



The Faculty of Arts and Education

## MASTERS THESIS

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Title of thesis: Norwegian Vg1 English teachers' and students' beliefs concerning digital competence and the use of digital tools in ESL learning, and teachers reported practices regarding the use of digital tools to promote language learning.	
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## Abstract

The current thesis aimed to explore Norwegian upper secondary school teachers' and students' beliefs concerning the use of digital tools and ESL learning. In addition, it aimed to investigate which digital tools Vg1 ESL teachers report that they use to promote English learning and why. The study investigated the teachers' reported practices when it comes to digital tools and why they use them. Finally, the current thesis aimed to investigate what the concept *digital competence* means for both teachers and students.

To gather the data, the study employed a mixed methods research design, including teacher interviews and a student questionnaire. Four Vg1 English teachers from two separate Norwegian upper secondary schools were interviewed to investigate teachers' beliefs and their reported practices concerning the use of digital tools to promote ESL learning. In addition, four Vg1 classes from two separate schools participated in a questionnaire in order to gain a perspective of the students' beliefs. In total, 121 students responded to the questionnaire.

The findings demonstrated overall positive beliefs concerning the use of digital tools in ESL learning from both teachers' and learners' perspectives. Both the teachers and the students reported that digital tools are useful within the English subject. While some teachers reported that they primarily use digital tools to visualize, other teachers reported that they use digital tools as primary sources to create varied lessons and to find authentic teaching material suited to the students' level and interests.

Although the study found overall positive beliefs, some challenges with the use of digital tools and ESL learning were also addressed by the teachers and the learners. The main reported challenges are the distractions that come with the use of digital tools.

The present study contributes within the field of L2 English to gain a better understanding of teachers' and students' beliefs concerning the use of digital tools in ESL learning. It contributes to this growing field by exploring it from both the teachers' and the students' perspectives. Further, the current study investigates how teachers' beliefs are reflected in their reported practices. Furthermore, it aims to get an overview of which digital tools the teachers report that they use and why. Finally, the present study contributes by exploring what the concept *digital competence* in LK20 means for teachers and learners.

The main teaching implications proposed by the findings of the current study concerns how digital tools are being used in ESL learning. The use of digital tools can increase the students' motivation to learn. Hence, digital tools should be used in order to promote ESL learning. The students reported that they learn English by playing digital games and by using social media. These activities could be used within the English subject as teachers are free to choose teaching methods as long as it is in line with the curriculum.

Further studies are recommended in order to gain more knowledge about this important topic. Moreover, LK20 was recently implemented, meaning that there is a low amount of knowledge about how teachers and learners alike interpret key digital concepts in the curriculum. Thus, further studies could investigate how both teachers and students interpret other key digital concepts in LK20.

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## List of abbreviations

BALLI	Beliefs about Language Learning Inventory
CALL	Computer Assisted Language Learning
DA	Dynamic Assessment
DGBLL	Digital game-based language learning
DigComp	European Digital Competence Framework for Citizens
EE	Extramural English
ESL	English Second Language
ICT	Information and Communications Technology
L1	First Language
L2	Second Language
LK20	Norwegian Curriculum for Knowledge Promotion 2020
NSD	Norwegian Centre for Data Research
PDC	Professional Digital Competence
ZPD	Zone of Proximal Development

## 1.0 Introduction

### 1.1 Topic, aims and research questions

This thesis is a mixed method study of how the use of digital tools can promote language learning in Vg1 L2 English classrooms. The overall aim of this thesis is to explore teachers' and students' beliefs about the use of digital tools in the English subject. It is outlined in the Core curriculum that "[s]chools shall facilitate for and support the pupils' development in the five basic skills throughout the entire learning path" (Utdanningsdirektoratet 2020, p.12). According to the Core Curriculum, the five basic skills include reading, writing, numeracy, oral skills and digital skills. Thus, digital skills count as one of the five basic skills and it is therefore natural to draw attention to it. The development of technology has influenced all aspects of society, including schools and classrooms. Today, teachers and schools are in possession of a number of technological equipment and possibilities. These possibilities need to be explored and applied in the promotion of language learning. Udir's framework for teacher's professional digital competence emphasizes that "[i]n order to be capable of developing pupils' basic skills and specialized knowledge, teachers must develop their own professional digital competence during their initial teacher education, and later, through continuing professional education and development, during their teaching career" (Udir, 2017).

Vygotsky's (1978) sociocultural theory is seen as important both within social psychology and within the Norwegian school system. He argues that social interaction plays a critical role in children's learning. Additionally, imitation, guided learning, and collaborative learning are important concepts in his theory. Haas (1996) extended Vygotsky's idea by proposing that the use of digital tools is a new psychological tool which can mediate interaction between human beings and the environment. The use of digital tools can provide interaction and collaboration, which are important concepts in sociocultural theory.

Brevik (2019) studied learners' experiences and beliefs concerning their own English proficiency and demonstrates how interest and L2 proficiency are intertwined. She found out that the learners explained their English proficiency by the role of interest and their extensive use of English technology outside school. She demonstrates how learners use



digital tools, such as digital games, internet and social media to develop their English proficiency. Thus, Extramural English (EE) is an important concept in the current thesis.

Digital technology in ESL learning is also important in Brevik and Holm (2022), as they investigated the significance of connecting informal and formal language teaching and learning in order to understand L2 language development among teenagers. They found out that the students' use of English outside school was primarily linked to online gaming and social media. The term *affinity space* was coined by Gee (2004) and refers to a space where groups of people are drawn together due to a shared, strong interest in a common activity. When teachers provide activities that extend the students' existing affinity space, students use English in the classroom more frequently and more confidently. Thus, teachers have the opportunity to increase the students' motivation ESL learning by using digital tools to facilitate the opportunity for students to move into an affinity space

Furthermore, the study seeks to explore what teachers do in practice and describe teachers' beliefs and reported practices. In order to gain insight into teachers' and students' beliefs, a mixed method study will be implemented, including semi-structured interviews with four vg1 teachers, and a digital questionnaire distributed to four vg1 classes. The participants were from two different schools in Norway and 121 students responded to the questionnaire. The thesis addresses the following research questions:

- What beliefs do Vg1 teachers have about the use of digital tools to promote ESL learning?
- What beliefs do the teachers have about teacher and learner digital competence?
- What beliefs do Vg1 pupils have about the use of digital tools in ESL learning?
- What beliefs do the learners have about teacher and learner digital competence?
- What digital tools do vg1 ESL teachers report that they use to promote English learning and why?

## 1.2 Relevance and contribution of the study

The aim of the thesis is to contribute to the research about the use of digital tools and language learning. Digital skills are mentioned as one of the five basic skills in LK20 and it is therefore natural to study teachers' and learners' views about this skill. Possibilities within digital tools need to be explored and applied in the promotion of language learning. Blume

(2020) studied ESL teachers' behaviors and beliefs regarding digital game-based language learning. The results indicate that teachers employ digital-game-based language learning (DGBLL) to a limited degree, despite holding generally positive beliefs about the activity. According to Blume, current engagement in game playing affects perceived English language skills and language learning strategies positively. According to Estensen (2021), Norwegian 6<sup>th</sup> graders have reported that they learn most of their English outside of school, and that extramural English activities are the most important type of activities for them to develop their English skills. While reading was reported as the least popular activity, playing digital games was the most popular activity, followed by TikTok and watching films, TV series and videos. While Blume (2020) focuses on teachers' behavior and beliefs in her study, Estensen (2021) focuses on learner beliefs in his study.

As previous studies (Blume, 2020; Estensen; 2021) either have studied teachers' beliefs or learners' beliefs, the current thesis aims to study teacher cognition and learner beliefs. Having identified this research gap, the study seeks to make a contribution by investigating both teacher cognition and learner beliefs about the use of digital tools and ESL learning. Thus, this study seeks to contribute towards this growing field of research by exploring it from both teachers' and pupils' perspectives. Moreover, LK20 has just recently been implemented, meaning that there is a low amount of knowledge about how teachers and learners interpret key concepts in LK20. Thus, it is important and necessary to study how teachers and learners alike interpret key concepts in LK20. The current thesis aims to contribute by exploring what the term *digital competence* means to both teachers and learners.

### 1.3 Outline of the thesis

The current thesis consists of six chapters. Chapter one aimed to explain the topic and research questions of the thesis, in addition to explaining the relevance of the thesis, and its possible contribution. Chapter 2 describes the theoretical background of digital tools, digital skills and digital competence. Further, it describes the framework for teacher and learner beliefs. Chapter 3 explains the method used for the data collection. The present study was conducted by having a mixed study approach. It describes mixed methods and how the data

has been collected. Interviews and a questionnaire have been conducted in order to collect data. Further, it explains the sampling, coding and analysis. Furthermore, it discusses the validity, reliability and ethical considerations that have been taken into account in the present study. Chapter 4 presents the findings. Chapter 5 presents a discussion of the findings in relation to the chosen theoretical framework presented in chapter 2. Additionally, it also discusses the limitations of the study and implications for teaching. Finally, chapter 6 draws conclusions, and describe the contributions made and implications for future research.

## 2.0 Theoretical Overview

This chapter includes the theory and research that inform the current study about how the use of digital tools can promote ESL learning. It also focuses on teacher and learner beliefs and practices regarding the use of digital tools in L2 teaching and learning. Section 2.1 outlines a historical overview of the technological development in Norwegian classrooms. Section 2.1 defines the terms digital tools, digital skills, digital competence and digital literacy in accordance with LK20. Section 2.3 addresses a sociocultural approach to digital competence. Section 2.4 explains Extramural English. Section 2.5 focuses on benefits and roles with technology. Section 2.6 explains motivation and how it can be linked to the use of digital tools. Section 2.7 explores digital technology in the English L2 classroom. Section 2.8 and 2.9 explain the theoretical framework of teacher and learner beliefs. Finally, section 2.10 presents previous studies about the correlation between the use of digital tools and language acquisition.

### 2.1 A historical overview of the development of technology in Norwegian classrooms

In the 1980s, school authorities turned their attention to the role of digital technology in education (Ørevik, 2020) and the use of computers in Norwegian schools dates back to this period of time (Erstad, 2005). However, technology and how it is used has evolved drastically since then. The use of EDB (elektronisk databehandling) in schools was very limited and specialized. Erstad (2005) in Ørevik (2020) describes three main phases in a large-scale implementation of ICT (Information and Communications Technology) in Norwegian schools initiated at governmental level. The first phase started in the 1990s, and the main focus was to get the technological infrastructure in place. In the 2000s, a new phase arose as teachers were offered in-service training in pedagogical use of computers, and learning environments were reorganized to accommodate for the use of digital technology. The third phase started in 2004, when the national *Programme for Digital Competence* was launched. Digital literacy lay at the heart of the third phase and interest in how digital technology could be harnessed in students' process of learning and knowledge development arose.

The 2006 Knowledge Promotion Curriculum (LK06) was the first Norwegian curriculum to list digital competence as one of the basic skills on par with reading, writing,

oral proficiency, and numeracy (Aagaard & Lund, 2013). Today, Norwegian pupils in upper secondary schools have access to digital tools, including during exams. Aagaard and Lund (2013) note that “allowing students to use computers change the conditions under which learners show their capacity to complete assignments” (p.226). Using digital tools in educational settings expands possibilities within teaching and learning. In 2007, all students in Vg1 started using their own PC. Today, children get their own Chromebook at the age of six, meaning that Vg1 pupils have already used a Chromebook in an educational setting for a decade when starting in upper-secondary school. In Vg1, the students use computers, which differ from the Chromebooks they are used to. This requires that teachers are digitally competent in order to be able to help their pupils using their computers and other digital tools. Thus, digital competence among teachers is essential in order for them to facilitate their pupils’ language development.

The framework for teachers’ professional digital competence outlines that “[t]echnology affects every aspect of our everyday lives and has changed the way we learn, communicate, entertain ourselves, locate information, and acquire knowledge. These changes are, and will continue to become, increasingly apparent at every level of the education system” (Udir, 2017). Technology is an integrated and natural part of our everyday life and is being used for all kinds of purposes. This affects teachers’ teaching approaches in pedagogical, didactic and administrative contexts, development of pupils’ digital bildung, and the development of their specialized knowledge and basic skills (Udir, 2017, p.1). The development and the creation of the digital space has definitely changed how the English language is taught and learnt. Digital tools must be explored and applied in the promotion of L2 learning in Norwegian schools.

## **2.2 Defining terms: Digital tools, digital skills, digital competence and digital literacy**

### **2.2.1 Digital tools**

Digital tools can be defined as “programs, websites or online resources that can make tasks easier to complete” (Department of Health and Social Care, 2019). Digital tools can be used for multiple purposes, but the present study seeks to explore how digital tools can be used in an educational setting to promote language acquisition, and within EE activities that include the use of digital tools. Li (2020) argues that digital tools are affective tools.

Technologies are in general reported to engage and motivate learners. According to Stockwell (2013) in Li (2020), there are two ways that technology can motivate learners. First, some are motivated due to a genuine interest in technology, which promotes language learning through the use of technology. Second, learners who are interested in language learning will take advantage of technology to enhance the learning process. Thus, teachers can use technology to fulfill their pupils' potential within language learning.

### 2.2.2 Digital skills

The term *digital skills* can be defined in several ways. UNESCO (2018) defines digital skills as “[a] range of abilities to use digital devices, communication applications, and networks to access and manage information”. Digital skills enable people to create and share digital content, communicate and collaborate, and solve problems. In LK20, it is explained what digital skills in the English subject means:

Digital skills in English involve being able to use digital media and resources to strengthen language learning, to encounter authentic language models and interlocutors in English, and to acquire relevant knowledge in English. This requires critical and reflected behavior using digital forms of expression in English and in communication with others. The development of digital skills in English progresses from exploring the language to interacting with others, creating texts and acquiring knowledge by obtaining, exploring and critically assessing information from different English-language sources.

(LK20, 2019)

The LK20 (2019) English curriculum focuses on two main areas in terms of digital skills in the English subject. One area focuses on using digital sources and channels of communication constructively in the learning of English. The other area emphasizes the importance of critical awareness and reflection in the retrieval and use of digital text sources and in digitally mediated communication and text creation.

### 2.2.3 Digital competence

*Digital competence* is essential for learning, work and active participation in society. The term refers to the confident and critical usage of the full range of digital technologies for information, communication and basic problem-solving in all aspects of life (School Education Gateway, 2020). The European Commission has developed the European Digital Competence Framework for Citizens (DigComp) and divided it into five areas: information and data literacy, communication and collaboration, digital content creation, safety and problem solving. These areas are similar to the areas listed above in LK20: interaction, critical assessment of information, to acquire knowledge, to develop language skills and creation of digital texts. Both LK20 and DigComp list “creation of digital text” or “digital content creation”. “Interaction” in LK20 is equivalent to “communication and collaboration” in DigComp. “Critical assessment of information” and “safety” share some of the same content. Both “to acquire knowledge” and “problem solving” focus on people being able to individually accomplish tasks or find information. Yet, they are different in terms of what they focus on. Both “information and data literacy” and “develop language skills” concern literacy. The Framework for teachers’ professional digital competence (Udir, 2017) outlines what digital competence for teachers involves. The framework emphasizes several roles of teaching:

Today, it is more important than ever that children and young people are not merely passive consumers of products, services and information but also critical users and active producers of content themselves. The role of teaching includes fostering pupils who are capable of identifying credible information, quoting sources, protecting their intellectual property, applying ethical values and attitudes in communications and interaction, producing their own digital resources, and developing a reflective relationship in relation to their own and others’ actions, cultural differences, values and rights. (p. 1)

The framework outlines five sub competences of digital competence: identifying credible information, quoting sources, protecting intellectual property, applying ethical values and attitudes in communication and interaction, producing own digital resources, and developing a reflective relationship in relation to their own and others’ actions, cultural differences, values and rights. The Framework for teachers’ professional digital competence

(2017) clearly emphasizes the importance of teaching pupils digital skills. Teachers' responsibility is pointed out as it states that "[T]he role of the teacher is key in this context" (Udir, 2017). Thus, teachers are made responsible for teaching digital skills and cannot disclaim this important task.

The European Digital Competence Framework for Citizens (DigComp) offers a tool to improve citizens' digital competence.

The European Commission's Communication "A new skills agenda for Europe: Working together to strengthen human capital, employability and competitiveness" proposes ways to address the skills challenges that Europe is currently facing. The aim is for everyone to have the set of competences needed for personal development, social inclusion, active citizenship and employment. These competences include literacy, numeracy, science in foreign languages, as well as more transversal skills such as digital competence, entrepreneurship competence, critical thinking, problem solving and learning to learn.

(DigComp 2.0: The Digital Competence Framework for Citizens, 2016)

Digital competence is listed as one of the competences needed for personal development in DigComp. However, several of the other competences can also be fulfilled by the use of digital technologies. Digital tools can be used to obtain other competences such as literacy, critical thinking, problem solving and learning to learn.

Recent reports show that there is a mismatch between the digital challenges that newly qualified teachers meet in their profession and the preparations they have received during their teacher education, which has led to a concern for a stronger focus on PDC. (Gudmundsdottir, Loftsgarden, & Ottestad, 2014, in Lund, 2014). Lund (2014) argues the necessity of viewing PDC (professional digital competence) as comprising a deep understanding of technology, knowledge of students' learning processes, and an understanding of the specific disciplinary practices and features characterizing individual school subjects. On the one hand, a number of research projects indicate that the interplay among learners, teachers, technologies, individuals, groups, and institutions show that the



conditions and ecologies for learning and teaching are slowly transforming. On the other hand, digital technologies encounter an educational tradition that is both rich and resistant to change and a mismatch between immature technologies and well-established pedagogical practices (Hauge & Lund, 2012 in Lund, 2014).

