

# MASTEROPPGAVE

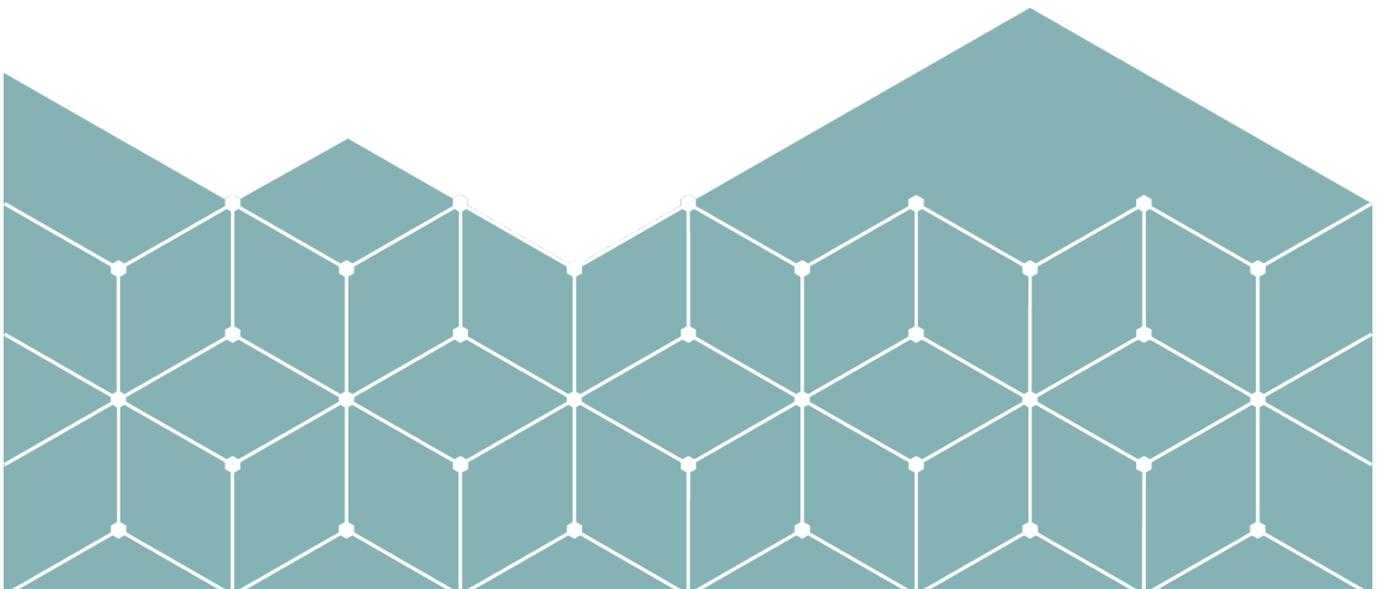
English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic

Isaac Øgaard Solløs

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## Abstract

In the globalized society of the 21<sup>st</sup> century, digital technology has also entered lower secondary schools in Norway. Many teachers have positive attitudes towards the use of educational technology in teaching, and the availability and quality of educational technology are quite high (Røkenes & Krumvik, 2016, Blikstad-Balas & Kletten, 2020, Fjørtoft, 2020).

Simultaneously, these factors are not always reflected in the teaching. Many teachers feel insecure and hesitant in implementing educational technology into their instructions (Røkenes & Krumvik, 2016). When schools closed due to the Covid-19 pandemic, the teachers were left no choice but to base their teaching around educational technology. This thesis has therefore explored English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic.

A mixed method was used, combining a quantitative questionnaire and a qualitative focus group interview. The relatively small size of the samples and the selection process limits the generalisability. Thus, the results mainly reflect the experiences of the two sample groups and thus, indicate tendencies. Caution is practiced when concluding the thesis.

A rich variety of educational technology and methods were used during digital distance teaching. However, individual assignments seemed to dominate, and written assignments were used more often than oral assignments. Consequently, authentic, and practical language situations were not prioritized, limiting the students' learning outcome related to. Generally, the students reached a better and more satisfactory learning outcome in the written aspects of the curriculum. Social learning was also less prioritized in the digital English language teaching. Last, many teachers, although feeling quite confident prior to the schools closing, reported of an increase in knowledge of and how to implement educational technology during the pandemic.

