, 2007: 188).

The quantification of hedging devices in the textual data also faced limitations. While the supervisor for this thesis helped analyse some texts and the entire data set was analysed twice over by the researcher, only one rater analysed the whole data set. This made calculating inter-rater reliability impossible. The results would have been more reliable had there been a second rater to analyse all the data. However, there was a high level of agreement between the textual analyses conducted by the supervisor and researcher.

While Johansson and Geisler (2011) looked at whether pupils developed in their use of stance expressions from lower to upper secondary school, none of the other studies reviewed in the theory chapter of this thesis have approached the topic of hedging in lower secondary school writing. It was therefore difficult to compare the findings of this study with the findings of previous studies investigating hedging use. Not only was the focus of this study unusual, it also incorporated a unique hedging framework that quantified each category of hedge in terms of whether they were accurately or inaccurately used. From the outset, it was expected that this framework, being used for the first time, would face limitations.

Many studies of hedging seem to face issues with categorization. Vold (2006: 70) points out that some markers have several meanings, making categorization problematic. For example, the hedge “I think” was the most commonly used Explicit Marker of Author Involvement. Quirk et al. (1985: 1113) recognises that “type (i) comment clauses” like “I think” may have four functions including hedging, “certainty”, “emotional attitude”, and to “claim the hearer’s attention”. These categorisations seem to be more relevant to spoken rather than written language, but considering the speech-like nature of some of the texts, the pupils were perhaps conscious of spoken intonation when writing. If pupils had read their texts aloud, it may have been easier to understand their hedging intentions. Examples [2b] and [3b] (see chapter 4) help to illustrate this point. These sentences could be said with a variety of intonation patterns, which may have changed the way these devices were categorized. Sentence [2b] could be said in a way that emphasizes, rather than hedges, the speakers wishes.

The intonation of example [3b] could potentially be changed to fit any of Quirk et al.'s four categories.

[2b] I *just* really want to watch my good ol' sport

[3b] I *think* it's amazing how the author made us feel all of these different emotions

Furthermore, Lewin (2005) found that hedges were interpreted differently by readers and authors. An author may feel like they use hedges, not to explicitly hedge their statements, but rather because hedges are linguistically ubiquitous. A reader, on the other hand, may interpret these devices, used out of necessity from the author's point of view, as having a hedging function. Pupils could also have been interviewed about their written intentions.

Finally, this study did not account for boosting devices. This was based on the limited scope of this thesis. Hedges and boosters are both considered to be important linguistic features and account for "83 per cent of all metadiscourse" (Hyland, 2005: 67). In further research, comparing the use of boosting and hedging devices in texts could nuance findings.

5.4 Future Research

This section will put forward suggestions for future research based on this study's findings. The findings of this study showed that topic and formality have the most significant effect on how year nine pupils in Norwegian schools use hedging devices in written English. Hedging use also seemed to correlate with the lowest and highest passing grades, but not with grades 3, 4 and 5. Some of the statistical tests suggest that hedging use might correlate with gender, but generally, it seems that a pupil's gender did not significantly affect their hedging use. The suggestions will be made firstly, concerning the quantitative data and secondly, concerning the qualitative data.

Quantitative data can be collected and analysed in a variety of ways to investigate hedging use in lower secondary school writing. In this study, the researcher did not create the tasks that pupils wrote about, but instead allowed teachers to hold written evaluations as they had originally planned. This provided a rich data set that was true to the teaching methods of the schools involved. Pupils were able to prepare to write the texts over a longer period and it

was easy to cooperate with the teachers in this way. Further research could similarly utilise authentic pupil work, but also include a greater quantity of texts written about a wider variety of topics and written in both formal and informal styles. Comparing hedging use with other written textual elements could also shed light on whether the frequency of inaccurately used hedges in this data are of particular concern, or whether this finding can be expected based on the proficiency of pupils at this level. Research has tended to focus on hedging in academia, so a further suggestion is to investigate how hedging devices are used in more popular mediums such as newspaper articles and magazine articles. This could provide knowledge of what to expect of pupils' written work.