#### 2.2.4 Digital Literacy

The term *digital literacy* emerged in the 1990s. Gilster (1997) defines digital literacy as “the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers” (p.6). Further, he argues that digital literacy involves the ability to critically evaluate information and use this information in various real-life contexts. UNESCO (2018) defines digital literacy as “the ability to access, manage, integrate, communicate, evaluate and create information safely and appropriately through digital technologies and networked devices for participation in economic and social life”. UNESCO (2018) also views digital literacy as an important life skill.

According to Bali (2016), digital literacies are not solely about technical proficiency but about the issues, norms, and habits of mind surrounding technologies used for a particular purpose. While digital skills are important for our technical proficiency, digital literacy requires a deeper understanding. While digital skills focus on what and how, digital literacy focuses on why, when, who, and for whom. Digital skills focus on which tool to use and how to use it. Further on, digital literacy includes in-depth questions. Bali (2016) argues that teaching digital literacy does not mean teaching digital skills in a vacuum. Rather, teachers must teach digital skills in an authentic context that makes sense to students.

Bali (2016) emphasizes the importance of students being aware that although technology gives us a lot of power, it also restricts us in many ways, and we need to question how the affordances of technology modify our communication and our behavior. According to Bali (2016), digital literacy is not merely about the skills of using technologies, but rather how we use our judgement to maintain awareness of that we are reading and writing, why we are doing it, and whom we are addressing. She claims that teachers can only begin to put the seeds of this critical literacy in their classes and hope that the students will transfer this beyond the classroom and into their increasingly digital identities and lives. The technology

is part of all aspects of the learners lives and plays a major part in our everyday lives. Thus, digital literacy is not solely important in school, but in every aspect of our lives.

Although digital literacy is an important term in the technological world, some scholars argue that tailored textbooks can be more beneficial than authentic text written for non-educational purposes. According to Brevik, Olsen and Hellekjær (2016), there is a strong positive relationship between reading proficiency in L1 and L2. However, L2 reading differs from L1 reading in a number of respects. Language, culture, and the L2 reader's education, skills and experience are factors that ought to be taken into account (Grabe, 2009). Ørevik (2020) discusses the use of authentic text versus printed text in textbooks. She refers to Bernhardt (2011) who argues that "reading and producing printed (written) material are important critical skills in their own right" (p.144). There is a strong tradition in Norwegian classrooms to use printed textbooks. In educational contexts, the ability to interact with written text is the most highly valued form of literacy (Macken-Horarik, 2008, in Ørevik, 2020). Thus, written text remains important in the 21<sup>st</sup> century. According to Maagerø (2012), learning within a subject involves learning the genres of the subject. She notes that discussing fundamental characteristics of central subject-specific genres will increase students' genre awareness, and thus, increase their ability to understand and produce these genres. Further, Ørevik (2020) argues that "[i]t would seem logical that textbooks tailored to the subject would be more readily understandable to most students than authentic texts written for non-educational purposes" (p. 149).

### 2.3 A sociocultural approach to digital competence

Vygotsky's (1978) sociocultural theory is seen as important both within social psychology and within the Norwegian school system. According to Vygotsky (1978), social interaction plays a critical role in children's learning, and imitation, guided learning, and collaborative learning are important in his theory. Vygotsky created the concept of the zone of proximal development (ZPD), which is a central part of his theory. Vygotsky defined the ZPD as: "[T]he distance between the actual developmental level (of the learner) as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers"

(Vygotsky, 1978, p. 86). He argued that the ZPD furnishes psychologists and educators with a tool through which the internal course of development can be understood. In addition, to take account of the cycles and maturation process that have already been completed, the processes that are currently in state of formation that are just beginning to mature and develop can also be included. Thus, the ZPD can delineate the child's immediate future and the child's dynamic developmental state, allowing not only for what has already been achieved developmentally, but also for what is in the course of maturing.

*Scaffolding* is a term coined by Bruner and it is a tool for growth. Pol, Volman, and Beishuizen (2010) note that it is a term that is often associated with Vygotsky's ZPD. Scaffolding refers to the role adults or more competent peers can play in problem-solving activities with children (Pol et al., 2010, p. 271). Similarly, Edusei (2018) argues that video games attempt to adjust the experience of playing video games to the player's level. Thus, scaffolds are present in most video games, as they seek helping the player overcome the given challenge. Scaffolding is also important in sociocultural theory and within EE activities as learners can be scaffolded by digital tools. Digital tools must be explored and applied in the promotion of ESL learning. Thus, digital competence is crucial in terms of the learners' English language development. According to Kang (2018), scaffolding can support students to write effectively using new technologies that will eventually lead to independence. "As investigating digital tools may be a new concept for both students and teachers, scaffolding provides the support students need to deepen understanding and eventually complete tasks independently, and it ensures that teachers are thoughtfully modeling and playing with digital tools alongside students" (p.735). Thus, students can independently complete tasks due to scaffolding by teachers and digital tools. A study conducted by Howell (2018) shows that technology can be thought of as a scaffold or tool that mediates student learning. Students reported that digital tools helped them scaffold their argumentative writing by visualizing their arguments and understand the organization of argument.

Vygotsky (1981) argues that human activities and mental functioning are mediated and facilitated by tools, artefacts and language, where language is considered the primary mediation tool in terms of thinking, learning and cognitive development. Haas (1996) extended Vygotsky's idea by proposing that the use of digital tools is a new psychological tool which can mediate interaction between human and the environment. Thus, he argues

that the use of a shared screen, images, music and other artefacts can improve shared understanding and facilitate linguistic acquisition.

Interaction is central within language learning. Chapelle (2003) in Li (2020) proposed three types of interaction in the computer-assisted language learning (CALL) context: interaction between people, interaction between a person and the computer, and interaction within a person's mind.

Today, social media plays an important role in interaction among teenagers. The use of social media and social networks can enable students to improve literacies and language skills (Li, 2020). Social networks facilitate possibilities and opportunities for learners to engage in interactions to experience the language. Social networks can thus foster interactive communities for communication, interaction and discussions. Using social networks can also advance oral proficiency, lexical acquisition and syntactic complexity (Lee, 2006 in Li, 2020). Authentic tasks can facilitate language, interaction and collaboration (Blake, 2000; Smith, 2004, in Li, 2020).

The technology is constantly changing. This development creates new possibilities for the users of digital technology and affects teaching and learning from a sociocultural perspective. "From a sociocultural perspective, digital technologies afford users to move beyond existing practices and pave the way for new ones – not least in the field of learning and teaching" (Hauge, Lund, & Vestøl, 2007, in Lund et al., 2014). In this respect, digital technology becomes what is often referred to as cultural tools or artifacts (Säljö, 2010, in Lund et al., 2014). Lund et al. (2014), argue that such artifacts function as both the gatekeepers to and the glue of cultures. They also possess the potential to transform culture. Further, this view is related to a sociocultural perspective, as artifacts mediate cognitive activity and development is woven deeply into social practices (Vygotsky, 1978, 1986; Wertsch 1998, in Lund et al., 2014). Seen as cultural artifacts, digital learning resources store the debris of knowledge and epistemic practices developed over generations. First, this means that centuries of research, discoveries, and scientific discussions are embedded within artifacts by means of different types of textual and visual representations. Thus, digital learning resources provide opportunities for both students and teachers to interact with domain-specific knowledge and scientific discourses. Second, digital resources designed for educational purposes most often embed the residue of what can be seen as ideal

epistemic practices. Seen from a sociocultural perspective, this domain-specific knowledge and these epistemic practices are what students and teachers interact with when they employ digital learning resources for learning purposes (Säljö, 2010 in Lund et al., 2014). The sociocultural perspective on the use of and the interaction between students and teachers reinforces the need to move away from understanding digital competence as a purely generic set of skills and toward understanding PDC as something that also includes specific teaching-profession skills.

More learning-oriented assessment practices emerged in the late 1990s, focusing on where learners are in their leaning trajectories, where they need to go, and how best to get there (Aagaard & Lund, 2013). Dynamic Assessment (DA) is a formative assessment practice, building on Vygotsky's (1978) ZPD. Instruction and assessment are treated as dialectic units in DA. Assistance can be provided from peers, experts, or cultural artifacts, such as digital technologies. "Building assessment practices based on sociocultural learning perspectives implies the recognition of knowledge as shared and developed through collective and mediated processes of meaning-making" (Daniels, 2009; Vygotsky, 1978 in Aagaard & Lund, 2013).

## 2.4 Extramural English

Sundqvist (2009) was the first scholar to introduce *extramural English* (EE) as a concept in second language acquisition. Sundqvist and Sylvén (2016) define EE as:

English outside the walls, and by that we mean the English that learners come in contact with or are involved in outside the walls of the classroom. This contact or involvement is *not* initiated by teachers or other people working in educational institutions; the initiative for contact or involvement lies with the learner himself/herself or, at times, with someone else, such as a friend or parent. (p. 6).

EE activities include activities where the main language is English, where students participate outside school without parental or teacher initiative. Thus, students participate in EE activities due to intrinsic motivation. Examples of EE activities include watching movies, tv shows, reading books, surfing English websites, playing videogames, and

reading/listening/writing English in real life or online (Sundqvist & Sylvén, 2016). Thus, many EE activities can be facilitated through the use of digital tools. Yet, Sundqvist and Sylvén (2016) address the difference between learning L2 English in school and outside school and argue that motivation is central within the difference.

Previous studies (Brevik, 2019; Brevik & Holm, 2022; Estensen, 2021) have concluded that teenagers develop their English proficiency by participating in EE activities. Many of these activities include the use of digital tools, as teenagers have reported that they primarily learn English by playing digital games, using social media, and surfing on the internet (Brevik, 2019).

## 2.5 Benefits and Roles of Technologies

According to Li (2020), “[R]esearch suggests integrating technologies into language teaching and learning is beneficial (see Macaro et al., 2012; Liu et al., 2002; Zhao, 2003 for a review), ranging from learning and teaching perspectives” (Li, 2020, p. 168). In other words, the use of digital tools is beneficial for both teachers and learners. According to CALL (computer-assisted language learning), technology can offer at least six benefits in language teaching and learning (Li, 2020). First, technology provides students with high quality and authentic linguistic and cultural materials. Second, technology can act as a cognitive tool to facilitate the acquisition of linguistic knowledge and the development of language skills. Third, it is a tool that mediates learning. Fourth, it provides students with more opportunities to interact. Interaction is a fundamental construct of sociocultural perspectives on learning. Fifth, technology can provide immediate and individualized feedback. Thus, technology can be used to scaffold learners. Finally, technology increases student motivation and enhances engagement.

Technology is widely used as a language resource for authentic input and to provide a context for the study of language use, primarily through the use of blogs and videos (Arndt & Woore, 2018, in Li, 2020). Through using authentic sources in instruction, learners will be able to acquire “usable skills” in real-life situations (Nunan, 1989, in Li, 2020, p.169). Learners can also experience authentic language use when they engage in social networks for communication. Such experiences can facilitate learners to increase their input, in addition to promoting socialization for L2 communities.

There are many language benefits of using digital tools. Brevik and Holm (2022) conducted a study in the vocational English classroom in Vg1 where they investigated the significance between informal and formal language teaching. Brevik and Holm (2022) emphasize the importance of teachers facilitating the opportunity for students to move into an affinity space, meaning a place where people interact with each other, often at a distance, primarily through shared practices or common endeavor, which resulted in the students using English in the classroom more frequently and more confidently than before. Richards (2017) distinguishes between *created materials* and *authentic materials*. Created materials include textbooks and other instructional resources that have been developed to include examples of specific grammatical items and discourse features. Authentic materials are materials such as text, photographs, video selections, realia, and other teaching resources that were not created for pedagogic purposes. Richards (2017) points out that authentic materials are preferred to created materials due to the fact that they contain authentic language and reflect real-world uses of language. According to McGrath (2002) in Richards (2017) “Authenticity is felt to be important because it gives learners a taste of the real world, an opportunity to “rehearse” in sheltered environment; hence the less authentic the materials we use, the less well-prepared learners will be for the real world” (p.248). Thus, it is beneficial to use digital tools to promote language learning as it often is more authentic to the students. Although several scholars argue that authentic materials are important due to authenticity, Ørevik (2020) argues that tailored textbooks are more readily understandable to most students than authentic texts written for non-educational purposes. She argues that “[t]eachers can play an important role in fostering students’ development of reading comprehension by seeking out varied and motivating reading matter in cooperation with the students” (p. 160). Thus, Ørevik (2020) notes that teachers have the opportunity to increase students’ motivation by selecting varied and motivating reading matter.

According to Li (2020), computers are believed not only to provide authentic resources for language learning but also increase linguistic knowledge. Multimedia presentations have a positive effect on vocabulary acquisition and in writing. Further, collaborative writing has been a core investigation regarding the use of digital tools in L2 learning. Furthermore, technology can engage learners in content brainstorming and fostering collaborative scaffolding during the writing process regarding content and structure (Li, 2020).

## 2.6 Motivation

Intrinsic and extrinsic types of motivation have been widely studied, and the distinction between them has been important in terms of both developmental and educational practices. According to Ryan and Deci (2000), to be motivated means to be moved to do something. “A person who feels no impetus or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated” (Ryan & Deci, 2000, p. 54). Further, Ryan and Deci (2000) note that motivation is hardly a unitary phenomenon. People do not only have different amounts of motivation, but also different kinds of motivation. While *intrinsic motivation* refers to doing something because it is inherently interesting or enjoyable, *extrinsic motivation* refers to doing something because it leads to a separable outcome. Intrinsic motivation results in high-quality learning and creativity (Ryan & Deci, 2000). They recognize that basic need satisfaction accrues partly from engaging in interesting activities. Furthermore, Ryan and Deci (2000) argue that social contextual conditions that support one’s feelings of competence, autonomy, and relatedness are the basis for one maintaining intrinsic motivation. Finally, Ryan and Deci (2000) point out that the facilitation of more self-determined learning in school requires classroom conditions that allow satisfaction of three basic human needs: that support the innate needs to feel connected, effective, and agentic as one is exposed to new ideas and practices new skills.

According to Li (2020), technology can increase learner motivation and engagement. Brevik (2019) studied learners’ beliefs and experiences regarding their own English language development. The students explained their English proficiency by the role of interest and their extensive use of English technology and tools outside school. Thus, digital tools have promoted the students’ motivation and willingness to learn.

## 2.7 Digital technology in the English classroom

As noted, the aim of this study is to investigate how digital tools can promote language learning in the L2 classroom. The technological development affects how English is being taught and learnt in Norwegian classrooms and digital technologies play a major role in these processes. Li (2020) points out that the use of digital tools in classrooms benefits



learning. Further, he notes that “research suggests that technology can reduce anxiety, increase learner motivation and engagement, reduce workload and enhance linguistic gain” (p. 165).

Lund (2009) sums up three effects new technologies coupled with increased pedagogical insight have had on the subject of English. First, students now meet the English language in innumerable new contexts. Adolescents are exposed to English in non-educational settings. This might be challenging for learners of English as they attempt to interpret, understand, and rephrase language use that is not adapted to educational settings. Second, with technology come new genres. Students who express themselves through different types of media must follow certain conventions. Third, digital networks represent new challenges in terms of understanding, promoting, and designing different ways and routes of learning.

According to Ørevik (2020), “digitization introduces fundamental changes to the text culture of the subject of English” (p. 169). Examples of traditional texts are factual texts, short stories, exam essays, recorded conversation and film. Although many of these remain important, digitization has definitely widened the repertoire of texts used in L2 English classrooms. Digital texts, such as movies, websites, e-books and apps can be applied to promote language learning. An essential difference between web-based texts and traditional textbook material concerns the form and communication of the texts as they are organized differently.

The use of digital technology can promote students’ learning development in ways traditional methods cannot. Ørevik (2020) notes that “Findings from research suggest that typical digital genres are carriers of changes in traditional dynamics between representatives of knowledge authority and students, relying more on students’ choice-making, interests and agency than is the case with traditional textbook texts” (p. 181). Learning to learn is an important aim in LK20. The use of digital tools can facilitate for pupils “learning to learn” as students have a greater say in choice-making and agency.

Lund (2009) concludes that digital, internet-based technologies are not just helpful in terms of English as a subject. They are also part of changing the terms in which we teach English. English is a global resource, and English as a subject holds a special position concerning developing communication forms. Norwegian pupils have a high degree of competence in

what Lund refers to as general ICT knowledge. This makes it easier to exploit Vygotsky's ZPD (Lund, 2009). Interaction between learner and teacher lies at heart of Vygotskian theory and the ZPD. The teacher is responsible of structuring interactions and develop instruction based on what the pupil already knows and is capable of doing. As outlined, teachers can facilitate for the learner's development by scaffolding (Lund et al., 2014).

Gee (2004) coined the term *affinity space* and defines it as:

A place (physical, virtual, or a mixture of the two) wherein people interact with each other, often at a distance (that is not necessarily face-to-face, though face-to-face interactions can also be involved), primarily through shared practices or a common endeavor (which entails shared practices), and only secondarily through shared culture, gender, ethnicity, or face-to-face relationships (p. 98).