*Key words:* educational technology, lower secondary school, English language teaching, Covid-19

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# **1. English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic**

## **1.1 Background**

Digital technology has become an integral part of many aspects of the globalized society of the 21<sup>st</sup> century, one of which is Norwegian lower secondary schools. Research shows that many teachers express positive attitudes towards the use of technology in the classroom (Røkenes & Krumsvik, 2016, Blikstad-Balas & Kletten, 2020, Fjørtoft, 2020). The teachers claim that educational technology in language learning has a positive impact on student motivation, the effectiveness of the classes, ease of communication and flexibility of tasks (Røkenes & Krumsvik, 2016, Blikstad-Balas & Kletten, 2020, Fjørtoft, 2020). Blikstad-Balas & Kletten (2020) argue that the teacher is crucial in the implementation of technology into teaching. If the teachers' knowledge and ability to use the educational technology lacks, no amount of available technology will compensate for this (Blikstad-Balas & Kletten, 2020).

An eye-opening finding, when considered in the context of the previous statements, was done by Røkenes & Krumsvik (2016), whose research revealed indications of a mismatch between the Norwegian national steering documents, the aims of the schools and what is being done, both in the schools and in the teacher education, to prepare the teachers to use educational technology in their teaching. Furthermore, they argue that this mismatch results in teachers who feel unprepared and insecure using existing technology and integrating new technology into their teaching (Røkenes & Krumsviks, 2016).

## **1.2 Main aim and research questions**

Based on the findings of the previous research, a new and interesting research space appeared in the spring of 2020. Due to the tragic and world-changing Covid-19 pandemic, schools were forced to close for longer periods of time. During these periods, much or all teaching was done digitally, basing the teaching around the use of educational technology, and teachers were no longer given a choice whether to use it or not.

Much of the previous research on the use of educational technology has a fairly broad scope, focusing on the use of educational technology in teaching in general. This thesis will have a more refined field of interest, focusing on the English subject and its core element communication. The main aim of this thesis is thus to get an insight into English language

teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic.

To answer the main aim of the thesis, the following research questions are central. They help break down the main aim into more specific, manageable parts, which together provide a holistic view of the teachers' experiences during this extraordinary time in the history of language teaching. The three research questions are:

Q1. How did the teachers facilitate the use of educational technology through this period to reach curriculum aims concerning communication?

Q2. To what extent do the teachers now feel confident using technology in their teaching compared to prior to the Covid-19 pandemic?

Q3. The core curriculum emphasizes that “school shall support and contribute to the social learning and development of the pupils”. To what degree did the teachers succeed in focusing on this perspective in the teaching of English during the pandemic?

### **1.3 Design**

The thesis starts by establishing a theoretical foundation, presenting the findings of previous research on the use of educational technology in the context of teaching (Røknes & Krumsvik, 2019, Blikstad-Balas & Kletten, 2020, Fjørtoft, 2020). Furthermore, the theoretical concept of digital literacy is defined and placed within the context of English language teaching and learning. The teachers' digital skills is another crucial factor in implementing educational technology into language teaching. Therefore, the Professional Digital Competence Framework for Teachers is presented.

Communication is the first of the three core elements in the English subject curriculum. A definition of communication is thus needed. Three models are used to do so. Furthermore, the connection between communication and the English subject curriculum is drawn. The same is done with the Common European Framework of Reference for Languages (CEFR) and communication using educational technology. The theoretical foundation is completed by presenting socio-cultural perspectives on knowledge and learning in the classroom.

Following the theoretical foundation, a comprehensive description of the research design and methods used in this thesis is given. In this chapter, central aspects of the mixed methodology chosen for the research of this thesis are presented. The mixed method combines a quantitative questionnaire and a qualitative focus group interview. This is done to combine the strengths of the two methods, and limit their weaknesses.

As both the theoretical foundation and the research design and methodology are accounted for, the results and findings are presented. The results of the questionnaire and the focus group interview are shown separately. Following their presentation, the findings are discussed in light of the previous research and the theoretical foundation. The quantitative and qualitative results are used to support and strengthen each other.

Finally, the thesis is summarized. Based on the findings of the research, the main aim and the additional research questions are being answered and concluding remarks made, still keeping in mind that the findings mainly represent the thoughts and experiences of the two sample groups of the research. The pedagogical implications of the findings are commented, as is the potential for further research.