Collecting data from native English speakers at lower secondary school would allow for cross-cultural comparison at this level. Vold (2006) found that, although "Norwegian researchers tend more towards the Anglo-American style of writing" (2006: 77), hedging was less pervasive in Norwegian academic writing in English academic writing. It would be illuminating to investigate whether this finding would be reflected in analysing texts written by L1 and L2 lower secondary pupils. Furthermore, comparing texts written by L1 and L2 speakers, Silva (1993) found that "L2 writers' texts were less fluent (fewer words), less accurate (more errors), and less effective (lower holistic scores)" (1993: 668). Comparing L1 and L2 writing could help to show whether pupils in Norwegian schools use significantly more inaccurate hedges than English speaking pupils. This comparison could thus help gain an understanding of what expectations can be made of pupils in Norwegian schools regarding hedging use.

One implication of the findings of this study is that pupils may benefit from learning more types of each hedging category to vary their vocabulary. A qualitative analysis could therefore consider the lexical complexity (e.g. Wolfe-Quintero et al., 1998) of the hedging devices used in each text. This study looked at the frequency of hedges per one hundred words belonging to each category, but not specifically at the number of different types of hedge present in each text. Looking at hedging complexity may highlight whether explicit teaching of a wider variety of hedging types may be of interest at this educational level.

This study looked at the accuracy of each hedging device based on grammaticality, well-formedness and appropriateness. These three factors were mainly considered on a sentential level. Further research could consider hedges based on larger structural factors, similar to criteria used by Ishikawa (1995). For instance, if a pupil repeatedly relies on just one or two hedges to withhold commitment in a given text, the overall well-formedness may

arguably be compromised. This would also help gain further insight into Hinkel's (2005: 47) finding that L2 speakers tended to rely on a limited range of hedging devices.

The interviews held with teachers provided useful qualitative data that supplemented the quantitative data. One finding produced by the qualitative data was from comments made by teacher X and teacher Z, which suggested that they favoured girls' written work. The quantitative data, however, did not reflect these comments. It is possible that the teachers were considering other linguistic aspects when they made their comments. Alternatively, this may reflect Bussey and Bandura's (1999: 701) claim that teachers treat boys and girls differently. More qualitative research could be done to investigate teachers' preconceptions of gender. If teachers have a tendency to display a bias towards girls, this may contribute to understanding why, in Norwegian schools (UDIR., 2015a: 4), boys are behind girls in all subjects besides physical education.

Future research could collect detailed qualitative data about the pupils. Collecting details about pupils' mother tongue, for example, could provide insight into what can be expected if and when pupils come from backgrounds with different rhetorical traditions (e.g. Hinkel, 1997). Interviewing pupils to understand their intentions when using hedging devices may also be of interest, as authors tend to perceive their hedging use differently to readers (Lewin, 2005). The gender variable analysed in this study was based on a biological distinction, which is considered crude by some (e.g. Eliot, 2011). Different results might be produced if, instead, gender orientation (e.g. Pajares and Valiante, 2001) is accounted for.

In this section, the suggestions for future research into hedging at this academic level are made based on this study's findings. This study applied a unique hedging taxonomy to a textual data written by year nine pupils in Norwegian schools writing in English. None of the research reviewed in the theory chapter of this thesis has addressed written hedging use in this context. Gaining further insight into the use of hedging devices may contribute to understanding hedging use at this level, what expectations can be had of year nine pupils, and whether these linguistic devices should be explicitly taught.

6 – Conclusion

This aim of this thesis is to investigate the use of hedging devices in English texts written by year nine girls and boys at two Norwegian schools. Five categories of accurate and inaccurate hedging device were quantified to test how they interacted with holistic ratings, topic, formality and gender. This research intends to contribute to understanding how English learners at this level use hedging devices and which factors had the largest effect on hedging use.