According to Gee (2017), public schools can easily become isolated from other spaces. "Isolating school from teaching and learning out of school will harm children and lead to even greater inequality of opportunity and results" (p. 5). He argues that when school becomes the main and only site for teaching and learning academic skills, teaching and learning are not well distributed. Thus, he argues that teachers have the responsibility to avoiding schools to become isolated institutions, but rather, connect formal and informal learning. Further, Gee (2017) argues that in the digital world, "affinity spaces are becoming the main places where people engage in 21<sup>st</sup> century teaching, learning, doing and being" (p. 117).

Blikstad-Balas (2019) addresses some challenges concerning the use of digital technology in the classroom. She notes that previous studies about teaching quality demonstrate that what teachers do and how they do it is crucial in terms of the students' learning outcomes. According to Blikstad-Balas (2019), access to technology does not contribute to learning. Rather, a discussion about how technology is being used, and which challenges and opportunities that come with the technology must be raised. Blikstad-Balas (2019) notes that "when technology contributes to learning, it is to a greater extent related to the teaching and pedagogy that underlines it, and to a lower extent related to which digital tools

the students in the current situation have access to” (my translation, p.61). She illustrates challenges that are linked primarily to two concepts. First, digital technology is not being used adequately. Second, the available digital resources are not being used for the right purposes, and thus, serve as “disturbing elements”. Further, Blikstad-Balas (2019) argues that developing students’ ability to assess sources is one of the most important things they learn at school due to the number of digital texts students encounter. Furthermore, she discusses what kind of digital competence the students lack.

## 2.8 Teacher beliefs

According to Clarke & Peterson (1986) in Barnard and Burns (2012), “it has long been recognized that what teachers do in practice is largely influenced by their beliefs and values” (p. 30). Thus, the present study aims to investigate both teachers’ beliefs and their reported practices. Skott (2014) outlines the term teacher beliefs by connecting *what* knowledge is and *how* to acquire knowledge. Further, he addresses teachers’ roles of facilitating the development of proficiency and linking them to classroom practices.

The field of teachers’ beliefs is interested in teachers’ thinking about the meta-issues such as what knowledge is in a certain domain, how students become proficient in that domain, and what teachers may do to facilitate the development of such proficiency. Also, it is concerned with how these lines of thinking develop and with their role for classroom practice (Skott, 2014, p. 13).

The term *belief* can be defined in several ways. Skott (2014) in Borg (2018, p. 76) suggests that different definitions of belief highlight four core elements:

- They refer to ideas that individuals consider to be true
- They have cognitive and affective dimensions
- They are stable and result from substantial social experiences
- They influence practice

Thus, the final point claims that beliefs are expected to shape practice. However, Borg (2018) maintains that this is not uncontested. He argues that the study of attitudes has demonstrated that these are not good indicators of behavior. Borg (2018) further

emphasizes that teachers hold beliefs about many issues, and this multitude of beliefs is organized into networks or belief systems. While some beliefs will be denoted as more important, other beliefs will be less valued. When tension arises, the beliefs that are more central will prevail over those that are peripheral. An important distinction is between professed or espoused beliefs and enacted beliefs, meaning, there is a gap between what teachers say they believe, and beliefs inferred from what teachers do.

There are many reasons to study beliefs and practices (Borg, 2018). First, it is important to help teachers recognize gaps between their beliefs and practices in order to make changes. Second, insight into teachers' beliefs and practices can highlight to which extent teacher cognitions and work reflect good practice as defined in the literature. Third, studying beliefs and practices provides insight to which extent the innovation is having the intended impact. Fourth, studying teachers' beliefs can help understanding the reasons for teachers' practices. Fifth, an appreciation of the relationship between beliefs and practices has implications for the design of pre-service teacher education programs. Finally, teaching will be more effective when beliefs and practices are consistent. Kagan (1992) addresses the challenges of studying teachers' beliefs due to the fact that beliefs are tacit and unobservable. Additionally, teachers may also have difficulties articulating their beliefs.

According to Li (2020), research suggest that despite teachers demonstrating overall positive attitudes and beliefs about using technologies in the classroom, teachers are reluctant technology users. Further, Li (2020) notes that teachers have different conceptions of the roles and functions of technology, and he explores teacher cognition in their respective professional contexts. Three interesting observations about teachers' understanding of technology are emphasized. First, PowerPoint is the most frequently used digital tool. Second, despite the tools that teachers have adopted, the presentational and organizational function is clearly identified. Third, a positive image of technology is portrayed by the teachers collectively (p. 174-175).

According to Li (2020), there is a strong correlation between the use of technology and teachers' pedagogical goals (Li, 2020, p. 175). Teachers use technology to facilitate interaction with students, establish a context for learning activities, mediate learning or increase student engagement (Li, 2020, p. 175). Thus, teachers use digital tools to achieve some of their pedagogical goals.

## 2.9 Learner beliefs

*Learner beliefs* are defined by Kalaja, Barcelos, and Aro (2018) as “the conceptions, ideas and opinions learners have about L2 learning and teaching and language itself” (p.222). From the 1970s, the research emphasis of applied linguistics started to shift from “how to teach” to “how to learn” (Li, 2018). Studying learner beliefs can enrich our understanding of language development, especially of related to the learners’ beliefs about L2 attainment (Dörnyei, 2005, p. 217). Beliefs play an important role in learners’ awareness of their approaches to learning an L2. L2 learner beliefs have intrigued applied linguistics since the mid 1980s and build on a discussion of what makes a good language learner. Kalaja et al. (2018) explain that more attention was given to learner beliefs when researchers began researching what kind of learner characteristics promoted success in L2 learning in the 1970s (Kalaja et al., 2018, p. 223). Thus, learner beliefs about language were seen to be important and could be good indicators of the decisions learners make (McDonough, 1995, in Kalaja et al., 2018). By studying teacher and learners’ beliefs, researchers can make it possible for both teachers and learners to reflect upon them, in addition to becoming more aware of their own beliefs and consider them and thus reconsider them in order to become more successful language teachers and students (Kalaja et al., 2018).

Several approaches to studying learner beliefs have developed the last decades. *The traditional approach* is marked by a study of Horwitz. This approach grew from the idea that learner beliefs can be a good indicator of the decisions that language learners make and how they approach L2 learning (Kalaja et al., 2018). Horwitz (1988) conducted a study where she launched a research instrument to the field: a questionnaire known as Beliefs about Language Learning Inventory, or BALLI. The aim of the study was to investigate the possible effect of beliefs on learners’ expectations and language learning strategies. There are issues concerning the methodology that may threaten the validity and reliability of the research (Kalaja et al., 2018). The method has received criticism for its perspective on L2 learning and concerns that students might interpret questions differently.

*The contextual approach(es)* sprung out from the reaction to the traditional approach and its criticism. “These approaches see beliefs as embedded in students’ contexts and use an array of diverse methodologies to study the learning of L2s from an emic perspective (Kalaja et al., 2018, p. 224). *The sociocultural approaches*, based on the ideas of Vygotsky

(1978), are the most widely used contextual approach. “These approaches focus on how beliefs are (co)constructed and mediated in social interactions and stress the role of other people and artifacts in beliefs, and the importance of speech in this process” (Kalaja et al., 2018, p. 225). In sociocultural approaches, finding out what influences beliefs is more important than mapping the beliefs themselves.

In the early 2000s, emotions were detected to influence learner beliefs (Kalaja et al., 2018, p. 229). Thus, questions circling around learners’ emotions in terms of motivation and creativity will be included in the questionnaire.

From the 1970s, the research emphasis of applied linguistics starting to shift from “how to teach” to “how to learn” (Li, 2018).

According to Kajala et al. (2019), learner beliefs do not only shape the likelihood of learners’ engagement in autonomous out-of-class technological behaviors, but more importantly, influence the nature of learners’ selective use of and interaction with technological resources. Their findings suggest that learner beliefs play a major role when teachers want to enhance learners’ engagement in out-of-class language learning with technology.

According to Murphey and Falout (2012), the students’ sense of ownership of their education can be increased by eliciting students’ voices incrementally into the process of research and education. Additionally, it can promote students’ self-directed development as more proactive, autonomous, interactive, and critically thinking students and citizens.

Peacock (1998) addresses the link between learner and teacher beliefs. He revealed a discrepancy between learner and teacher beliefs and suggested that this gap impact the learners’ language progress negatively. Similarly, Nunan (1995) suggests that learners should identify their preferred learning styles and strategies (p. 142). Further, he argues that learners should be involved in making choices among various options (Nunan, 1995, p. 144).

## 2.10 Literature review/previous studies

This section presents several studies and research conducted on the use of digital tools and L2 learning, in addition to teacher and learner beliefs. A number of studies have found a positive correlation between the use of digital tools and language learning. Recognizing the vital role teachers play in using digital tools for educational purposes, a number of studies

have been conducted to explore teachers' beliefs and attitudes towards using digital tools in the classroom. According to the findings, teachers have positive attitudes. However, studies indicate that teachers are reluctant technology users (Li, 2020, p. 166). Research suggests integrating digital tools into language teaching and learning is beneficial, both from learning and teaching perspectives (Li, 2020, p. 168).

Blume (2020) found a positive correlation between gaming and L2 learning. According to Blume, current engagement in gaming affects perceived English language skills and language learning strategies positively. She studied ESL teachers' beliefs and practices concerning digital game-based language learning. The results demonstrate that teachers generally hold positive beliefs about DGBLL (digital game-based language learning). However, the results also demonstrate that teachers engage in DGBLL to a limited extent.

In an MA study focusing on learners' beliefs conducted by Estensen (2021), Norwegian 6<sup>th</sup> graders have reported that they learn most of their English outside of school. According to this study, EE activities are the most important type of activities for children to develop their English skills. While reading was reported as the least popular activity, playing digital games was the most popular activity, followed by TikTok and watching films, TV series and videos.

Sundqvist and Sylvén (2012) conducted a study on the correlation between playing video games and language development. Their findings indicate that students who participate in an EE activity such as playing video games outperform students who do not play video games. Playing video games can be implemented in L2 classrooms, as the activity is doable in Norwegian schools, provided that teachers have the digital competence to do so. One competence aim in the English subject (LK20) is as follows: "discuss and reflect on form, content and language features and literary devices in different cultural forms of expression from different media in English-language world, including music, film and gaming". Thus, teachers need digital competence in order to implement this competence aim.

Brevik and Holm (2022) conducted a study that investigated the significance of connecting informal and formal language teaching and learning in order understand L2 language development among teenagers. They found out that informal and formal language teaching and learning were connected in two ways. First, the students' use of English outside school was primarily linked to online gaming and social media. Second, the teacher designed activities that extended the students' existing affinity space, which resulted in the students

using English in the classroom more frequently and more confidently. The students were asked to write a text in order to give an overview of a) their favorite ways of learning English and b) their use of English outside school. Thus, the teacher could accommodate the learners' beliefs. Brevik and Holm (2022) argue that teachers have a responsibility to avoid schools being seen as isolated spaces for academic learning. "While ensuring that tasks align with broad curriculum goals, teachers can look to students' other outside-school L2 experiences as the basis of activities that connect the English students use outside school with their learning in school" (p. 10-11). Thus, by using digital tools to facilitate the opportunity for students to move into an affinity space, teachers have the opportunity to increase their students' motivation of learning English at school.

Brevik (2019) studied learners' experiences and beliefs concerning their own English language development. According to the findings, the learners explained their English proficiency by the role of interest and their extensive use of English technology and tools outside school. Three profiles have been identified based on their English use outside school: the Gamer, the Surfer, and the Social Media User. While the gamer spends up to 8 hours a day playing online games and mainly using English, the surfer spends hours on the internet searching for authentic language situations, often involving English, whereas the social media user produces and consumes information in English through social media. Brevik (2019) demonstrates how interest and L2 proficiency are intertwined.

The current study on how the use of digital tools can promote language learning contributes to the field by exploring both teachers' and learners' beliefs and reported practices concerning the use of digital tools. While the previous studies mentioned above has either focused on teachers' beliefs or learners' beliefs, the present study is focusing on both teachers' beliefs and learners' beliefs. Including both teachers and students in the sample enables the researcher to compare the responses. Having similar sets of questions for the teachers and the students allows the researcher to compare the responses to a larger extent.



## 3.0 Methodology

### 3.1 Introduction

This chapter presents the methods and research tools used for gathering the data to examine the research questions presented in chapter 1. As outlined in chapter 2, the present thesis addresses the following research questions:

- What beliefs do Vg1 teachers have about the use of digital tools to promote ESL learning?
- What beliefs do the teachers have about teacher and learner digital competence?
- What beliefs do Vg1 pupils have about the use of digital tools in ESL learning?
- What beliefs do the learners have about teacher and learner digital competence?
- What digital tools do vg1 ESL teachers report that they use to promote English learning and why?

A questionnaire survey and interviews have been conducted in order to collect data in the present mixed methods research. Section 3.2 presents the choice of research design for the present thesis and mixed methods. Section 3.3 explains qualitative research and interviews. Further, it describes how the interviews have been planned and conducted. Section 3.4 explains quantitative research and questionnaire. Section 3.5 reveals how the participants for the present study were selected. Section 3.6 describes audio-recordings and transcription. Section 3.7 explains how the data material was coded and analyzed. Section 3.8 elaborates on the validity and reliability. Lastly, section 3.9 considers the research ethics of the present project.

### 3.2 Research design

The present study was conducted by having a mixed study approach to collect the necessary data. The present study has collected quantitative data with a questionnaire, and qualitative data by conducting interviews. Mixed methods research can be described as “[s]ome sort of a combination of qualitative and quantitative methods within a single research project” (Dörnyei, 2007, p. 44). While quantitative research aims to collect numeral data that can be

analyzed by statistical methods, qualitative research concerns non-numerical, open-ended questions that can be analyzed by non-statistical methods (Dörnyei, 2007, p. 24). Creswell (2015) defines mixed methods research as:

An approach to research in the social, behavioral, and health sciences in which the investigators gathers both quantitative (close-ended) and qualitative (open-ended) data, integrates the two and then draws interpretations based on the combined strengths of both sets of data to understand research problems (p.2).

There are many benefits of mixed methods research and several scholars advocate for using mixed methods in research (Dörnyei, 2007). First, the main attraction of mixed methods research is that by using both qualitative and quantitative approaches, researchers can bring out the best of both paradigms. Thus, the strengths of one method can potentially be utilized to overcome the weaknesses of another method. Second, mixed method research allows for a better understanding of a complex phenomenon by converging numeric trends from quantitative data and specific details from qualitative data. Words add meaning to numbers and numbers add precision to words. Third, mixed methods research may improve validity by producing evidence for the validity of research outcomes through the convergence and corroboration of the findings. Fourth, by combining qualitative and quantitative methods, a larger audience can possibly be reached.

Although there are many strengths regarding mixed methods research, weaknesses of mixed methods research also need to be addressed. Hesse-Biber & Leavy (2006) in Dörnyei (2007) suggest that the popular belief that the sum may be greater than its parts is not necessarily true. They also address whether any given researcher can be in both types of methodology, meaning they raise skepticism towards researchers mastering both qualitative and quantitative methods.

Despite the weaknesses of the approach, mixed methods research was chosen as an appropriate design for the present study. The main reason that the researcher chose to carry out a questionnaire for the students is due to the fact that it is time efficient (Dörnyei, 2007). The questionnaire has been conducted with four Vg1 classes from two different schools. Interviews on the other hand, are more time consuming. Yet, they are often more authentic as the interviewees participate in a conversation. Four Vg1 English teachers from two

different schools have been interviewed. The qualitative method made it possible to explore teachers' beliefs and reported practices. The quantitative method allowed for efficient, rich and comprehensive data material about students' beliefs and experiences. In addition, a mixed methods research was chosen due to the possibility to explore how digital tools can promote language learning from both the teachers' and students' perspectives.

### 3.3. Interviews

Kvale and Brinkmann (2008) in Brinkman (2014) define the qualitative research interview as "an interview with the purpose of obtaining descriptions of the life world of the interviewee in order to interpret the meaning of the described phenomena" (p. 286-287). The present study aimed to study teachers' beliefs and teachers reported practices. According to Merriam and Tisdell (2015), the main purpose of an interview is to obtain a special kind of information. Patton (2015) points out that when interviewing, the researcher wants to find out what is in and on someone else's mind. He notes that there are things that cannot be observed. These things that can only be found out by asking the right questions. Kagan (1992) notes that one of the challenges of studying teachers' beliefs lies in the fact that beliefs are tacit and unobservable. Teachers may also have difficulties articulating their beliefs. Thus, it is crucial that researchers choose appropriate methods to attempt to make beliefs more explicit. Interviewing is one appropriate method in terms of exploring teachers' beliefs (Barnard & Burns 2012; Merriam & Tisdell, 2015). There are several benefits of semi-structured interviews (Brinkmann, 2014). First, they offer better use of the knowledge-producing potentials of dialogues by allowing more leeway for following up on whatever angles are deemed important by the interviewee. Second, the interviewer has a greater say in focusing the conversation on issues that are considered important in relation to the research project.

Semi-structured interviews are the most common type of interviews in applied linguistic research (Dörnyei, 2007). They are also common within teacher cognition research Borg (2012) in Barnard and Burns (2012). Although there is a set of pre-prepared guiding questions and prompts, they are characterized by an open-ended format and the interviewee is encouraged to elaborate on the issues raised (Dörnyei, 2007, p. 136).