## **2. Theoretical foundation**

Theory acts as the framework for research and are among the deciding factors in determining its course. Furthermore, a theoretical foundation works as a tool when working with the different parts of the research project. In this thesis, the aim is to investigate how English language teachers in lower secondary school in Norway use educational technology when working with the curriculum's core element Communication (The Norwegian Directorate of Education, 2020), through digital distance teaching due to the Covid-19 pandemic. The following section will thus present several theoretical perspectives crucial in answering the main aim of the thesis.

First, in order to place the research of this thesis within a context, the main aspects of three previous research projects within the field of educational technology and teaching will be presented. As distance teaching in the 21<sup>st</sup> century always involves some sort of digital technology, knowledge on how to use and interact with technology appropriately is crucial, for both students and teachers alike. The focus on use of educational technology is also evident from the English subject curriculum. The concept of digital literacy will therefore be presented. In this context, the Professional Digital Competence Framework for Teachers is relevant in guiding teachers in developing their own digital literacies to be prepared to guide students in the digital environments they may partake in during their education (Kelentic, Helland & Arstorp, 2017).

Following this, theories on communication and a socio-cultural perspective on knowledge and learning in the classroom are described. Such theories differ from their succeeding theories, in the fact that socio-cultural theories emphasize the importance of the social context surrounding every human action, thus also learning (Magnar, Lillejord, Nordahl,

& Helland, 2015). Here, different models of communication will also be presented. Furthermore, the aspects of the subject curriculum for English concerning communication will be presented (The Norwegian Directorate of Education, 2020).

Last, as human interactions are absolutely essential in a socio-cultural learning environment, and communication is the primary tool humans have in such contexts, perspectives on motivation, building relations and learning collectively are all relevant in this context.

## **2.1 Previous research**

To place the research of this thesis within a specific context, the following section will present the main aspects of three previous research projects. Although English is not mentioned specifically, these projects still concern aspects of the use of educational technology in English language teaching. The research is presented chronologically.

The first project is titled “Prepared to teach ESL with ICT? A study of digital competence in Norwegian Teacher Education” (Røknes & Krumsvik, 2016). The researchers set out to examine how secondary student teachers are educated to teach with educational technology through the didactics course “English as a Second Language” offered at a teacher education program in Norway (Røknes & Krumsvik, 2019). The research produced the following main findings.

First, the results show the importance of a systematic and reflected approach to integration and implementation of educational technology through the teacher education. In this context the institutions responsible for the teacher education need to work as models for the use of educational technology (Røknes & Krumsvik, 2016). The teacher educators and mentor teachers need to reflect the desired use of educational technology by using technology in innovative, creative and inspiring ways themselves. The research data found that only 50 percent of the student teachers viewed their teacher educators as role models of educational technology use (Røknes & Krumsvik, 2016). Based on this, Røknes & Krumsvik (2016) argue that teacher educators and mentor teachers need to be reminded of their role as models for using and integrating educational technology in English language teaching.

Another interesting finding highlights the need for the student teachers to experience and reflect on the value of technology in an educational context (Røknes & Krumsvik, 2016). The student teachers highlighted activities giving them opportunities to work and experience with relevant resources as especially valuable (Røknes & Krumsvik, 2016). Such activities may

give the student teachers time to reflect on, discuss and try out different didactical uses of educational technology related to their subject discipline.

Finally, Røknes & Krumsvik (2016) indicate that, despite the fact that student teachers' self-perceived digital competence and didactical use of educational technology were relatively high, the research showed that their use of educational technology in English language teaching was dominated by “elementary and basic digital skills” (Røknes & Krumsvik, 2016, p. 17). As a result, Røknes & Krumsvik (2016) argue that future English language teacher education needs to increase the focus on promoting the more complex dimensions of digital competence.

Based on these findings, Røkenes & Krumsvik (2016), indicate that there is often a mismatch between the steering documents, the aims of the schools and what is done, both in the schools and classrooms, as well as in the teacher education in preparing the teachers to use educational technology in their teaching. Furthermore, they claim that this mismatch results in teachers feeling unprepared and insecure in using existing technology and also in integrating new technology into their teaching, which in turn often results in teachers putting off integrating new and innovative uses of educational technology into their teaching (Røkenes & Krumsviks, 2016).