This thesis used mixed methods (Dornyei, 2007) in that both quantitative and qualitative methods were used. The quantitative data was given precedence at the stages of collection and analysis. This data consisted of 82 texts written in English by year nine pupils from two Norwegian schools. Hedging devices were quantified in terms of hedging category and accuracy. The taxonomy incorporated five hedging categories, including Adaptors, Rounders, Plausibility Shields, Explicit Markers of Author Involvement and Verbal Fillers (Holmes, 1986; Prince et al., 1980; Salager-Meyer, 1994). The accuracy of each device was considered based on grammaticality, well-formedness and appropriateness (Fetzer, 2004). The frequency per one hundred words was calculated for each accurately and inaccurately used hedging category in each text in order to see how hedging use interacted with holistic grades, topic, formality and gender. Three interviews were held with the teachers of each class involved. This qualitative interview data provided contextual information to supplement the quantitative analysis.

This study found that the level of formality was most significant factor correlating with hedging use in texts written about sports. Texts written in an informal style contained a higher frequency of accurate hedges per one hundred words than texts written in a formal style. Pupils seemed to show knowledge of how to accurately use hedges when writing in a speech-like style. This is perhaps due to pupils being more highly exposed to spoken conventions at this educational level (e.g. UDIR., 2015b: 7; Bromseth and Wigdahl, 2006-2007). This finding suggests pupils at this level could benefit from explicit teaching in how to use hedges in formal writing. However, only six texts in the data set were categorised as informal, so a larger sample would be needed to investigate this further. None of the statistical tests comparing how formality interacted with gender produced significant results.

Pupils in the data set wrote texts either about sports or about the book *Holes* (Sachar, 1998). The given topic seemed to affect hedging use. Texts about sports exhibited more hedging devices than texts analysing *Holes*. It may be that pupils have personal experiences and opinions about sports, so, in writing about this topic, they required more hedging devices to “recognise alternative voices and viewpoints and so withhold complete commitment to a proposition” (Hyland, 2005: 52). Pupils may have fewer personal experiences and opinions about *Holes*, and focus instead on the content of the book when writing about this topic, thus requiring fewer hedging devices.

Gender was a significant factor when comparing the use of accurate Plausibility Shields in texts written about *Holes*. In total, girls used significantly more accurate Plausibility Shields than boys in these texts. Although no statistically significant differences concerning holistic ratings were found, this result was reflected at nearly all grade levels. This hedging category seemed to be more frequent in texts that received higher grades in this study and was the most frequently used category of hedges found by Salager-Meyer (1994) in written medical discourse. This implies that the use of Plausibility Shields is linked to higher proficiency. It is therefore possible that girls are more apt in using Plausibility Shields to subtly acknowledge the claims of others or to withhold commitment (Hyland, 2005: 52). This finding concerned the texts analysing literature and can therefore be compared to Roe and Vagle’s (2010: 88) finding that girls showed greater skill in addressing tasks involving literary analysis on the PISA (OECD, 2010) test. However, this finding in this study was based on only 24 texts and was the only significant result when testing the interaction of boys’ and girls’ use of every accurate and inaccurate hedging category with topic and formality.

Hedging use seemed to correlate with holistic ratings to an extent. While the frequencies of hedging devices were homogeneous at grades 3, 4 and 5, the differences were noticeable between grades 2 and 6. Texts that received a grade 2 tended to contain fewer accurately used hedges and more inaccurately used hedges. Grade 6 texts showed the opposite trend. This suggests that hedging may play a role in determining whether a text receives the lowest or highest passing grade, but other factors are more important in determining whether texts receive grades 3, 4 and 5.

Significant differences were only found at grade 2 when comparing how each gender’s hedging use interacted with holistic ratings. Grade 2 texts written by boys contained a significantly higher frequency of inaccurately used hedges. This suggests that the male participants in this study might have received low grades as a result of their inaccurate hedging use. However, this finding concerned texts written by only four girls and four boys.