According to Dörnyei (2007), the semi-structured interview is suitable for cases when the researcher has a good enough overview of phenomenon or domain in question and is able to develop broad questions about the topic in advance but does not want to use pre-made response categories which limit the depth and breadth of the respondent’s story.

In qualitative research, it is common to use *purposive sampling*, meaning that researchers rely on their own judgement to choose participants for their studies (Dörnyei, 2007, p. 127). However, some criteria were made when selecting participants. In the present study, the researcher used her own personal network to contact potential participants. The criteria for the participants were that they were fully qualified English teachers and that they were currently teaching Vg1 English in a Norwegian upper-secondary school. Thus, the sampling may be defined as *criterion sampling* as the participants met some specified criteria (Dörnyei, 2007). Four teachers agreed to participate. The researcher selected student participants through the four teachers mentioned above as four classes responded to the questionnaire. Table 1 presents the teachers’ profiles. Their names and the names of the schools where they work were anonymized due to ethical and privacy considerations. The teacher participants will be referred to as “Teacher 1”, “Teacher 2”, “Teacher 3” and “Teacher 4”.

**Table 1**

*The teachers’ profiles*

<b>Participants</b>	<b>Age</b>	<b>Educational degree</b>	<b>Teaching experience</b>
Teacher 1	57 years old	Master’s degree in English didactics	33 years
Teacher 2	46 years old	90 credits in English	20 years
Teacher 3	44 years old	Master’s degree in English literature	18 years
Teacher 4	35 years old	Master’s degree in English literacy	1 year

Several preparations were made in advance of the interviews. The researcher created an interview guide (see Appendix), in order to ensure that the basic lines of inquiry are pursued with all of the interviewees (Patton, 2015, p. 439). Dörnyei (2007) emphasizes the importance of preparing a detailed interview guide, which will serve as the main research instrument. The interview guide was revised several times after discussions and feedback from the supervisor. The format of the interview guide was open-ended and allowed for follow-up questions. Although there was a set of pre-prepared guiding questions and prompts, the format was open-ended, and the interviewees were encouraged to elaborate. In the present study, the researcher provided guidance and direction during the interviews. However, the interviewees were also allowed and encouraged to elaborate on certain issues. Hence the setup, the interviews can be categorized as semi-structured interviews (Dörnyei, 2007, p. 136).

The interview guide consisted of eight sections, starting with introductory questions. In terms of the setup of the interview, Dörnyei (2007) explains that the first questions are important to set the tone and create initial rapport. The first few questions are crucial to help the interviewee feel competent, comfortable and encourage them to open up. The final closing question is crucial in an interview and should permit the interviewee to have the final say. The interviewee should get the opportunity to add any final thoughts or comments.

The introductory questions for the teachers were as follows:

- How old are you?
- How many years have you taught English?
- What are your general teaching qualifications?
- What are your qualifications in English?

Further, the interview guide was divided into seven sections. The second section aimed to investigate teachers' beliefs about the use of digital tools to promote ESL learning and the term digital competence. Questions such as "What are your beliefs about using digital tools to promote ESL learning?", "What does the concept digital competence for English teachers mean to you?" and "What does the concept digital competence for pupils in the English subject mean to you?" were included. The third section aimed to explore teachers' reported practices. The fourth section revolved around the use of digital tools and interaction. The

fifth section addressed critical assessment of information. The sixth section focused on learning to learn. The seventh section was about the correlation between the use of digital tools and the development of language skills. Finally, the seventh section explored how digital tools were used to create digital texts.

### 3.4 Questionnaire

Questionnaires are one of the most common methods of data collection in second language research (Dörnyei, 2007). Dörnyei and Taguchi (2011) claim the main strength of questionnaires to be the ease of their construction and they emphasize the importance of the participants' anonymity. Brown (2001) in Barnard and Burns (2012) defines questionnaires as "any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers" (p. 31). According to Dörnyei (2007), the popularity of questionnaires is due to the fact that they are easy to construct, extremely versatile and uniquely capable of gathering a large amount of information quickly. Questionnaires usually contain both closed- and open-ended items (Barnard & Burns, 2012). The questionnaire used in the current study was completely anonymous and written in Norwegian. According to Pinter (2013), participants may encounter challenges due to lack of adequate vocabulary. Pinter (2013) addresses that it potentially can be a gap between children's level of understanding and the linguistic means available to them to respond clearly and unambiguously. Thus, the questionnaire was written in Norwegian in order to avoid any possible misunderstandings. Most people feel more comfortable reading and writing in their first language. As the questionnaire was carried out in four Vg1 classes, the researcher made sure it was suitable for teenagers. According to Barnard and Burns (2012), several scholars have argued that "it is necessary to pilot the questionnaire to ensure that the questions are not ambiguous and to check the feasibility of the procedures" (p. 32). The questionnaire was also piloted in advance to make sure it was clear and reader friendly. One 16-year-old and one 17-year-old read and answered the questionnaire. Their feedback was extremely valuable to the researcher and minor changes were done after their feedback to improve and adjust the questionnaire. Some questions were considered as repetitive as they were similar. This resulted in a few questions either being left out or worded differently.

The results of a questionnaire survey are typically quantitative, although it may also contain some open-ended questions which will require a qualitative analysis (Dörnyei, 2007, p. 101). The questionnaire was a Likert-scale questionnaire, which is the most famous type of close-ended items (Dörnyei, 2007). Likert-scale questionnaires consist of statements where the respondents are asked to indicate to which extent they agree or disagree. The questionnaire mainly consisted of close-ended questions and statements. The statements were a mixture of agree items and frequency items. Open-ended questions are also important for the questionnaire as they give the pupils the opportunity to express themselves more freely. The questionnaire in the present study consisted of four parts. The first part consisted of 27 agree statements where the students were given five options: strongly agree, agree, neutral, disagree and strongly disagree. The first part aimed to investigate students' beliefs about the correlation between the use of digital tools and L2 language acquisition. The second part consisted of 20 frequency statements where the students were given five options: always, often, sometimes, rarely and never. The second part aimed to explore the students' reported practices of how digital tools are used in the English subject. The third part consisted of 14 frequency questions to investigate which digital tools the pupils use at school and in their spare time. The second and the third part may seem similar. Yet, while the second part focused on *how* digital tools are used within the English subject, the third part sought to investigate *which* digital tools the pupils use. They were also given the opportunity to add any digital tools they use. Finally, the fourth part consisted of four open-ended questions.

The open-ended questions were as follows:

- What are the benefits and challenges of the use of digital tools in terms of your English language development?
- What does the concept “digital competence” for pupils in the English subject mean to you?
- What does the concept “digital competence” for teachers in the English subject mean to you?
- Has the use of digital tools been important for your English language development? If so, how?

It is important to bear in mind that the students have the chance to include multiple things in the open-ended questions. Thus, one student can provide one answer with several things, which could impact the findings.

### 3.5 Sampling

For qualitative research, it is common to use *purposive sampling*, meaning that researchers rely on their own judgement to choose participants (Dörnyei, 2007, p. 127). Researchers know their research and should be able to choose appropriate participants. According to Cohen et al. (2007), there are two different sampling strategies: *probability* and *non-probability sampling*. While probability sampling is a random selection of participants, a non-probability sample selects a specific portion of the population that will have the opportunity to participate. The criteria were that the participants were currently teaching English in Vg1. Thus, the sampling may be defined as *criterion sampling*, which involves selecting participants who meet some specific predetermined criteria (Dörnyei, 2007). The sampling of the questionnaire and interviews can be categorized as non-probability criterion sampling. In the present study, the researcher used her own personal network to find participants. The researcher e-mailed several teachers and asked them if they would be interested to participate in the study. Four teachers from two different schools agreed to participate. In addition, the researcher also aimed to include both male and female teachers and to include teachers who had different qualifications and amounts of experience. Three of the teachers had a master's degree in English and one teacher had 60 credits in English. One female teacher and three male teachers participated in the present study. Their qualifications and amount of experience are presented in Table 1.

### 3.6 Audio-recordings and transcription

The four interviews were carried out in-person at the teachers' schools and audio recorded. According to Dörnyei (2007), interviews should always be recorded due to the fact that taking notes is simply not enough as it is unlikely that the researcher will be able to catch all the details of nuances of personal meaning; furthermore, notetaking disrupts the interviewing process (p. 139).



It is also important to be aware that many people are not comfortable being recorded, and therefore this aspect must be discussed with the interviewee in advance. In the present study, the researcher informed the interviewees in advance that the conversations would be recorded. In Norway, educational research must be reported and approved by NSD (norsk senter for forskningsdata). The interviewees signed the NSD letter about agreeing to audio-recording. The audio recorder was placed on the table in the middle of the researcher and the interviewees during the interviews. Then, the researcher transcribed the interviews in order to analyze the data. Most qualitative data is transformed into a textual form, for example interview transcription. The analysis is done primarily with words. Qualitative data is thus a *language-based* analysis (Dörnyei, 2007). When analyzing data, the first step is to transform the recording into textual form (Dörnyei, 2007). The transcription method used for the present thesis was *intelligent verbatim transcription*. This transcription method allowed the researcher to exclude discourse fillers such as “uhm”, pauses and discourse markers, while still preserve the interviewees’ beliefs and reported practices (Eppich, et al., 2019). The transcription method chosen differs from *true verbatim transcription*, where every utterance is written into textual form (Eppich et al., 2019). Thus, the researcher focused on the interviewees’ messages rather than how they expressed themselves. Intelligent verbatim transcription was chosen for the present thesis in order to convey the interviewees’ responses in a reader-friendly manner, in addition to keeping their responses accurate. The transcriptions are not included in the appendix due to ethical considerations and confidentiality.

Kvale (1998) in Gibbs (2018) warns us to “beware of transcripts” as he argues that there are threats when moving from spoken context of an interview to the typed transcript. Superficial coding, decontextualization, missing what came before and after the respondent’s account, and last but not least missing what the larger conversation was about are threats that must be taken into account. When researchers transcribe interviews, there is a chance that they to some extent fail to convey the conversation exactly as it was. There is also a possibility that researchers interpret and understand things differently.

### 3.7 Coding and analyzing the data

After the data material was collected and transcribed, it was coded and analyzed. Stake (1995) in Dörnyei (2007) defines analysis as a “matter of giving meaning to first impressions as well as to final compilations”. Coding is the process of organizing large amounts of data into smaller segments to make it more manageable (Bailey, 2007, p. 127). According to Dörnyei (2007), clarity is the most important feature to aim for when coding. In the present study, *initial coding* and *second coding* were employed. First, the researcher read the transcripts several times to obtain a general sense of the data. Second, different colors were applied to highlight relevant passages in order to categorize the material.

In order to analyze the questionnaire responses, each response option was assigned a number for scoring purposes. The scale goes from “strongly agree” = 5 to “strongly disagree” = 1, and “always” = 5 to “never” = 1

**Table 2**

*Categories for the teachers’ responses*

Teachers	
Main Category	Subcategory
1. Introduction	1.1 Experience
2. Beliefs about how digital tools can promote language learning	2.1 Teachers’ beliefs about the use of digital tools to promote ESL learning 2.2 Teachers’ beliefs about teacher and learner digital competence
3. Practice	3.1 Reported practices and why

**Table 3***Response options and numeric scores for the close-ended questions*

<b>Response options</b>	<b>Numeric score</b>
Strongly agree	5
Agree	4
Neutral	3
Disagree	2
Strongly disagree	1

<b>Response options</b>	<b>Numeric score</b>
Always	5
Often	4
Sometimes	3
Rarely	2
Never	1

### 3.8 Validity and reliability

Validity and reliability should always be addressed in research. According to Gibbs (2018), validity concerns the extent to which the study represents “what is actually happening”, while reliability concerns consistency. Silverman (2005) in Dörnyei (2007) claims that “validity is another word for truth” (p. 48). According to Dörnyei (2007), “there is a general consensus amongst researchers that they must continually strive to assess and document the legitimacy of their findings” (p. 48). Researchers must convince their audiences that they should listen to them and believe them. Dörnyei (2007) notes that both terms were originally introduced in quantitative research. Thus, although both validity and reliability refer to empirical research in general, they have been related to quantitative methods for a long time. Qualitative research is subjective to some extent due to the fact that the researcher interprets the findings of the study. Dörnyei (2007) explains that “truth” is relative, as what is true for one researcher may not be true for another.

Research validity concerns the whole research process and is often divided into *internal validity* and *external validity* (Dörnyei, 2007). A research study has internal validity if “the outcome is a function of the variables that are measured, controlled or manipulated in the study” (Dörnyei, 2007, p. 52). External validity is “the extent to which we can generalize our findings to a larger group, to other contexts or to different times (Dörnyei, 2007, p. 52). Thus, a study is externally invalid if the results apply only to the setting in which they were found. In the present research, the external validity is challenged due to the fact that it aimed to investigate particularistic findings of both teachers’ and student’ beliefs instead of generalizable findings. The sample size of four teachers cannot generalize the findings to a larger group.

Reliability refers to the degree of consistency (Dörnyei, 2007). According to Morse and Richards (2002) in Dörnyei (2007), “reliability requires that the same results would be obtained if the study were replicated (p. 57).

In the present study, several measures were made in order to ensure valid findings. The researcher made an interview guide which was piloted in advance of the interviews of the four Vg1 teachers. Two teacher colleagues were interviewed to make sure that the questions were clear. Minor changes were made due to their feedback. They reported that some questions were repetitive. As a result, a few questions were deleted from the interview guide. Prior to the teacher interviews, the teachers were informed about the topic of the interview and they were given a consent letter. However, they were not provided with the questions. Thus, the teachers knew what they would be participating in. Yet, they were not be able to prepare nor conduct any theory on the topic prior to the interviews. The researcher also wanted to ensure authenticity. The researcher tried to remain neutral during the interviews, and to avoid expressing personal beliefs and asking leading questions. The teachers participated anonymously and were not paid to participate, meaning that they did not participated for personal gain and recognition.

The questionnaire consisted of a few open-ended items which included short-answer questions to elicit information which might otherwise have been overlooked. Such items can also serve to cross-check the validity of responses (Brown, 2009; Dörnyei & Taguchi, 2010 in Barnard & Burns 2012). Thus, the participants were given the opportunity to add information.

### 3.9 Ethical considerations

This section aims to describe several ethical considerations that have been taken into account in the present study. Social research, including educational research, concerns people's lives and thus involves ethical issues (Dörnyei, 2007, p. 63). Thus, all aspects of research should be ethically considered. Dörnyei (2007) argues that in mixed methods studies, there is an increased likelihood for the occurrence of ethical dilemmas. Qualitative research often intrudes more into the human private sphere as there is an interest in people's personal views which may target sensitive or intimate matters. Data collection methods, anonymity, confidentiality, handling the data collection and ownership of the data are important ethical considerations that have been taken into account in the present study.

The researcher needed to apply and receive approval from the Norwegian Centre for Research Data (NSD) in order to conduct research. NSD approved the project in January (see appendix A). The NSD ensure that data about people and society can be collected, stored and shared, both safely and legally and is responsible for certifying research projects in Norway. The NSD has high standards in terms of ethical and legal guidelines. Several ethical concerns were considered prior to the approval. First of all, informed consent is crucial when conducting studies (Dörnyei, 2007). The participants must be informed about the research to know whether they want to participate (Seidman, 2013, p. 64). Gibbs (2018) addresses the principle of fully informed consent, meaning that participants in research should know exactly what they are participating in and letting themselves in for. The researcher must provide them with information about what will happen with them during the research in addition to what will happen with the data they provide after the research is completed. The participants should be made aware of this prior to the research on them starts. They should also be given the option to withdraw from the research at any time. The researcher wrote information letters to the teachers and the students which were approved by NSD. The participants were informed about the purpose of the present study. Thus, they were aware that the researcher wanted to explore their beliefs and experiences about how the use of digital tools in the L2 English classroom can promote language acquisition. The participants were also informed about the procedures to protect the confidentiality, how the responses would be handled, and the voluntary nature of the study.

Confidentiality is an ethical issue which entails that the participants' identity should not under any circumstances be disclosed. The teachers' identities were coded with "Teacher 1", "Teacher 2", "Teacher 3" and "Teacher 4". The schools' names and any other personal information were not published. Only the researcher had access to recordings, transcriptions, and signed consent letters. All data materials were deleted. The researcher deleted the recordings after transcribing them. In terms of the questionnaire, the findings were stored in SurveyXact. All the students' responses were anonymized in SurveyXact.

## 4.0 Findings

### 4.1 Introduction

This chapter presents findings from the present study conducted on how the reported use of digital tools can promote L2 language learning in four Norwegian upper secondary schools and teachers' and learners' beliefs concerning the concept digital competence. As outlined in chapter 3, mixed method research was conducted to collect data for the present study.

Section 4.2 presents the teacher findings. The findings have been organized according to the research questions. Section 4.2.1 gives an overview of the teacher profiles. Section 4.2.2 presents the findings concerning the teachers' beliefs about the use of digital tools to promote ESL learning. Section 4.2.3 describes the teachers' beliefs concerning the term digital competence. Section 4.2.4 summarizes the teachers' reported practices. Section 4.3 presents the learners' beliefs, whereas section 4.3.1 describes the learners' beliefs concerning the use of digital tools and ESL learning, and section 4.3.2 presents learners' beliefs about what the term digital competence means for teachers and learners.

### 4.2 Teacher interviews

The table below presents an overview of the teacher findings organized according to the research questions.