Another relevant research project in the context of educational technology in teaching was conducted by Blikstad-Balas & Kletten (2020). In their article “Still a long way to go”, Blikstad-Balas & Kletten (2020) investigate how and for what purpose teachers use technology in their everyday instructions.

Initially, the article presents a literature review, covering three topics: access to educational technology in the classroom, teachers' competence and teachers' attitudes towards educational technology. This review shows that most lower-secondary schools can provide permanent 1:1 access to educational technology, either by lending laptops or tablets to their students or having computer rooms available to them (Blikstad-Balas & Kletten, 2020). Thus, the access to educational technology in Norwegian lower secondary schools should be sufficient enough to enable broad use of educational technology in the classroom.

Moreover, the review shows that many teachers have positive attitudes towards the use of educational technology in the classroom (Blikstad-Balas & Kletten, 2020). As many as 80 percent of the respondents in Gudmundsdottir and Hatlevik's research (2018, in Blikstad-Balas & Kletten, 2020) expressed positive attitude toward educational technology in an educational context.

At the same time, approximately half of the respondents also expressed concerns about the possible challenges of educational technology use (Gudmundsdottir & Hatlevik, 2018, in

Blikstad-Balas & Kletten, 2020). Many teachers view their digital competence as one area limiting the integration and use of educational technology in their teaching (Blikstad-Balas & Kletten, 2020). Throndsen et al. (2019, in Blikstad-Balas & Kletten, 2020) show that one out of five teachers express a need for expanding their digital competence and how to integrate educational technology into their teaching. Similarly, Gudmundsdottir & Hatlevik (2018, in Blikstad-Balas & Kletten, 2020) found that almost 50 percent of the participating teachers viewed their own educational technology training as poor in terms of preparing them for integrating educational technology into their teaching.

The key findings of Blikstad-Balas & Kletten's (2020) research are quite interesting when compared to the other reviewed literature. Their data indicate that, despite the fact that access was sufficient and attitudes were positive, much of the implementation and use of technology in the English language classes was "limited to supporting traditional teacher centred practices, with low student participation", which the researchers argue, indicates that educational technology was often used for traditional, transmissive pedagogy (Blikstad-Balas & Kletten, 2020, p. 55).

When the students used technology, they were mostly writing digital texts, individually, an activity which brings little new to the pedagogical practices and does not make use of the opportunities associated with educational technology (Blikstad-Balas & Kletten, 2020). Blikstad-Balas & Kletten (2020) argue that the implementation of digital technology and the development of digital competence in schools need to be based around more than just a curriculum with great intentions and a basic digital infrastructure. Furthermore, they argue that "structures at a national level are not enough, and there is an urgent need for professional development at the local level to increase the instructional repertoire and the didactical motivation of teachers in relation to digital technology" (Blikstad-Balas & Kletten, 2020, p. 55).

When schools closed as a result of the Covid-19 pandemic, Sintef began researching teachers' experiences with digital teaching during the spring of 2020 and how the closed schools and resulting digital home schooling impacted the teaching and learning. This research was published in the report *Nær og fjern* in August of 2020 (Fjørtoft, 2020). The report sheds light on both positive and negative aspects of the infrastructure, conditions, learning environment and the professional digital competence of the teachers and schools.

The report shows that, the teachers utilised a wide variety of digital resources. One common aspect was the use of tools enabling video communication (Fjørtoft, 2020). According to many teachers, the use of digital teaching material made the planning process of the teaching

more time consuming. On the other hand, the teachers also argued that these resources often made it easier to differentiate between students (Fjørtoft, 2020).

Most of the challenges the teachers pointed out, were related to the learning environment of the classes and to the social factors the students had to cope with. Some of the teachers felt that their role as class leaders was compromised by this form of teaching. They felt that their pedagogical scope of action became limited by the fact that none of the participants was gathered physically (Fjørtoft, 2020).

Nær og fjern points out that there was a large variation in the starting point and the teachers' experience level using educational technology in their teaching. Furthermore, despite the challenges the teachers faced, the report indicates that they have, in general, managed the new digital classroom in a good way. They also express that they feel they have expanded their digital competence and feel better prepared to use educational technology in the classroom (Fjørtoft, 2020).