Future research could analyse larger quantities of texts representing each grade to corroborate this finding.

Although some variables interacted significantly with gender, the majority of findings showed no significance. Overall, it seems that gender does not determine the way in which girls and boys use hedging devices. In terms of holistic ratings, the texts of the highest quality seemed to exhibit greater hedging accuracy, while texts of the lowest quality seemed to exhibit poorer hedging accuracy. Otherwise, hedging use does not seem to significantly interact with holistic ratings. Instead, formality and topic seem to be the most significant factors determining how hedges are used.

Comments made by two of the three teachers implied they perceived boys to be less able than girls in writing good quality texts. This contrasts with the non-significant gender findings in this study. Based on Bussey and Bandura's (1999: 701) claim that teachers treat boys and girls differently, further research could investigate the gender perceptions of teachers in Norwegian schools and whether this affects the grades girls and boys receive.

The findings of this study indicate some implications for teaching hedging conventions. Overall, pupils used accurate hedges more frequently than inaccurate hedges, implying that year nine pupils tend to exhibit good knowledge of how to use these devices. However, inaccurately used hedges were still quite frequent. Inaccurate use of the Plausibility Shield "can" was especially high. Furthermore, it seemed that the variety of hedges in the data set was quite limited. Illustrating this, the Rounder "some" was, overall, very frequent and some pupils repeatedly resorted to using this hedge where other hedges would have helped vary the vocabulary used in the text. Helping pupils to broaden their hedging vocabulary, and to accurately use the Plausibility Shield "can" could benefit their written proficiency. The Norwegian curriculum for English (UDIR., 2013) does not currently address hedging, but neither does it address any other specific linguistic devices. Explicitly including hedging in the curriculum is arguably unnecessary, but it may be of interest to include more information and exercises concerning hedging in textbooks used in schools. This would help address goals for written communication in the Norwegian curriculum for English, which states that pupils should to learn how to adapt "the language to purposeful objectives and to the recipient [...] by distinguishing between formal and informal written language" and by "developing a vocabulary and using orthography, idiomatic structures and grammatical patterns when writing" (UDIR, 2013: 3-4).

The teaching implications are tentatively suggested here based on the limited scope of this study. Before firmer conclusions can be drawn about the potential benefits of explicitly

teaching hedging to lower secondary school pupils, research could compare hedging use in year nine texts written by both L1 and L2 learners. This may shed light on the expectations that can be made of L2 pupils at this level. Research may also compare hedging with other textual elements in L2 texts to investigate whether the frequency of inaccurate hedges present in this data set is in harmony with other inaccurately used linguistic devices, or whether hedges are of particular concern.

This study investigated whether holistic ratings, topic, formality and gender affected hedging use in year nine English writing in Norwegian schools. Overall, gender did not seem to be a significant factor affecting hedging use. Hedging devices seemed to be more accurately used in the texts that received the highest grade, and more inaccurately used in texts that received the lowest passing grade. Otherwise, the frequency per one hundred words of hedging devices did not seem to differ in texts that received grades 3, 4 and 5. Topic seems to affect hedging use in that tasks concerning sports elicited a higher frequency of written hedges than tasks concerning literary analysis. The most significant finding related to a pupil's chosen formality, where texts written in a more informal, speech-like style contained higher frequencies of accurate hedges than formally written texts. As is evident in academic writing (e.g. Hyland, 1998), this study shows that hedging seems, overall, to be integral to English texts written by year nine pupils at Norwegian lower secondary schools.

7 – References

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8 – Appendices

Appendix A – Letter Sent to Guardians of Pupils

Original Norwegian version

Hei,

Jeg vil med denne e-posten be om samtykke til å bruke skolearbeidet til deres barn til forskning for en mastergrad. Ingen personlige opplysninger skal inkluderes i oppgaven og all data skal anonymiseres ved prosjektets slutt. Vennligst besvar denne e-posten med «ja» om du samtykker.