**Table 4***Overview of the teacher findings*

	<b>Teacher 1</b> (F, 57 years old)	<b>Teacher 2</b> (M, 46 years old)	<b>Teacher 3</b> (M, 44 years old)	<b>Teacher 4</b> (M, 35 years old)
<b>RQ 1: Beliefs about the use of digital tools to promote ESL learning</b>	Positive  Focuses on opportunities and interesting materials	Positive  Focuses on motivation and interesting materials	Positive  Used with care Having a good plan Used to visualize	Positive  Used with care Having a good plan Used to visualize
<b>RQ2: Beliefs about teacher and learner digital competence</b>	Technical competence  Source criticism	Technical competence	Technical competence  Understand how digital tools are organized	Technical competence
<b>RQ 3: Reported practices</b>	Teams and OneNote used most frequently.  Digital tools are the primary sources for English teaching. Padlet, Kahoot, Mentimeter, videos, films, internet resources, online dictionaries, word, PowerPoint. An online textbook is the secondary source.	Teams and OneNote used most frequently.  Digital tools are the primary sources for English teaching. Videos, films, reading online news, creation of videos. An online textbook is the secondary source.	Teams and OneNote used most frequently.  The textbook is the primary source for English teaching. Digital tools are used as secondary sources: PowerPoint, websites, VR headset, digital games.	Teams and OneNote used most frequently.  The textbook is the primary source for English teaching. Digital tools are used as secondary sources: PowerPoint, websites, VR headset, digital games.



#### 4.2.1 Educational background and teaching experience

In order to collect qualitative data in the present study, four Vg1 teachers employed at two different schools were interviewed. Teacher 1 had 33 years of teaching experience and had been teaching English in Norwegian upper secondary schools during her entire teacher career. She had a master's degree in English didactics. Teacher 2 had 20 years of teaching experience and had been teaching English at Norwegian upper secondary schools in all of his teaching years. He had 90 credits in English. Teacher 3 had 18 years of teaching experience in total, whereas he had been teaching English at an upper secondary school in 6 of them. He had a master's degree in English literature. Teacher 4 had 1 year of teaching experience. He had a master's degree in English literacy.

#### 4.2.2 Teachers' beliefs concerning the use of digital tools to promote ESL learning

The four teachers held positive beliefs in general about the use of digital tools to promote language learning. However, two main patterns emerged. On the one hand, Teachers 1 and 2 shared similar beliefs, and on the other hand, Teachers 3 and 4 shared similar beliefs. While Teacher 1 held exclusively positive beliefs, Teacher 2 had not given it much thought, but he noted that the use of digital tools falls naturally in the English subject. Teachers 3 and 4 also held positive beliefs in general but emphasized that it is important to have a solid plan when using digital tools. They also noted that digital tools must be used with caution. Teacher 3 also pointed out that digital tools are just tools that must be used appropriately and correctly in order for the students to achieve learning outcomes. Although all the four teachers were positive to the use of digital tools to promote ESL learning, the quotes from Teachers 1 and 3 below demonstrate their different points of view concerning the use of digital tools.

It is important to use digital tools to promote language learning in the English subject because it gives the opportunity to use authentic texts and listen to authentic conversations in a completely different way than before. Digital tools also enable interaction which is reflected in the new exam form (Teacher 1).

Learning does not happen in the digital itself. Digital tools are just tools. There must be a plan for how to use these tools and they must be used correctly and appropriately in order for the students to achieve learning outcomes. Digital tools are just tools and nothing else but that (Teacher 3).

The four teachers held different beliefs regarding the correlation between the use of digital tools and the students' motivation of learning English. When asked about if they believed that the use of digital tools can promote the students' motivation in ESL learning, two patterns emerged. While Teachers 1 and 2 held positive beliefs, Teachers 3 and 4 were more skeptical. Teacher 1 believed that the use of digital tools promotes the students' motivation due to more varied lessons. "Yes, unconditionally yes. We can more easily create varied teaching materials that are more student-oriented and student centered. It gives the opportunity for the students to work individually and independently. It can visualize things, which is very important" (Teacher 1). On the one hand, Teachers 1 and 2 held positive beliefs and emphasized that by using digital tools, teachers can more easily create varied teaching material adapted to the students' level and interests. Teacher 1 also noted that the use of digital tools can facilitate authentic material, including authentic texts, conversations, videos and films. On the other hand, Teachers 3 and 4 were more skeptical that the use of digital tools increases students' motivation in learning English. Teacher 4 reported that motivation does not necessarily come as a result of the use of digital tools. "I do not necessarily think that the use of digital tools increases the students' motivation in learning English. It depends on what it is and how we use it" (Teacher 4). Although Teacher 4 did not deny that the use of digital tools can promote the students' motivation of ESL learning, he emphasized that it depends on how digital tools are being used.

The four teachers were asked how it is to use digital tools when some of their students are probably following the technological development to a greater extent than themselves. The teachers admitted that their students sometimes help them using digital tools. Yet, all of the four teachers reported that they encounter challenges in terms of their pupils being digitally incompetent in certain areas. All of the teachers reported that their students struggle to save documents on their computers, find sources and that they lack knowledge on data security.

LK20 was central when asking the teachers about their beliefs and practices. The teachers were asked about their beliefs and practices concerning how digital tools can facilitate interaction, critical assessment of information, learning to learn, language development and creation of digital texts. The teachers pointed out that the use of digital tools facilitates and supports interaction both in terms of teacher – student interaction and student – student interaction. Teams and OneNote are reported as the most frequently used digital tools that support interaction by the four teachers. Teacher 1 reported that the students interact and cooperate by sharing documents and presentations. Teacher 3 reported that they have had a collaboration with a class in Scotland. They created an opportunity for Norwegian and Scottish teenagers to communicate. They started communicating with each other by sending e-mails, but eventually moved over to communicating on social media. Thus, the teachers facilitated for authentic communication and interaction.

Source criticism is implemented both in the English subject and in the Core Curriculum, in addition to being incorporated in digital skills. The four teachers reported that source criticism is continuously a topic in the English subject. Teacher 1 listed two challenges in terms of source criticism within the English subject. First, source criticism must be worked on continuously. Teachers must discuss source criticism with the students and teach them whether a website is reliable or not. Teachers must also teach the students about search strategies in order for them to be able to find information independently. Second, the students must learn how to use sources when writing. The four teachers reported that their students encounter challenges using sources appropriately. While some students struggle to select reliable sources, other students struggle to paraphrase and refer to sources.

Learning to learn is a central aim in LK20, and there are many opportunities within the use of digital tools to facilitate learning. The teachers were asked about their beliefs concerning the importance of teaching the students to learn, and their practices for achieving this particular aim. They were also asked which digital tools they use to facilitate learning. According to the four teachers, it is extremely important to teach the pupils to acquire knowledge. Teacher 1 argued that this goes far beyond the English subject, as it is an important life skill. Teacher 4 pointed out that learning strategies are the most important thing pupils learn in upper secondary school.

Learning strategies are the most important thing that the pupils acquire from upper secondary school as upper secondary school aims to prepare the pupils for further studies and education. They are in the process of getting to know themselves and they need the opportunity to explore which methods are best suited to them (Teacher 4).

The development of language skills is also a central aim in LK20. Teachers' beliefs and reported practices were explored as the teachers were asked how the use of digital tools can promote English language development and how they use digital tools to promote language learning. Teacher 1 held positive beliefs and noted that "there are endless of possibilities regarding using digital tools to facilitate language learning". Further, she argued that reading authentic texts promotes reading comprehension, vocabulary development and cultural knowledge. Teacher 2 noted that there is a correlation between reading and writing and argued that it is irrelevant whether the text is digital or analog. Teacher 3 and Teacher 4 reported that they prefer analog texts and that they actively chose analog texts over digital texts in order to create a closed universe without any distractions that come with the use of digital tools. The four teachers believed that the use of digital tools can facilitate language development in terms of reading comprehension, vocabulary and pronunciation.

Finally, teachers' beliefs about the use of digital tools to create texts were investigated. The teachers were asked how digital tools can be used to write digital texts and multimodal texts. The teachers held positive beliefs of using digital tools when creating texts. They believed that it is important to give the students the freedom of choice whether they want to write by hand or on their computers. While some students write by hand, most students primarily write on their computers. The four teachers noted that there are several benefits of writing on a computer. First, the students can easily change the text whenever they need to, meaning that it is easier to structure the text. Second, the students have access to a digital dictionary. Third, the computer has a spelling program, which scaffolds the students when writing. Finally, the students are allowed to use all aids during the exam. Teacher 2 noted that the students should be familiar with the aids that are allowed on the exam. Thus, he argued that it is beneficial that the students are used to write on the computer.

#### 4.2.3 Teachers' beliefs concerning the term digital competence

The teachers were asked what the term *digital competence* means for both teachers and students in the English subject. The four teachers pointed out the importance of teachers being digitally competent, meaning to be able to use digital tools. They believed that teachers must utilize and exploit digital tools to promote ESL learning. Digital tools must be integrated in language learning. Teacher 1 also emphasized source criticism:

Digital competence for teachers varies from teacher to teacher. To me, it is about the technical, and being able to use and exploit digital tools for what it is worth. It is about using digital tools as part of the language learning. It is also about having a critical approach to sources. Source criticism is an extremely important part of digital competence (Teacher 1).

Teacher 3 emphasized that digital competence is not merely about being able to use digital tools, but to understand how they are organized and structured. He noted that digital competence is about understanding digital tools in order to understand the current world.

Digital competence for teachers is about maneuvering the digital sphere by understanding what it is, how it is structured and how it is put together. Teachers must teach their students to understand the world. It is important to teach our students not only how to use digital tools, but also to understand these tools (Teacher 3).

Regarding digital competence for students in the English subject, the four teachers were uncertain in which the students have awareness amongst the concept digital competence in the English subject and in general. The teachers noted that the students grew up with digital tools and technology. Thus, the students may not distinguish everyday technology from technology used in the English subject. The teachers admitted that they do not underline digital competence in the English subject. Rather, it is a natural and integrated part of the subject. It is also included in the competence aims. The four teachers first and foremost believed that digital competence for the students is about their ability and set of skills to use digital tools. "Digital competence for students means that they can use different types of digital tools, and that they have the skills and abilities required to use these tools" (Teacher

4). In addition, Teacher 3 also pointed out the importance of students being conscious about the context and how digital tools are organized.

To me, digital competence is about understanding the context because that makes you better equipped to handle challenges within the digital sphere. The students rarely need assistance in using digital tools. Yet, they lack knowledge of what is behind (Teacher 3).

#### 4.2.4 Reported practices

As outlined in the previous section, two patterns emerged within teachers' beliefs, which is also reflected in the teachers reported practices. Thus, two sets of reported practices emerged. While Teachers 1 and 2 from school 1 more or less shared the same reported practices regarding the use of digital tools to promote language learning, Teachers 3 and 4 from school 2 more or less shared the same reported practices. On the one hand, the reported practices from Teachers 1 and 2 are characterized by using digital tools as primary sources. Although they reported that they have an online textbook, they mainly use internet resources, videos and films as teaching material. On the other hand, Teachers 3 and 4 reported that a physical textbook is the primary source when teaching English. In addition to the primary source, they also reported that they use digital tools mainly to visualize. PowerPoint presentations were reported as the most frequently used digital tool to visualize. Also, Teachers 3 and 4 reported that they use digital games and VR headset to facilitate authentic interaction. The quotes below provide an overview of the four teachers reported practices which are reflected in their beliefs:

Before, we depended on a printed book, which is dead. It was much harder to differentiate before. Now, it is easier to create level differentiated and adjusted tasks. The society is an important aspect of the English subject, and using digital tools makes it possible to stay updated on current topics (Teacher 1).

Now that we are not forced to use a textbook, we can use anything as long as it is in line with the curriculum. I help the students to find something suited to their level and interests. It is easier to find original themes now that we are not linked to a textbook (Teacher 2).

I would almost not teach English without a physical textbook. It is about creating a closed universe. The students are doing all sorts of things when they are using their computers. They need the opportunity to put their computers away. Unlike a computer, a book has no distractions. A book comes without messages and notifications. It is also more challenging to facilitate for in-depth learning on a screen (Teacher 3).

I try to facilitate for analogue texts to minimize the distractions that come with the use of digital tools (Teacher 4).

The present study explored which digital tools, and for which purposes, the four teachers use when teaching English. The four teachers reported that they use digital tools every day and in every English lesson. All of the four teachers reported that they use computers, Teams and OneNote in more or less every English lesson. The classes are organized in Teams, which is where the communication between the teacher and the students takes place. The subject is organized in OneNote, where the students also have their workbooks. The teacher has access to their workbooks and can gain insight in the students' work anytime. Thus, the teacher has the opportunity to provide the students with close follow-up of their work through their digital workbooks.

In addition to the most frequently used digital tools, the teachers reported that they also use internet resources, Word, PowerPoint, Kahoot, Padlet, Mentimeter, films, digital games and make podcasts in the English subject. Kahoot is a game-based learning platform based on multiple-choice tasks. Padlet is an online learning platform that allows learners to collaborate by posting text, images, links, documents, videos and voice recordings. Mentimeter is another online platform which enables learners to engage with each other. Teacher 2 also reported that he uses current news to create teaching materials. Teachers 3 and 4 reported that they use VR-headset to play digital games. The students are organized into small groups and play together.

The teachers were asked why they use the digital tools they are using. Teacher 1 reported that she uses digital tools to visualize things, in addition to creating varied lessons. She also argued that she uses these tools to listen to and watch authentic interaction. "I use them because it gives me the opportunity to create varied lessons, and it gives the students the

opportunity to listen to and see authentic interaction. It is a good way to achieve the goal of cultural knowledge” (Teacher 1). Teacher 2 reported that he uses digital tools to find teaching material suited to the students’ level and interests. Teachers 3 and 4 reported that they mainly use digital tools to visualize things and that the primary source in the English subject is a printed textbook. Teacher 3 also emphasized that the teachers have a relation to the students which cannot be replaced by someone on a screen. “I use those digital tools to visualize. I only use them as support. Teachers cannot be replaced by people on YouTube. As a teacher, I have a relation to my students, which is irreplaceable” (Teacher 3). Furthermore, Teachers 3 and 4 reported that they use a VR headset and play digital games to facilitate interaction.

### 4.3 Learners’ beliefs

#### 4.3.1 Learners’ beliefs about the use of digital tools in ESL learning

Despite the fact that the teachers at school 1 and the teachers at school 2 held quite different beliefs regarding the use of digital tools to promote language learning, the results from the students at school 1 and school 2 were quite similar. Thus, the results that will be presented in this section do not distinguish between the two schools and the findings from the two schools will be presented together. On the whole, the students held positive beliefs about the use of digital tools to promote ESL learning.

This section presents the data material gathered from the student questionnaire, including numbers and percentages and tables with mean and mode scores. The response alternatives were based on the Likert scale. The response options were strongly agree, agree, neutral, disagree and strongly disagree, where strongly agree = 5, and strongly disagree = 1. The findings are presented in their entirety instead of separated class by class or school by school due to the fact that there were no huge gaps between the classes nor schools. The aim was also to investigate the main tendencies instead of similarities and differences between the classes and schools. Also, the findings do not distinguish between male and female, as the study aimed to investigate the students’ beliefs in its entirety, and not based on gender. The findings below are presented in descending order, from highest to lowest score.



Table: Students' beliefs and experiences concerning the use of digital tools to promote ESL learning. N = 121.

**Table 5**

*Students' beliefs (N=121)*

<b>Statements</b>	<b>Mean score</b>	<b>Mode score</b>
I have access to the necessary digital tools needed for learning English at school.	4.63	5
I have access to the necessary digital tools needed for learning English outside school.	4.62	5
I learn English through social media.	4.48	5
Digital tools are helpful when learning English.	4.40	5
Spelling programs are helpful when writing English texts.	4.34	4
Digital tools make it more fun to learn English.	4.31	4
The use of digital tools contributes to the development of my English vocabulary.	4.25	4
English classes are more varied due to the use of digital tools.	4.18	4
The use of digital tools contributes to the development of my pronunciation of English words.	4.04	4
The use of digital tools contributes to the development of my reading comprehension in English.	4.03	4
I feel confident to find reliable sources when searching for information online that will be used in the English subject.	4.00	4
I learn English by playing digital games.	3.94	4
Online authorized dictionaries are helpful when writing English.	3.80	4
The use of digital tools increases my motivation to learn English	3.64	4
Online authorized dictionaries are helpful when reading English.	3.48	4

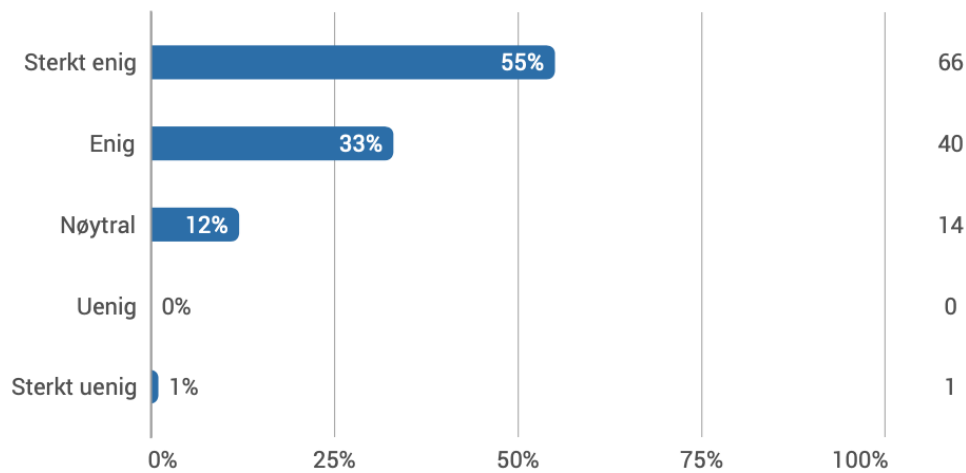
The table demonstrates that the students held positive beliefs concerning the use of digital tools and ESL learning, as no statements received a lower mode score than 4. The students reported that they were most positive that they learn English through social media. 88.4% of

the students reported that they learn English through social media, 7.4 per% were neutral, and 4.2% reported that they disagreed that they learn English through social media. One statement investigated whether the students find digital tools helpful when learning English. While 87.6% answered that they agree that digital tools are helpful when learning English, 11.6% were neutral, and 0.8% disagreed. Further, the students reported that English classes are more varied due to the use of digital tools. The students believe that the use of digital tools is beneficial in their language development, including vocabulary development, pronunciation and reading comprehension. Regarding source criticism, one statement explored whether the students feel confident in choosing credible sources. Whereas 75% reported that they feel confident in choosing credible sources, 23% were neutral, and 2% reported that they do not feel confident when selecting sources. One statement aimed to investigate if the students learn English by playing digital games. 71% answered that they learn English by playing digital games, 15% were neutral, and 14% disagreed that they learn English by playing digital games. The statements with the lowest scores include the correlation between the use of digital tools and the students' motivation, and the use of online dictionaries when reading and writing English. Although the statement concerning the use of digital tools and the students' motivation has one of the lowest scores, 55% reported that the use of digital tools increases their motivation to learn English. Yet, 35% were neutral, and 10% disagreed that the use of digital tools increases their motivation to learn English.