## **2.2 Digital literacy**

In an ever-changing society, where new technological innovations and digital media play an increasing role in our everyday lives, it is becoming clear that the 21<sup>st</sup>-century skills need to be developed for both teachers and students. These skills are presented by Dudney, Hockly and Pegrum (2014) as: creativity, innovation, critical thinking and problem-solving, collaboration and teamwork, autonomy, flexibility and lifelong learning, all crucial for actively participating in society. Dudney et al. (2014) argue that the ability to engage actively and reflected with digital technologies are central to these skills. Dudney et al. (2014, p. 2) define these abilities as digital literacies, which are “the individual and social skills needed to effectively interpret, manage, share and create meaning in the growing range of digital communication channels.”

Magnar, Lillejord, Nordahl, & Helland (2015) argue that digital literacy involves the ability to use digital tools, medias and resources appropriately, to be able to solve practical tasks, gather and edit information, create digital products and communicate using new technology. They claim that as personal computers have become one of the most common and important means of communicating, having a PC and an internet connection are no longer sufficient (Magnar et al. 2015). Being able to use digital media in a way which contributes positively to our everyday lives, will make certain tasks easier and enable new possibilities and solutions central to the use of technology. Not only does technology enable new ways to communicate and interconnect people, it also enables new perspectives on learning and

knowledge (Magnar et al., 2015). As well as being essential for participating in society in general, digital literacies are important in the context of the language classroom (Spires, Paul & Kerkhoff, 2017).

Dudney et al. (2014) divide digital literacies into four focus groups: language, information, connections and (re-)design. This division is meant as a theoretical model, as the literacies are much intertwined and often rely on each another. As the concept of digital literacy is quite complex, the literacies presented in the following section, are a selection of the more central literacies needed in order to reach the goals of the curriculum for English teaching in lower secondary school.

Communicating through the use of language is crucial to most or all forms of digital literacy. Despite changes in the format through the introduction of digital technology, print literacy, i.e., the ability to comprehend and create meaning through written text, is as relevant as ever before, much digital communication still involves written language (Dudney et al, 2014). As the format changes, so does the form of communication. One form of digital communication is textspeak. This is the language of online chatrooms and text messages, where abbreviations and emoticons are central aspects in saving time and space as well as in preventing misunderstandings. The ability to communicate effectively using this digital language is what Dudney et al. (2014) call texting literacy. According to Kemp (2011, in Dudney et al, 2014) positive correlation often occurs between a student's texting literacy and print literacy. In order to bend the rules, one must know them to begin with. Kemp (2011, in Dudney et al, 2014) claims that most students are aware of the difference between textspeak and standard language, independent of their ability to use either of them.

Multimedia literacy is another central literacy in a language learning classroom where digital technology is present. As Dudney et al (2014, p. 11) argue, “in a world of screens, we no longer rely on language alone to carry the weight of our communication”. Being able to interpret and create texts in multiple media and to use images, sound and video is essential to multimedia literacy (Dudney et al, 2014). In this context, mobile literacy can also be quite relevant, as most of the activity on a mobile device combines different medias. Mobile literacy includes “the ability to navigate, interpret information from, contribute information to, and communicate through the mobile internet” (Dudney et al, 2014, p. 14).

### ***2.2.1 Digital skills in the English subject***

Digital literacy plays a central part in the English subject curriculum as well. One of the four basic skills the curriculum presents is digital skills (The Norwegian Directorate of

Education, 2020). This does involve the ability to use digital media and resources to strengthen the language learning process, when interacting with authentic language and interlocutors and to acquire relevant knowledge to the English subject (The Norwegian Directorate of Education, 2020). To do so, the students must act cautious and reflected when interacting and communicating in a digital context. The digital skills in the English subject develop from exploring the language to being able to interact with others, create texts and acquire knowledge by gathering, exploring and critically assess information from a variety of sources using the English language (The Norwegian Directorate of Education, 2020). The subject aims of the curricula does also cover a digital aspect. One of the aims require the students to use different digital recourses and aids in the language learning process, in creating texts and in interaction with others (The Norwegian Directorate of Education, 2020).