Detaljene:

Navnet mitt er James Thomson. Jeg er engelsklærer ved [skolenavn] og går også på masterstudier i literacy studies ved UiS. Jeg ønsker å bruke en prøve alle elevene på 9. trinn har skrevet til forskning for min mastergrad. Kun min veileder og jeg skal ha tilgang til innsamlet materiell. Ingen personopplysninger skal brukes i selve oppgaven og dataene anonymiseres ved prosjektets slutt (som er i juni 2016). Jeg forsker på om det finnes forskjell i måten jenter og gutter skriver på. En PISA-undersøkelse i 2009 viste at gutter i Norge ligger bak i lesing. Dermed er forskjellene i skrivning et interessant tema.

Om dere gir samtykke nå, så kan dette likevel senere kunne trekkes tilbake uten begrunnelse ved å ta kontakt med meg på james.jacob.thomson@sandnes.kommune.no. I tilfellet denne e-post kommer til flere foresatte så holder det med at kun èn samtykker.

På forhånd takk for hjelpen.

Med vennlig hilsen,

James Thomson

English translation

Dear parents/guardians,

I would like, with this e-mail, to ask permission to use your child's schoolwork for master thesis research. No personal details will be included in the thesis and the data will be anonymised when the project is finished. Please answer "yes" to this e-mail if you grant consent.

Details:

My name is James Thomson. I am an English teacher at [school name] and am currently studying a master's degree in literacy studies at the University of Stavanger. I wish to use texts written as part of a test that all year 9 pupils have completed. Only my supervisor and I will have access to the gathered data. No personal details will be used in the thesis and the data will be anonymised at the end of the project (in June 2016). I am investigating whether there are any differences in the way girls and boys write. A PISA study in 2009 showed that Norwegian boys are behind regarding reading proficiency. IT seems interesting to investigate whether there are also differences in their writing.

If you give consent now, you may withdraw it without any reason by contacting me via e-mail: james@jjthomson.wanadoo.co.uk. If this e-mail reaches more than one guardian, only one will need to grant permission.

Thank you in advance for your help.

All the best,

James Thomson

Appendix B – Instructions for Teachers

The following instructions were sent as an e-mail.

Original Norwegian version

Ang. James Thomsons masteroppgave

Til engelsklærerne på 9. trinn:

Takk for at dere har sagt ja til å hjelpe meg med å samle data til min mastergrad.

For å kvalitetssikre dataene har jeg utarbeidet et par instruksjer.

Jeg vil at elevene skal skrive en sakprosastekst. Lærere kan selv velge hvor lenge prøven varer og tema for tekstene, så lenge sjangerne er sakprosaorientert (f.eks. artikkel, argumentativ tekst, brev). Hvis det er ønskelig kan jeg hjelpe med å drøfte oppgavene. Forøvrig ønsker jeg å blande meg inn i deres undervisningspraksiser så lite som mulig.

Av praktiske årsaker ønsker jeg at elevene skriver oppgavene på datamaskin. Jeg vil at elevene skriver navnene sine på oppgavene fordi jeg vil sammenligne resultatene med karakterene elevene får av dere. Jeg kommer altså til å trenge tilgang til karakterene deres, men jeg kan hente denne informasjonen på et senere tidspunkt, så det er ikke noe hast med rettingen. Jeg kommer til skolen og henter resultatene selv med en minnepinne for å unngå at elevenes personlige detaljer blir sendt via epost.

Jeg har registrert dette studiet med NSD og er blitt rådet om at det ikke burde forekomme etiske problem med datainnsamlingen.

Ta gjerne kontakt om dere har spørsmål. Takk igjen for hjelpen.

Med vennlig hilsen,

James Thomson

English Translation

RE: James Thomson's master's thesis

Dear year 9 English teachers,

Thank you for agreeing to help me collect data for my master's thesis.