The figure below indicates to which extent the students find digital tools helpful when learning English. According to the figure, it is clear that the majority of the students find digital tools helpful when learning English, as 88% of the students agreed to the statement.

**Figure 1**

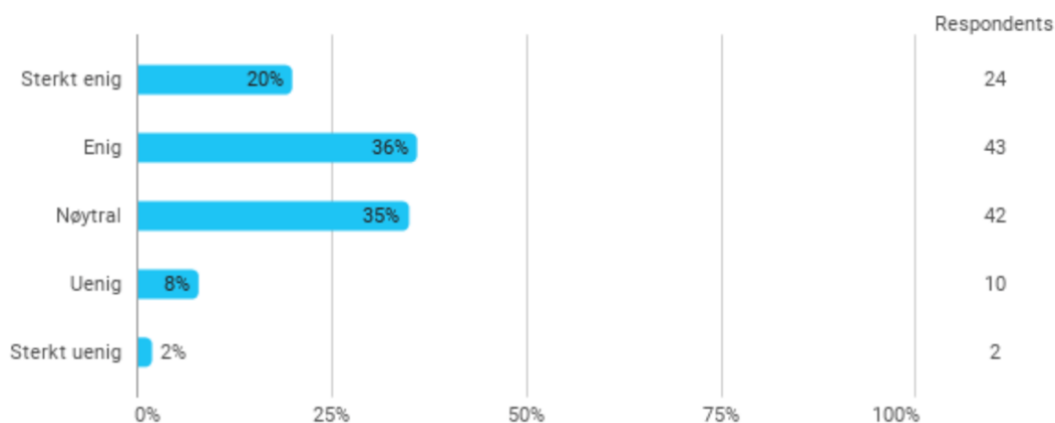
Digital tools are helpful when learning English.



Although the numeric score presented in the table above about the use of digital tools and the students' motivation is relatively low, the table below demonstrates that the motivation of many students increases as a result of the use of digital tools.

**Figure 2**

How the use of digital tools increases the students' motivation of ESL learning.



While 56% of the students answered that the use of digital tools increases their motivation of ESL learning, 35% were neutral, and 10% disagreed that the use of digital tools increases

their motivation of ESL learning. The figure demonstrates that the use of digital tools can be important for some students.

The students were asked about their beliefs concerning the benefits and challenges of using digital tools to learn English. Although several students did not reply to the particular question, some patterns emerged. The students listed far more benefits than challenges regarding the use of digital tools to learn English. On the one hand, the most frequent answers concerning the benefits circled around variation, access to information and motivation. On the other hand, the students listed distractions as the greatest challenge of using digital tools in ESL learning, followed by the amount of screen time and fake news. The table below presents an overview of the benefits and challenges listed by the students of using digital tools to promote ESL learning. It is important to bear in mind that the question was asked as an open-ended question. Thus, some students have included several things in their answers.

**Table 6:**

*Students' beliefs about benefits and challenges concerning the use of digital tools in ESL learning (N = 121)*

<b>Benefits of using digital tools in ESL learning</b>	<b>Challenges of using digital tools in ESL learning</b>
Variation	Distractions
Access to information	A lot of screen time
Increases motivation	Fake news
Endless opportunities	Source criticism
Promotes vocabulary development	Plagiarism
Promotes pronunciation	Digital textbook
Promotes interaction	Easier to cheat
Promotes collaboration	Spelling programs: we no longer need to be able to spell words in English
Freedom of choice, the students can choose topics and materials themselves	Lazier; search, copy, paste
Spelling programs are timesaving and dyslexia friendly	
Overview of other cultures	
Digital games, TV-series and films make it more fun to learn English	

#### 4.3.2 Learners' beliefs about teacher and learner digital competence

The students were asked what the term *digital competence* for students means. It was asked as an open-ended question. 121 students answered the questionnaire. However, 39 responses cannot be taken into account as they did not answer the question. Thus, 68% of the students answered the question. However, it is important to bear in mind that the question was asked as an open-ended question, meaning that the students had the opportunity to include multiple things in their responses. Although many students did not reply to this particular question, two types of replies occurred frequently. First, according to

many students, digital competence for students means that they have the ability and skills required to use digital tools. Second, to many students, source criticism is central within the term digital competence. 74 of the students' responses are categorized as "being able to use digital tools". 16 of the students' responses are categorized as "source criticism". Some of the students' responses included both categories and are thus categorized in both categories. Thus, 61% of the students' answers evolves around the ability to use digital tools, whereas 13% of the answers is categorized as source criticism.

The students were also asked what the term digital competence for teachers means. The question was asked as an open-ended question. Of the 121 participants, 48 responses cannot be included as they do not answer the question. Thus, only 73 students provided an actual reply, which constitute 60%. There is a similarity between the question asked about what digital competence for students means. In addition to the categories mentioned in the previous paragraph, the responses indicate a category about how to teach. The students' responses are thus categorized in three categories: 1) being able to use digital tools, 2) source criticism, and 3) arrange and adapt the teaching. The most frequent answer is "being able to use digital tools when teaching" as 43% of the students' responses fit into this category. The second most frequent answer is "source criticism" as 12% of the students' responses fit into that category. Finally, 5% of the students' responses are categorized as "arrange and adapt the teaching", meaning that teachers should use digital tools to facilitate the students' interests.

## 5.0 Discussion

### 5.1 Introduction

This chapter aims to discuss the main findings presented in chapter 4 in relation to the chosen theoretical framework presented in chapter 2. Chapter 5 is organized according to the research question. Section 5.2 discusses the teachers' beliefs concerning the use of digital tools to promote ESL learning. Section 5.3 considers the learners' beliefs regarding the use of digital tools in ESL learning. Section 5.4 discusses what beliefs teachers have about teacher and learner digital competence. Section 5.5 considers learners' beliefs about teacher and learner digital competence. Section 5.6 discusses what digital tools Vg1 ESL teachers report that they use to promote English learning and why. Finally, section 5.7 addresses the limitations for the study, whereas section 5.8 provides implications for teaching.

### 5.2 Teachers' beliefs and reported experiences concerning the use of digital tools to promote ESL learning

According to Borg (2009), it is important to understand what teachers believe in order to understand the teaching. The first research question in the current study investigated teachers' beliefs concerning the use of digital tools to promote ESL learning. In general, the four teachers held positive beliefs regarding using digital tools to promote ESL learning. However, their beliefs differed to some extent and two patterns emerged. Teachers 1 and 2 held exclusively positive beliefs concerning the use of digital tools to promote ESL learning, whereas Teachers 3 and 4 were more skeptical. Teachers 1 and 2 believed that the use of digital tools can increase the students' motivation of ESL learning. They explained that they can more easily create varied lessons by using digital tools, and that it is easier to find interesting teaching material suited and adapted to the students' interests when using digital tools. According to Ryan and Deci (2000), intrinsic motivation results in high-quality learning and creativity. Brevik (2019) demonstrates how interest and L2 proficiency are intertwined. By using digital tools, Teachers 1 and 2 are facilitating the opportunity for the students to move into an affinity space, meaning a place where people interact with each other through shared practices or a common endeavor. In Brevik and Holm (2022), affinity

space is linked to the use of digital tools. According to Brevik and Holm (2022), students use English in the classroom more frequently and confidently when finding themselves in an affinity space.

In spite of being less positive, Teachers 3 and 4 listed several benefits of the use of digital tools to promote ESL learning. Teachers 3 and 4 reported that they primarily use digital tools to visualize, which is in line with a previous study conducted by Howell (2018). According to Howell (2018), technology can be thought of as a tool used for scaffolding that mediated learning. The students reported that digital tools helped them scaffold their argumentative writing by visualizing their arguments and understand the organization of argument. Further, Teachers 3 and 4 noted that digital tools can facilitate interaction, which is an important concept in sociocultural theory. Furthermore, they stated that digital tools can be used to acquire knowledge. Moreover, they claimed that the use of digital tools is beneficial when creating texts as it is easier to structure and adjust the text along the way.

Although Teachers 3 and 4 noted several benefits of using digital tools to promote ESL learning, they also listed a number of challenges. Teachers 3 and 4 explained that distractions come with the use of digital tools. They noted that their students receive messages and notifications when using them. According to Teacher 3, teachers are responsible for creating a space for learning, without any distractions nor disruptions. Thus, Teachers 3 and 4 reported that they facilitate analog texts more than digital texts in the English subject and they believed that digital tools must be used cautiously. Ørevik (2020) argued that tailored textbooks are more readily understandable to most students than authentic texts written for non-educational purposes. Teachers 3 and 4 emphasized that digital tools should be used with caution. Teacher 3 noted that “digital tools are just tools, and nothing else but that”. He argued that learning does not happen in the digital itself. Rather, digital tools must be used appropriately to achieve learning outcomes. Teacher 3 shares similar beliefs as Blikstad-Balas (2019), as she argues that access to technology does not contribute to learning. She points out that when technology contributes to learning, it is due the teaching and pedagogy that underlines it, and not due to the digital tools.

Several of the questions in the interview guide were based on LK20. LK20 divides digital skills in English into five subsections: interaction, critical assessment of information, to acquire



knowledge, language development and creation of digital texts. The teachers were asked about their beliefs and practices concerning the use of digital tools and the five subsections listed above.

All the four teachers believed that digital tools could support interaction and facilitate ESL learning. They all noted that there are many possibilities within interaction that come with the use of digital tools. They emphasized that the use of digital tools makes it easier for students to collaborate and interact authentically. Thus, the teachers' beliefs are in line with previous studies (Blume, 2020; Brevik & Holm, 2022; Brevik, 2019; Sundqvist & Sylvén, 2012).

Further, the four teachers emphasized the importance of source criticism. They noted that students must learn to identify reliable information, in addition to use sources appropriately when writing texts. Teacher 1 emphasized that source criticism is an important life skill. Teacher 2 noted that the technological development has changed how we teach and learn. Before, students were given particular books and texts, whereas now, they have access to any information whenever they want. Thus, information is just a keystroke away. Teacher 2 argues that it is crucial that students learn about source criticism due to the fact that they are surrounded by information at all times. Blikstad-Balas (2019) also emphasizes that developing students' ability to assess sources is one of the most important things they learn at school due to the number of digital texts they encounter.

Learning to learn is an important aim in LK20, and all the interviewed teachers noted the importance of teaching their students how to acquire knowledge. Teacher 4 argued that teachers have a great responsibility for teaching their students about learning strategies. In upper secondary school, the students must learn to acquire knowledge in order to be prepared for further studies and education. He argued that students in upper secondary school are evolving and must be given the opportunity to explore which methods and learning strategies that are best suited to them. Teacher 1 stated that learning to learn is an important life skill.

Two patterns emerged when the teachers were asked about how digital tools can facilitate language development. Teacher 1 noted the possibilities of using digital tools to facilitate language learning. Teacher 2 also held positive beliefs. However, he argued that it is irrelevant whether texts are analog or digital. Teachers 3 and 4 also held positive beliefs but noted that they prefer analog texts over digital texts in order to create a closed universe

without the distractions that come with the use of digital tools. However, Teachers 3 and 4 held positive beliefs concerning using digital tools to facilitate authentic interaction, and thus, facilitate language development in terms of vocabulary and oral skills by playing digital games.

The four teachers believed that there are many benefits of using digital tools to create digital texts. First, they noted that the students can easily make changes and structure the text along the way. Also, they were positive that the students have access to spelling programs and online dictionaries.

### 5.3 Learners' beliefs concerning the use of digital tools in ESL learning

One of the research questions aimed to explore the students' beliefs about the use of digital tools in ESL learning. Studying learners' beliefs is important as it can enrich our understanding of language development (Dörnyei, 2005). Murphey and Falout (2012) argue that the students' sense of ownership of their education can be increased by eliciting their voices, and it can promote students' self-directed development as more proactive, autonomous, interactive, and critically thinking students and citizens.

On the whole, the students held positive beliefs concerning the use of digital tools in ESL learning. 88% of the respondents agreed that the use of digital tools makes it easier to learn English, 11% were neutral, and 1% disagreed. The results clearly indicate that the students believe that digital tools are useful when learning English.

Further, 88.4% of the students reported that they learn English through social media. Thus, the students' beliefs about the role of social media and EE in the L2 development correspond with findings from previous studies. Brevik (2019) studied learners' experiences and beliefs concerning their own English language development. The learners mainly explained their English proficiency by the role of interest and their use of English technology outside school. Brevik (2019) characterizes the social media user as someone who produces and consumes information in English through social media. According to Li (2020), the use of social media and social networks can enable students to improve literacies and language skills as they facilitate possibilities and opportunities for learners to engage in interactions to experience the language.

Additionally, 71% of the students reported that they learn English by playing digital games. Sundqvist and Sylvén (2012) found out that students who participate in an EE activity such as playing video games outperform students who do not play video games.

Furthermore, there seems to be a link between the use of digital tools and the students' motivation to learn English. 56% answered that they agreed that the use of digital tools increases their motivation for ESL learning, 34% were neutral, and 10% disagreed. According to Brevik and Holm (2022), the students' use of English outside school is primarily linked to social media and online gaming. When teachers design activities similar to what the students do in their spare time, and thus facilitate the opportunity for the students to move into an affinity space, the students use English in the classroom more frequently and more confidently. When teachers use digital tools to facilitate for students to move into an affinity space, the students also experience motivation to learn, which is reflected in the students' responses. According to Li (2020), the use of digital tools in classrooms benefits learning. Moreover, Li (2020) argues that technology can increase learner motivation and engagement.

The students held positive beliefs that the use of digital tools can promote several language benefits, including vocabulary development, reading comprehension, and pronunciation. While 86% reported that the use of digital tools has contributed to their English vocabulary, 76% reported that the use of digital tools has contributed to their reading comprehension, and 71% reported that the use of digital tools has contributed to their English pronunciation. Thus, the students held positive beliefs concerning the use of digital tools and their English language development.

When the students were asked about their beliefs concerning the benefits and challenges of the use of digital tools in ESL learning, the overall findings were positive. Although the students listed a number of challenges, they listed far more benefits. The most frequent responses regarding benefits of digital tools in ESL learning were variation, access to information and increased motivation. First, the findings suggest that the students appreciate varied lessons and teaching methods, which the use of digital tools provide. Second, the students have access to information anywhere and anytime. They can find out approximately anything they want whenever they want. Thus, internet resources and digital tools can scaffold students to find information independently. Haas (1996) argues that the

use of digital tools is a new psychological tool which can mediate interaction between human and the environment around them and be used for scaffolding. Third, the students reported that the use of digital tools increases their motivation for ESL learning, which is in line with Li (2020).

The most frequent response concerning the challenges of the use of digital tools in ESL learning was distractions, followed by the amount of screen time and fake news. The students reported that when using digital tools for learning purposes, it is tempting to use it for other purposes instead. They reported that they receive messages and notifications which can impair the students' concentration and focus. In addition, some students reported that they have access to anything online, and that they struggle to use their computers and smartphones to the right purpose. Some students were also concerned about their amount of screen time and reported that they spend hours a day in front of a screen both at school and outside school. Some students listed fake news as a challenge in terms of using digital tools. They reported that source criticism is crucial. However, some of them reported that they are not confident choosing reliable sources. Both Blikstad-Balas (2019) and Ørevik (2020) note that there are challenges concerning the use of technologies when teaching and learning.

#### 5.4 Teachers' beliefs about teacher and learner digital competence

Although several definitions of digital competence have been presented in chapter 2, the current section and section 5.5 will use LK20's definition when discussing the findings in relation to the theory.