### ***2.2.2 Professional Digital Competence Framework for Teachers (PfdK)***

Adapting to the changing teaching context caused by new technology can be a challenging task for teachers. As technology has made information much more accessible, it is important that students become more than passive consumers of this information. They now also need to be critical users and active content producers themselves (Kelentic, Helland & Arstorp, 2017). As a result, the role of the teacher has changed as well. Teachers now need to guide students in “identifying credible information, quoting sources, applying ethical values and attitudes in communication 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” (Kelentic et al, 2017, p. 1). To do so, the teachers need to have sufficient professional digital competence. As the previous research indicated, many teachers feel this is not the case (Røknes & Krumsvik, 2019, Blikstad-Balas & Kletten, 2020, Fjørtoft, 2020). Knowing what technology to integrate and use in certain situations and how to do so most successfully can be quite challenging. The Professional Digital Competence Framework for teachers can be of great help to teachers in implementing educational technology into their teaching successfully (Kelentic et al., 2017).

According to Kelentic et al. (2017) the framework has two aims, one with focus on professional development, and one on the actual practice of the profession. For teachers, the second aim is most relevant in their everyday work. The framework is designed to work as a common guide which schools can use when “evaluating and following up on teachers' professional digital competence” (Kelentic et al., 2017, p. 2). The content of the framework is based on several other documents, such as national regulations, guidelines for teacher

education programmes, the national curriculum, the Basic Skills Framework, and the National Qualifications Framework (Kelentic et al., 2017). The framework consists of seven competence areas, all connected to digital perspectives on knowledge, skills and competence. The areas are subject and basic skills, school in society, ethics, pedagogy and subject didactics, leadership of learning processes, interaction and communication, change and development. The areas are all valued equally, and together they make up the professional, digitally competent teacher (Kelentic et al., 2017).

The area subject and basic skills point out that teachers need to be aware of the changes and expansions resulted by the digital development. Furthermore, they need to be familiar with how they can help their students achieve the competence aims of the subject curriculum and work on expanding their students' basic skills through integrating digital resources into their teaching (Kelentic et al., 2017).

Moreover, the second area, school in society, argues how teachers need to reflect on perspectives of digital development and the role and function of digital media in society (Kelentic et al., 2017). As a part of this, teachers need to understand their own role as well as the role of the school in bridging the gap between their students and the modern digital society. This is done by guiding students into being active and reflected participants in the digital and democratic society (Kelentic et al., 2017).

Thus, teachers need to be familiar with the ethics and values of both school and society in relation to digitalization. Teachers have a direct impact on the development of their students' digital judgement, understanding and ability to act in line with the ethics and values of society (Kelentic et al., 2017).

The framework also argues that a professional and digitally competent teacher reflects and develops teachers pedagogical and didactical knowledge related to their subjects and in a digital environment. This entails the teachers integrating "digital resources into their planning, organisation, implementation and evaluation of the teaching in order to foster pupils' learning and development" (Kelentic et al., 2017, p. 7).

Furthermore, the framework points out the importance of teachers being able to guide their students when working in digital environments; teachers need to understand and reflect on how such digital environments can constantly change and how this may create challenges for their pedagogical and didactical work. Knowing and utilizing the opportunities inherent in digital resources may help teachers solve these challenges. The peculiarity of different digital resources may also be used to vary the teaching and to adapt it to fit diverse groups of students as well as each student's individual needs (Kelentic et al., 2017). The teachers' ability to

interact and communicate with their students is essential. Kelentic et al. (2017, p. 9) argue that “a professional, digitally competent teacher uses digital communication channels for information, collaboration, and knowledge sharing with various stakeholders in a way that builds trust, and contributes to participation and interaction”. Teachers need to know the communicational opportunities digital resources offer and how interacting them in a digital environment change and expands the space for communication (Kelentic et al., 2017). As a result of this knowledge, teachers become able to facilitate and organise good, productive learning environments, where they guide their students in suitable and productive interactions with others in digital arenas (Kelentic et al., 2017).

Lastly, as digital competence is a dynamic, situational and flexible process, teachers need to develop and improve their competence and be flexible in their practices to keep up with the changes of the digital society. This can be done both individually and through teachers sharing their knowledge and experiences with their teaching community (Kelentic et al., 2017).

## **2.3 Communication**

The socio-cultural theory argues that communication is among the most powerful tools humans poses (Vygotsky, 1978). But what exactly does communication involve? Communication can be described as the act of constructing, decoding and discussing meaning. It can be done through verbal, nonverbal or textual tools and be aural, visual, or even physical. No matter the form, communication is always a learned behaviour (Corey, 2019). Most humans are born with the physical requirements for communication: the abilities to speak, hear and see. However, we have to learn the codes, symbols and systems of language to communicate successfully (Corey, 2019).