To make the results as consistent as possible, I have written some simple instructions.

I would like the pupils to write a non-fiction. You can choose the topic (e.g. an article, an argumentative text, a letter) for the tasks and set the length of the test yourselves. If you wish, I can help create the tasks. Otherwise, I do not want to interfere with your teaching practices.

For practical reasons, I would like the pupils to write the texts on computers. They should write their names on their texts. This is because I will compare my results with the grades that they get for their work. I will therefore also need access to their grades, but I can get this information at a later time, so please do not hurry to mark their work for my sake. I will visit your school myself to collect the results to avoid any of the pupils' personal details being sent via e-mail.

I have registered this study with NSD and have been advised that there should be no ethical issues with the collection of this data.

Please get in touch if you have any questions. Thank you again for your help.

All the best,

James Thomson

Appendix C – Tasks Set at School A

2 lessons-writing task in English, September

- 1) Write about one or two sports that you are interested in, either as an athlete or a spectator. If you are not interested in sports, try to give some good reasons why you think sports is a waste of time.
- 2) You think there is way too much/not enough sport on TV. Write a letter to the editor about it. Give good reasons why there should be more/less sports on TV.
Start your letter with: Dear Sir, or: Make a suitable title.
- 3) Write a short article on the beginnings of football and up to 1863, when the British FA was established.
- 4) Write a short article about how European football has changed since 1863, when the British FA was establish and up to today's modern football.
- 5) Write a short newspaper report about a football match or some other sports event.

Good luck with your writing!

Appendix D – Tasks Set at School B

Holes – Written Assignment

Do one of the following tasks:

1. Water:

How does Louis Sachar use *water* to make the story more *interesting* and *dramatic*? Give specific(konkrete) examples and back each point up with evidence (bevis) from the text.

2. Curses (forbannelser):

The idea of curses is central to the story. How? Explain by using specific (konkrete) examples and evidence (bevis) from the text. Stanley did not believe in curses. Do you? Why (not)?

3. Zero and Stanley:

At Camp Green Lake, Zero and Stanley become best friends, they experience things together that have been foreshadowed (varslet) by events (hendelser) in the past. Use the Zeroni and Yelnats family histories to retell (gjenfortelle) the fascinating journey (fascinerende reisen) that brought them together.

4. Nicknames (kallenavn) (avoid if you are aiming for a 5 or a 6, as it does not call for analysis):

The boys at Camp Green Lake all have nicknames. Explain what each name means and why it was given. Remember to use evidence(bevis) to back up your points.

The assignment should be 1-3 pages. Make your own title. Remember Times New Roman, Arial or Calibri, size 12 and 1.5 between the lines.

You will be given 2 lessons at school to write it before you hand it in.

Appendix E – Interview Guide

This interview guide was used to interview teacher X and Y from school A and teacher Z from school B.

- 1) How did you prepare the pupils for this writing test? Give a brief overview of the materials and teaching methods used. (Note to interviewer: let teacher answer freely and then ask further questions from list below.)
 - a. Which textbook and which chapter was used?
 - b. What kind of writing exercises did they do in class?
 - c. Did they get do any preparation as homework?
 - d. When did the pupils get the tasks?
 - e. Other information.

- 2) Do you teach the pupils that it is OK to show they are unsure about facts? For example, in writing about a footballer, they may be unsure about how many goals they have scored in total, so they should write “they scored *around* 200 goals”.

- 3) Have you explicitly taught pupils how to write about their opinions contrary to facts? For example, if they are writing about their favourite sport, rather than “football is the best sport” they can write “*I think* football is the best sport”.

- 4) Do you know if either of the issues from the two previous questions (showing uncertainty about facts; or distinguishing between facts and opinions) are covered in the textbook?

- 5) Do you think there are any general differences between the way boys and girls write in English? Give examples.