The four teachers highlighted the importance of teachers being able to use digital tools and to implement and exploit digital tools when teaching in order to facilitate the pupils' language learning. In addition to be able to use digital tools, Teacher 3 also pointed out the importance of understanding how the digital sphere is structured and put together. The four teachers also emphasized source criticism as an important part of digital competence for teachers. English teachers must be able to assess sources and teach their students how to be critical when they use them.

LK20 clearly emphasizes the importance of teachers being digitally competent. According to the framework for teachers' professional digital competence (2017), "it is more important than ever that children and young people are not merely passive consumers of products, services and information but also critical users and active producers of content themselves". Further, the framework outlines that teachers must stimulate the pupils to be able to identify credible information, quote sources, protect their intellectual property, apply ethical values and attitudes in communications and interaction, produce their own digital resources, and develop a reflective relationship concerning their own and others' actions, cultural differences, values and rights.

Although the teachers listed digital competence and source criticism, none of them included ethical values and attitudes, produce their own digital resources, and develop a reflective relationship concerning their own and others' actions, cultural differences, values and right. Thus, the teachers' view differs from the framework to come extent as they have only included a few things.

The four teachers had a similar view on what digital competence for learners means as for what digital competence for teachers means. The teachers highlighted the importance of learners being able to use digital tools. Teacher 3 also noted the importance of learners not solely being able to use digital tools, but to understand how they are structured and set up. He argued that teachers must teach the students to understand the current world they are living in affected by technologies. Additionally, the teachers listed source criticism as part of digital competence for learners.

As outlined in chapter 2, the Framework for teachers' professional digital competence (2017) emphasizes that teacher must foster pupils to identify credible information, quote sources, protect their intellectual property, apply ethical values and attitudes in communication and interaction, produce their own digital resources and develop a reflective relation to their own and others' actions, cultural differences, values and rights. Thus, both the ability to use digital sources and source criticism are emphasized in the Framework for teachers' professional digital competence (2017). However, the teachers' view differs to some extent as they do not include apply ethical values and attitudes in communication and interaction, produce their own digital resources and develop a reflective relation to their own and others' actions, cultural differences, values and rights.

## 5.5 Learners' beliefs about teacher and learner digital competence

As outlined in the findings, many students did not reply concerning their beliefs about teacher and learner competence. As noted, the teachers feared that many students may not have awareness about the term digital competence, which may seem to be reflected in the low number of responses concerning these questions. Yet, the students' responses concerning their beliefs about what digital competence for teachers means, were divided into three categories: 1) being able to use digital tools, 2) source criticism, and 3) facilitate and adapt the teaching. First and foremost, the students believed that the concept digital competence for teachers evolves around the ability and set of skills required to use digital tools. Further, some students believed that digital competence is about source criticism. Furthermore, a lower number of students believed that digital competence for teachers is about them facilitating and adapting the lessons to the students.

The students' beliefs concerning learner digital competence evolves around two concepts. First, the majority of the students answered that digital competence for learners means the ability and set of skills to use digital tools. 61% of the responses fit into that category. Second, a minority of the students answered that digital competence for learners means that they are critical to sources. 13% of the responses fit into that category.

As outlined in the theory section, DigComp (2016) aims that everyone has the set of competences needed for personal development, social inclusion, active citizenship and employment, including digital competence. The LK20 English curriculum focuses on two main concepts in the term digital competence in the English subject. First, one area circles around the ability to use digital tools and channel communication constructively. Second, the other area focuses on the importance of source criticism. The fact that many students did not answer these particular questions must be addressed as it indicates that a number of students do not have awareness amongst these terms. Although the majority of the students replied either "being able to use digital tools" or "source criticism" concerning the term digital competence, and the minority of students included both concepts, the learners' views are in line with LK20. However, the learners' views would be in line with LK20 to a greater extent if several included both concepts, and obviously if several students answered these questions.

Nevertheless, The Framework for Digital Competence (2017) outlines five sub competences of digital competence, including identifying credible information, quoting sources, protecting intellectual property, applying ethical values and attitudes in communication and interaction, producing own digital resources, and developing a reflective relationship in relation to their own and others' actions, cultural differences, values and rights. The students only mentioned the two first sub competences listed above, and thus, multiple of the sub competences have not been mentioned. The students' beliefs about digital competence does not correspond with the framework.

Additionally, there seems to be a correspondence between what the concept digital competence means for both teachers and students. They share similar beliefs concerning the concept as both the teachers and the students primarily mentioned technical competence and source criticism.

The current thesis aimed to explore the use of digital tools from both teachers' and learners' perspectives. Both teachers and students held positive beliefs towards the use of digital tools in ESL learning. As noted, the teachers' and learners' beliefs are mainly similar, which is extremely beneficial in a teaching situation. As outlined in chapter 2, Peacock (1998) addresses the link between teacher and learner beliefs and emphasizes that a potential discrepancy between learner and teacher beliefs impact the learners' language progress negatively. Further, Murphey and Falout (2021) argue that students' willingness to learn increases when their voices are heard, which is easier to implement when teachers' beliefs and learners' beliefs match. Furthermore, Nunan (1995) notes that students should be involved in making choices among various options, which is easier when there is a correspondence between teacher and learner beliefs.

## 5.6 Reported practices

As discussed in section 5.2, two patterns emerged in terms of the teachers' beliefs concerning the use of digital tools to promote ESL learning. While Teachers 1 and 2 held exclusively positive beliefs, Teachers 3 and 4 were more skeptical. Clarke and Peterson (1986) in Barnard and Burns (2012), note that "it has long been recognized that what

teachers do in practice is largely influenced by their beliefs and values” (p. 30). The teachers’ beliefs are reflected in their reported practices. The four teachers reported that they use digital tools in more or less every English lesson. Computers, Teams and OneNote were reported as the most frequently used digital tools.

Teachers 1 and 2 exclusively positive beliefs concerning the use of digital tools to promote ESL learning are reflected in their reported practices. They reported that they use digital tools, such as internet resources, films, and videos as primary sources in the English subject. They also reported that they use digital tools such as PowerPoint presentations, Kahoot, Padlet, Mentimeter and digital games less frequently to create variation. They have access to an online textbook. However, the textbook is used as a secondary source. According to Richards (2017), authentic materials, meaning materials that were not created for pedagogical purposes, are preferred to created materials due to the fact that they contain authentic language and reflect real-world uses of language. Teachers 1 and 2 provide their students with authentic material through the use of digital tools. Further, Teacher 1 reported that she uses Padlet to create a space where the students can interact with each other. Padlet opens up for discussion and interaction. According to Teacher 1, the activity requires critical thinking, and argumentative thinking and writing. Thus, the teacher is creating an affinity space where the students can interact authentically. Brevik and Holm (2022) found out that such activities result in students using English in the classroom more frequently and more confidently. Furthermore, interaction is important in sociocultural theory, and Vygotsky (1978) notes that social interaction plays a critical role in children’s learning.

Teachers 3 and 4 also held positive beliefs concerning the use of digital tools to promote ESL learning. However, they were more skeptical, which is also reflected in their reported practices. Teachers 3 and 4 reported that they use a printed textbook as the primary source in the English subject. Ørevik (2020) argues that tailored textbooks are more readily understandable to most students than authentic texts written for non-educational purposes. Further, Teachers 3 and 4 reported that they use digital tools, mainly PowerPoint, primarily to visualize. Howell (2018) notes that the use of digital tools is helpful in terms of visualization. Further, Teachers 3 and 4 reported that they use VR headsets and digital



games to facilitate interaction. They reported that they had divided the students into small groups where they had to interact and cooperate to solve tasks. They reported that the students enjoyed this activity and that they were willing to speak English when interacting in this activity. Thus, Teachers 3 and 4 had facilitated the opportunity for the students to move into an affinity space. A number of previous studies have found a positive correlation between playing digital games and ESL development (Blume, 2020; Estensen, 2021; Sundqvist & Sylvén, 2012). Moreover, Brevik (2019) point out that interests and L2 proficiency are intertwined.

Although the teachers have different beliefs and approaches to the use of digital tools to promote ESL learning, they all reported that they use digital tools when teaching English. Teachers 3 and 4 reported that they use digital tools to create a space for the students to interact with each other. This is central within sociocultural perspectives on learning. Vygotsky (1978) notes that social interaction plays a critical role in children's learning. Additionally, collaborative learning is important in sociocultural theory. Haas (1996) extended Vygotsky's ide and argues that the use of digital tools is a new psychological tool which can mediate interaction between human and the environment around them. Playing digital games, requires the students to interact and collaborate which is in line with Vygotsky (1978) and Haas (1996). Moreover, the students can be scaffolded when playing digital games. According to Edusei (2018), video games attempt to adjust the experience of playing video games to the player's level.

## 5.7 Limitations

The main limitation of the study is the low number of participants. Four Vg1 English teachers have been interviewed, and the questionnaire was distributed to 121 Vg1 students. The findings cannot be generalized to represent all teachers nor students in the Norwegian context. Further, there are issues concerning the methodology of the present study that may threaten the validity and reliability of the research (Kalaja et al., 2018). A mixed method approach has been conducted, consisting of both interviews and a questionnaire. There is a chance that the students have interpreted the questions differently. Further, the questionnaire did not include whether the participants were male or female. Although

considered a limitation, the participants' gender was excluded as the study aimed to investigate students' beliefs and experiences in general, and not on the basis of their gender. Furthermore, interviews may reduce the findings due to the fact that the interviewer is left to interpret the interviewee's statements (Brinkmann & Kvale, 2015). The interviews were conducted in Norwegian and later translated to English. Although the interviewees' statements have been translated as directly as possible, there is a chance that the translations affect the interviewees' wording. Due to the possibility of interpreting the interviewees' responses differently from their intended meaning, the study would have benefitted from a follow-up interview. Nevertheless, by including both teachers' and learners' beliefs and perspectives about the use of digital tools in ESL learning, their responses may be compared and discussed, which can strengthen the validity of the present study (Dörnyei, 2007).

## 5.8 Implications for teaching

This section aims to outline the main teaching implications proposed by the findings of the current study. According to the findings, both teachers and students held positive beliefs concerning the use of digital tools in ESL learning. The students reported that the use of digital tools increases their motivation to learn English. Ryan and Deci (2000) argue that intrinsic motivation results in high-quality learning and creativity. Thus, it seems crucial to adapt the English subject to the students' interests in order to facilitate an affinity space and authenticity. In order to do so, teachers need to know their students and attempt to provide authentic teaching material suited to their interests. Teachers have endless possibilities when it comes to finding teaching material due to the fact that they can use anything as long as it is in line with the curriculum.

Further, the students reported that they learn English through playing digital games and using social media, which is also in line with previous studies (Li, 2020; Brevik, 2019). While the teachers reported that they use digital games in the English subject to facilitate interaction, they did not report that they use social media to facilitate learning in the English subject. Rather, using digital tools was considered a challenge due to the distractions that may come with social media. It seems that many teachers have a negative view on the use of social media in school and perhaps want to avoid that at any costs. Due to the fact that

students report that they learn English through social media, and the studies supporting this (Li, 2020; Brevik, 2019, Estensen, 2021), social media could be integrated to the teaching to a greater extent. The use of social media can promote interaction and collaboration, which are important concepts in sociocultural theory.

## 6.0 Conclusion

### 6.1 Main findings

The current thesis aimed to explore teachers' and learners' beliefs concerning the use of digital tools and ESL learning, in addition to investigating their reported practices in two Norwegian upper secondary schools. A mixed method research design, including four teacher interviews and a student questionnaire distributed to 121 students, was employed to answer the following research questions:

- What beliefs do Vg1 teachers have about the use of digital tools to promote ESL learning?
- What beliefs do the teachers have about teacher and learner digital competence?
- What beliefs do Vg1 pupils have about the use of digital tools in ESL learning?
- What beliefs do the learners have about teacher and learner digital competence?
- What digital tools do Vg1 ESL teachers report that they use to promote English learning and why?

First, the four teachers held positive beliefs concerning the use of digital tools to promote ESL learning. However, two patterns emerged. While Teachers 1 and 2 held exclusively positive beliefs, Teachers 3 and 4 were more skeptical. Teachers 1 and 2 primarily focused on the endless numbers of opportunities that come with the use of digital tools. They also noted that it makes it easier to find teaching material suited to the students' level and interests, which can lead to motivation. Although Teachers 3 and 4 listed a number of benefits of using digital tools to promote ESL learning, including possibilities for interaction, acquisition of knowledge, and creating texts, they also listed some challenges. The main challenge was the distractions that come with the use of digital tools. They also reported that they prefer analog texts more than digital texts, mainly to create a closed universe without the distractions that come with the use of digital tools.

In line with the teachers' beliefs, the students also held positive beliefs about the use of digital tools in ESL learning. Further, they reported that they believe that digital tools can promote several language benefits, including vocabulary development, reading comprehension, and pronunciation. Moreover, 55% of the students reported that the use of

digital tools increases their motivation to learn English. However, the most frequently reported challenges were distractions and the amount of screen time.

Both teachers' beliefs and students' beliefs about teacher and learner digital competence were investigated. Their responses were similar. The teachers and the students pointed out that the concept digital competence primarily include the ability and the set of skills required to use digital tools and source criticism for both teachers and learners, which is in line with LK20 and the framework for teachers' professional digital competence (2017) to some extent.

The teachers' reported practices reflect their beliefs. The two patterns that emerged within the teachers' beliefs are reflected within their reported practices. On the one hand, Teachers 1 and 2 reported that they have access to an online textbook. However, their primary sources are obtained from digital tools. They reported that they primarily use internet resources, videos, and films as teaching material in the English subject. They stated that they mainly use these channels as they believe that it easier to find interesting and adapted material, which can increase the students' motivation for ESL learning. On the other hand, Teachers 3 and 4 reported that they have a physical textbook, which is the primary source. They reported that they use a physical textbook to create a closed universe without distractions. Teachers 3 and 4 reported that they use digital tools primarily to visualize when teaching. Additionally, they reported that they use digital games and VR headset to facilitate authentic interaction between the students.

## 6.2 Contributions and implications for further research

The present thesis aimed to contribute within the field of L2 English to gain a better understanding of teachers' and students' beliefs concerning the use of digital tools in ESL learning. The study has contributed towards this growing field by exploring it from both the teachers' and the pupils' perspectives. In addition, the present study has tried to investigate how teachers' beliefs are reflected in their reported practices. Furthermore, it has aimed to get an overview of which digital tools the teachers report they use and why. Finally, the current study has made a contribution by exploring how both teachers and students interpret the concept *digital competence* in the LK20 English subject curriculum. LK20 was

just recently implemented, and the present thesis sought to contribute to gain insight in how teachers and students interpret this important concept.

Further studies are recommended in order to gain more knowledge about this important topic of digital competence, in addition to get an insight into how both teachers and students interpret key digital concepts in LK20. Further studies could include a larger sample size when collecting data. Additionally, further studies could investigate teachers' and learners' beliefs concerning the use of digital tools in ESL learning by including both teacher and student interviews, in addition to including a questionnaire for both teachers and students, in order to gain in-depth insights from both perspectives. Moreover, further studies could distinguish between boys and girls when collecting data in order to explore gender differences concerning students' beliefs about the use of digital tools in ESL learning. Finally, further studies could investigate other key concepts in LK20 in order to gain knowledge about how teachers and learners interpret key concepts in the curriculum.

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## 8.0 Appendices

### Appendix A: NSD Approval letter



## Vurdering

### Referansenummer

886581

### Prosjekttittel

Hvordan digitale verktøy kan fremme språklæring i engelsk på vg1

### Behandlingsansvarlig institusjon

Universitetet i Stavanger / Fakultet for utdanningsvitenskap og humaniora / Institutt for kultur- og språkvitenskap

### Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

Torill Irene Hestetretet , torill.hestetreet@uis.no, tlf: 51831358

### Type prosjekt

Studentprosjekt, masterstudium

### Kontaktinformasjon, student

Marte Berg Høyvik, 245139@uis.no, tlf: 94142903

### Prosjektperiode

24.01.2022 - 31.05.2022

### Vurdering (1)

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#### 31.01.2022 - Vurdert

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet 31.01.2022 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

#### TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 31.05.2022

#### LOVLIG GRUNNLAG FOR UTVALG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering

er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake.

For alminnelige personopplysninger vil lovlig grunnlag for behandlingen være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 a.

#### PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at foresatte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

#### DE REGISTRERTES RETTIGHETER

NSD vurderer at informasjonen om behandlingen som de registrerte og deres foresatte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18) og dataportabilitet (art. 20).

Vi minner om at hvis en registrert/foresatt tar kontakt om sine/barnets rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

#### FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

#### MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde:

<https://www.nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema>. Du må vente på svar fra NSD før endringen gjennomføres.

#### OPPFØLGING AV PROSJEKTET

NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Kontaktperson hos NSD: Olav Rosness, rådgiver.

## **Appendix B: Teacher information letter and consent form for the interviews**

### **Vil du delta i forskningsprosjektet**

#### ***Hvordan kan digitale verktøy fremme språklæring i engelsk?***

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å undersøke hvordan digitale verktøy brukes til å fremme språklæring. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

#### **Formål**

Formålet med denne masteroppgaven er å få innsikt i læreres tanker om bruken av digitale verktøy til å fremme språklæring i vg1 engelskfaget, samt undersøke læreres praksis knyttet til dette.

Problemstillingene i prosjektet er:

- Hvilke tanker har vg1 engelsklærere om bruken av digitale verktøy for å fremme språklæring?
- Hvilke tanker har vg1 elever om bruken av digitale verktøy for å fremme språklæring?
- Hvilke digitale verktøy rapporterer vg1 lærere at de bruker for å fremme engelsklæring og hvorfor?
- Hvilke tanker har lærere om begrepet «digital kompetanse» for lærere og elever?
- Hvilke tanker har elever om begrepet «digital kompetanse» for lærere og elever?

#### **Hvem er ansvarlig for forskningsprosjektet?**

*Universitet i Stavanger* er ansvarlig for prosjektet.

#### **Hvorfor får du spørsmål om å delta?**

For å gjennomføre prosjektet mitt, ønsker jeg å intervju fire vg1 engelsklærere fra to ulike skoler.

#### **Hva innebærer det for deg å delta?**

Hvis du velger å delta, innebærer det at du stiller til et intervju. Det vil ta deg omtrent én time. Intervjuet dreier seg om dine tanker og praksis knyttet til bruken av digitale verktøy for å fremme språklæring i vg1 engelsk. Jeg vil også be deg om å oppgi noen opplysninger om deg i intervjuet. Det vil være opplysninger om stilling, utdanning og alder. Jeg kommer til å ta lydopptak av intervjuet, som jeg vil bruke til masteroppgaven min.

#### **Det er frivillig å delta**

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

#### **Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger**

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket.

Student Marte Høyvik og veileder Torill Irene Hestetraet vil ha tilgang til dine opplysninger. Ingen uvedkommende vil under noen omstendigheter få tilgang til dine personopplysninger. Jeg vil iverksette tiltak for å sikre dette. Navnet ditt og kontaktopplysningene dine vil jeg erstatte med en kode som lagres på egen navneliste adskilt fra øvrige data.

### **Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?**

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er mai/juni 2022. Lydopptaket vil slettes ved prosjektslutt.

### **Dine rettigheter**

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke personopplysninger som er registrert om deg, og å få utlevert en kopi av opplysningene,
- å få rettet personopplysninger om deg,
- å få slettet personopplysninger om deg, og
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger.

### **Hva gir oss rett til å behandle personopplysninger om deg?**

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Universitetet i Stavanger har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

### **Hvor kan jeg finne ut mer?**

Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med:

- *Universitetet i Stavanger* ved Torill Irene Hestetraet. Hun kan kontaktes på telefon: 51831358.
- Vårt personvernombud: [personvernombud@uis.no](mailto:personvernombud@uis.no)

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost ([personverntjenester@nsd.no](mailto:personverntjenester@nsd.no)) eller på telefon: 55 58 21 17.

Med vennlig hilsen

*Torill Irene Hestetraet*  
(Forsker/veileder)

*Marte Berg Høyvik*

## Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet «Hvordan kan digitale verktøy fremme språklæring i engelsk?», og har fått anledning til å stille spørsmål. Jeg samtykker til:

- å delta i intervju

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet

-----  
(Signert av prosjektdeltaker, dato)



## Appendix C: Student information letter and consent form

### Vil du delta i forskningsprosjektet

#### *Hvordan kan digitale verktøy fremme språklæring i engelsk?*

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å undersøke hvordan digitale verktøy brukes til å fremme språklæring. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

#### **Formål**

Formålet med denne masteroppgaven er å få innsikt i læreres og elevers tanker om bruken av digitale verktøy til å fremme språklæring i vg1 engelskfaget, samt undersøke praksiser knyttet til dette.

Problemstillingene i prosjektet er:

- Hvilke tanker har vg1 engelsklærere om bruken av digitale verktøy til å fremme språklæring?
- Hvilke tanker har vg1 elever om bruken av digitale verktøy til å fremme språklæring?
- Hvilke digitale verktøy rapporterer vg1 lærere at de bruker for å fremme engelsklæring og hvorfor?

#### **Hvem er ansvarlig for forskningsprosjektet?**

Universitetet i Stavanger er ansvarlig for prosjektet.

#### **Hvorfor får du spørsmål om å delta?**

For å gjennomføre prosjektet, ønsker jeg å samle data fra fire vg1 engelskklasser.

#### **Hva innebærer det for deg å delta?**

Hvis du velger å delta i prosjektet, innebærer det at du fyller ut et spørreskjema. Det vil ta deg omtrent 20 minutter. Spørreskjemaet dreier seg om dine tanker om digitale verktøy knyttet til læring i engelskfaget, samt praksiser i din klasse. Dine svar fra spørreskjemaet blir registrert elektronisk.

#### **Det er frivillig å delta**

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg. Det vil ikke påvirke ditt forhold til skolen eller læreren din.

#### **Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger**

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Du svarer elektronisk og anonymt på spørreskjemaet SurveyXact.

### **Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?**

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er i mai 2022.

### **Dine rettigheter**

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke personopplysninger som er registrert om deg, og å få utlevert en kopi av opplysningene,
- å få rettet personopplysninger om deg,
- å få slettet personopplysninger om deg, og
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger.

### **Hva gir oss rett til å behandle personopplysninger om deg?**

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Universitetet i Stavanger har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

### **Hvor kan jeg finne ut mer?**

Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med:

- Universitetet i Stavanger ved Torill Irene Hestetretæ. Hun kan kontaktes på telefon: 51831358.
- Vårt personvernombud: [personvernombud@uis.no](mailto:personvernombud@uis.no)

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost ([personverntjenester@nsd.no](mailto:personverntjenester@nsd.no)) eller på telefon: 55 58 21 17.

Med vennlig hilsen

*Torill Irene Hestetretæ*  
(Forsker/veileder)

*Marte Berg Høyvik*

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## **Samtykkeerklæring**

Jeg har mottatt og forstått informasjon om prosjektet [*sett inn tittel*], og har fått anledning til å stille spørsmål. Jeg samtykker til:

- å delta i spørreskjema

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet

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## Appendix D: Teacher Interview Guide

### Introduction

1. How many years have you taught English?  
Hvor mange år har du undervist i engelsk?
2. What are your general teaching qualifications?  
Hva er dine generelle kvalifikasjoner som lærer?
3. What are your qualifications in English?  
Hva er kvalifikasjonene dine i engelsk? (studiepoeng)
4. How old are you?  
Hvor gammel er du?

### Beliefs

5. What are your beliefs about using digital tools to promote ESL learning?  
Hva er dine tanker om å bruke digitale verktøy for å fremme læring i engelsk?
6. Do you think that the use of digital tools is helpful in terms of your students' motivation for learning English?  
Tror du at bruken av digitale verktøy fremmer elevenes motivasjon for å lære engelsk?
7. Do you think the use of digital tools lets your students be more creative when learning English?  
Tror du at bruken av digitale verktøy tillater dine elever til å bli mer kreative når de lærer engelsk?
8. What are some challenges of teaching digital skills in your classroom in terms of language learning?  
Hva er noen utfordringer rundt læring av digitale ferdigheter i ditt klasserom når det gjelder språklæring?
9. The technology is constantly developing. I assume that many of your pupils keep up with the development. How is it to use digital tools and teaching your pupils about digital tools?

Teknologien er stadig i endring. Jeg antar at mange av studentene dine er oppdatert på teknologien. Hvordan er det å bruke digitale verktøy i undervisningen når elevene er såpass oppdaterte som de er?

- 10.** Do you think your workplace should arrange more training in the use of digital tools to teach the English subject? If so, how?

Synes du at din arbeidsplass burde tilrettelagt for bedre opplæring i pedagogisk bruk av digitale verktøy for lærere? I så fall, på hvilken måte?

- 11.** How do you believe your pupils develop their digital skills in English?

Hvordan tror du at elevene dine utvikler sine digitale ferdigheter i engelsk?

- 12.** How has being an English teacher changed over the years in relation to teaching digital skills? For the better? For the worse?

Hvordan har din jobb som engelsklærer endret seg i forhold til å bruke digitale verktøy for å fremme språklæring? Til det bedre? Til det verre?

- 13.** What are your beliefs concerning a printed textbook vs other sources when teaching?

Hva tenker du angående fysisk lærebok vs. andre kilder i undervisningen?

## **Practices**

- 14.** How often do you use digital tools when teaching English?

Hvor ofte bruker du digitale verktøy når du underviser i engelsk?

- 15.** Which digital tools do you use when teaching English?

Hvilke digitale verktøy bruker du når du underviser i engelsk?

Why do you use the digital tools that you are using?

Hvorfor bruker du de digitale verktøyene du bruker?

- 16.** How do you use digital tools when teaching English?

Hvordan bruker du digitale verktøy når du underviser i engelsk?

- 17.** Do you vary what kinds of digital tools you use when teaching or do you usually use the same tools over again?

Varierer du hvilke digitale verktøy du bruker når du underviser i engelsk?

- 18.** Do you use a printed textbook when teaching English?

Bruker du fysisk tekstbok når du underviser i engelsk?

## Interaction

**19.** How do you believe digital tools can support interaction in the English subject? Pupil – pupil? Pupil – teacher? Pupil – speakers from other countries? Pupil – digital tools.

Hvordan tror du digitale verktøy kan støtte samspill i engelskfaget? Elev – elev? Elev – lærer? Elev – folk fra andre land? Elev – digitale verktøy?

**20.** How do you use digital tools to support interaction in the English subject?

- Pupil – pupil interaction
- Pupil – teacher interaction
- Pupil – speakers from other countries
- Pupil – digital tools

Hvordan bruker du digitale verktøy for å støtte samspill i engelskfaget?

Elev – elev, elev – lærer, elev – folk fra andre land, og elev – digitale verktøy.

**21.** What digital tools do you use to support interaction?

Hvilke digitale verktøy bruker du for å støtte samspill?

## Critical assessment of information

**22.** What do you think are the challenges concerning digital tools and source criticism in the English subject?

Hva synes du er utfordringene når det gjelder digitale verktøy og kildekritikk i engelskfaget?

**23.** How do you teach your pupils to critically assess information in the English subject?

Hvordan lærer du elevene dine å vurdere informasjon på en kritisk måte i engelskfaget?

## To acquire knowledge

**24.** What is your opinion about the importance of teachers teaching their pupils to acquire knowledge – to learn to learn (LK20)?

Hva mener du om viktigheten av at lærere lærer elevene å tilegne seg kunnskap? «Å lære og lære» (LK20).

**25.** How do you teach your pupils to acquire knowledge?

Hvordan lærer du elevene dine å tilegne seg kunnskap?

**26.** What digital tools and websites do you use to teach your pupils to acquire knowledge?

Hvilke digitale verktøy og nettsider bruker du for å lære elevene dine å tilegne seg kunnskap?

### **To develop language skills**

**27.** How do you believe that the use of digital tools can promote language development in L2 English classrooms?

- Reading comprehension, writing skills, vocabulary, pronunciation etc.

Hvordan kan bruken av digitale verktøy promotere engelsk språkutvikling?

- Leseforståelse, skriveferdigheter, vokabular, uttalelse osv.

**28.** How do you use digital tools to promote language learning?

Hvordan bruker du digitale verktøy for å promotere språklæring?

### **Creation of digital texts**

**29.** How do you believe that digital tools can be used when creating digital texts and multimodal texts?

Hvordan synes du at digitale verktøy kan brukes til å skrive digitale tekster og sammensatte tekster?

**30.** How do you teach your pupils to write digital texts in the English subject?

Hvordan lærer du dine elever å skrive digitale tekster i engelskfaget?

**31.** Which digital tools do your pupils use when creating digital texts?

Hvilke digitale verktøy bruker dine elever når de skriver digitale tekster?

## Appendix E: Student questionnaire

### Spørreskjema: digitale verktøy og språklæring

Dette er en undersøkelse om hvordan digitale verktøy kan fremme språklæring i engelskfaget. Undersøkelsen tar sikte på å finne ut hva du som elev tenker rundt dette. Digitale verktøy er teknisk utstyr og programvare som er tilgjengelig ved bruk av datateknologi. Eksempler på teknisk utstyr er internett, pc, lesebrett, mobiltelefon og nettbrett. Eksempler på programvarer er database, presentasjonsprogram, rettskrivingsprogrammer og World Wide Web (www).

Jeg setter stor pris på at du leser påstandene nøye og at du svarer så ærlig som du klarer. Det vil være til stor hjelp for min oppgave. Alle spørsmålene dreier seg om det engelske språket. Besvarelsen din forblir anonym og vil oppbevares helt konfidensielt. Informasjon som kan identifisere deg som deltaker vil ikke bli avslørt under noen omstendigheter. Første delen av undersøkelsen består av påstander hvor du skal svare i hvilken grad du er enig eller uenig. Den neste delen består av påstander som handler om hyppighet. Der skal du svare på hvor ofte påstandene forekommer. Den siste delen skal du skrive fritt.

På forhånd, tusen takk for din deltakelse!

	Sterkt enig	Enig	Nøytral	Uenig	Sterkt uenig
Jeg har tilgang til de digitale verktøyene jeg trenger for å lære engelsk på skolen.					
Jeg har tilgang til de digitale verktøyene jeg trenger for å lære engelsk hjemme.					
Digitale verktøy er nyttige når jeg skal lære engelsk.					
Digitale verktøy gjør det lettere å lære engelsk.					

Digitale verktøy gjør det gøyere å lære engelsk.					
Digitale verktøy bidrar til at undervisningen i engelsk blir mer variert.					
Bruken av digitale verktøy fremmer kreativiteten min i engelskfaget.					
Engelsk ville vært mer utfordrende dersom vi ikke brukte digitale verktøy.					
Bruken av digitale verktøy i engelsktimene øker motivasjonen min for å lære engelsk.					
Digitale ordbøker er nyttige når jeg leser engelske tekster.					
Digitale ordbøker er nyttige når jeg skriver på engelsk.					
Retteprogram (f.eks. Word) er nyttige når jeg skriver engelsk.					
Jeg synes vi burde bruke digitale verktøy enda mer i engelsktimene.					
Jeg synes vi burde bruke digitale verktøy mindre i engelsktimene.					
Digitale verktøy gjør det enklere å kommunisere med engelsklæreren min.					
Digitale verktøy gjør det enklere å samarbeide med medelever i engelsklassen min.					
Digitale ferdigheter er viktig for å lære engelsk på skolen.					
Digitale ferdigheter er viktig for å lære engelsk på fritiden.					
Mine digitale ferdigheter er viktig for min læringsutvikling i engelskfaget.					



Vi har lært om kildekritikk i engelskfaget.					
Jeg vet hvordan jeg finner informasjon på nettet når jeg trenger det til engelskfaget.					
Jeg føler meg trygg i å velge gode og pålitelige kilder når jeg skal finne informasjon på nettet til engelskfaget.					
Bruken av digitale verktøy fremmer min språkutvikling i engelsk.					
Bruken av digitale verktøy bidrar til økt leseforståelse i engelsk.					
Bruken av digitale verktøy bidrar til utvikling av engelsk ordforråd.					
Bruken av digitale verktøy bidrar til bedre uttale av engelsk.					
Jeg lærer engelsk gjennom digitale spill.					
Jeg lærer engelsk gjennom sosiale medier.					

### Hyppighet

	Alltid	Ofte	Av og til	Sjeldent	Aldri
Vi bruker digitale verktøy i engelsktimene.					
Jeg bruker digitale verktøy for samspill (kommunikasjon) med medelever i engelskklassen min.					
Jeg bruker digitale verktøy for samspill (kommunikasjon) med engelsklæreren min.					
Jeg bruker digitale verktøy for samspill (kommunikasjon) på engelsk med folk fra andre land.					

Jeg bruker retteprogram (f.eks. Word) når jeg skriver på engelsk.					
Jeg benytter meg av autoriserte digitale ordbøker når jeg leser engelsk.					
Jeg benytter meg av Google translate når jeg leser engelsk.					
Jeg benytter meg av autoriserte digitale ordbøker når jeg skriver på engelsk.					
Jeg benytter meg av Google translate når jeg skriver på engelsk.					
Jeg benytter meg av Google for å finne informasjon i engelskfaget.					
Vi bruker digital lærebok i engelsk.					
Vi bruker fysisk lærebok i engelsk.					
Vi bruker digitale verktøy til å skrive sammensatte tekster (kan inneholde tekst, bilde og lyd).					
Vi bruker digitale verktøy for å lage videoer.					
Vi bruker digitale verktøy for å lage podcast.					
Vi spiller digitale spill i engelskfaget.					
Vi lærer om kildekritikk i engelskfaget.					
Vi utøver kildekritikk i engelskfaget.					
Vi finner informasjon på nettet på egenhånd i engelskfaget.					
Vi får tildelt kilder med informasjon av engelsklæreren vår.					
Jeg er kritisk når jeg leser informasjon på nettet som skal brukes i engelskfaget.					

**Hvilke digitale verktøy (enheter og programmer) bruker du for å lære engelsk på skolen og på fritiden? Kryss av alternativene som passer for deg.**

	Veldig ofte	Ofte	Av og til	Sjeldent	Aldri
<b>Enheter</b>					
Smarttelefon – på skolen					
Smarttelefon – på fritiden					
PC/Mac					
Chromebook					
Nettbrett					
<b>Programmer</b>					
Word					
AppWriter					
PowerPoint					
Digitale spill					
Creaza					
Andre: vennligst skriv hvilke					

Hva mener du er fordelene og ulempene med bruken av digitale verktøy når det gjelder din engelsk språkutvikling? Både på skolen og utenfor skolen?

Hva betyr konseptet «digital kompetanse» for elever i engelskfaget for deg?

Hva betyr konseptet «digital kompetanse» for lærere i engelskfaget for deg?