Several theoretical models explain the social process of communication using pictures or visual representations of the complex phenomenon, each emphasizing different aspects of the process (Corey, 2019). The models can be quite useful as they simplify the process, identifying the various elements of communication, and illustrate how the different parts of the process are in fact quite interrelated by combine verbal and visual elements. The three most common are the linear, interactional and transactional model (Corey, 2019).

### **2.3.1 Linear model**

The linear model was originally presented by Shannon & Weaver (1948, in Corey, 2019), where they described communication as a linear process. This model describes how a sender (the source of the message) transmits a message (may consist of the sounds, words, or

behaviours) through a channel (the pathway or route for communication) to a receiver or listener (the target or recipient of the message) (Corey, 2019). During this process the message may be exposed to noise, which includes any interference in the channel or distortion of the message (Corey, 2019).

This model had quite an impact on its field when it was first presented. Later it has been viewed as too simple. The model has been criticised for illustrating communication as a one-way process, providing only one channel for one message, where many will argue that it is in fact a dynamic action between multiple parties (Corey, 2019). It is also argued that the messages illustrated in the model are too clear-cut, having a definite beginning and end, where some will argue that communication is seldom this well-structured (Corey, 2019).

### ***2.3.2 Interactional model***

As a consequence of the linear models' lack of complexity, the interactional model illustrates communication as an ongoing process, using two channels where messages and feedback flow between two parties (Corey, 2019). Feedback is in this context, the response the receiver gives to the sender and indicates whether the message was received and understood or not. This can include both verbal or nonverbal responses (Corey, 2019).

How the environment, experiences, culture and heredity influence how a sender constructs a message is in the context of the interactional model known as the field of experience. All individuals have their own individual field of experience, which in turn, influence their interactions, making every communicational situation unique (Corey, 2019). Although the interactional model is more dynamic than the linear model, it still has its limitations. Even though the participants can be both senders and receivers, they cannot be both simultaneously, which they, in real life situations, would most likely be, as such situations are quite fluid (Corey, 2019).

### ***2.3.3 Transactional model***

Compared to both the linear and the interactional models, the transaction model is the most dynamic. In this model, the participants are referred to as communicators rather than senders and receivers, indicating that communication is a reciprocal. All the participants can both send and receive messages, making communication a transaction and a cooperative action where people create shared meaning through a more dynamic process (Corey, 2019). In this model, the field of experiences is even more central. In addition to having a unique field of experience, the participants also need to establish a shared field of experiences, with some shared aspects of culture, language or environment in order to communicate. In addition,

messages will influence the responses and vice versa. Thus, no message stands alone, but all messages in a conversation are instead interrelated (Corey, 2019).

### ***2.3.4 Communication in the English Subject curriculum***

As the world is becoming more globalized, and more and more interaction is done through digital devices, Norwegian youths are constantly being exposed to new impressions and information. A vast majority of these impressions are presented using the English language. Thus, the role of the English subject is constantly increasing. The subject curriculum states that English is a central subject in developing the students' cultural understanding, their abilities to communicate, to promote formation and identity development (The Norwegian Directorate of Education, 2020). Through working with the subject, the students will be able to communicate with others locally and globally, regardless of their cultural and language background (The Norwegian Directorate of Education, 2020). The subject shall contribute to the development of the students' intercultural understanding, and of different ways of living, thinking and communicating. Furthermore, the subject shall prepare the students for further education and participation in a society and a career that requires reading, writing and communicating orally using the English language (The Norwegian Directorate of Education, 2020).

**2.3.4.1 The core element Communication.** The renewal of the National curriculum presents three core elements for the English curriculum, one of which is communication (The Norwegian Directorate of Education, 2020). This core element involves the ability to create meaning using (the English) language and being able to use (the English) language in formal and informal contexts. The student shall implement their own strategies in communication, orally and written in different contexts and by using various media and sources. The students shall experience, use and explore the (English) language from the very beginning. The language teaching shall facilitate opportunities for the students to participate in and interact with authentic and practical situations and contexts (The Norwegian Directorate of Education, 2020).

### ***2.3.5 Communication using educational technology in the CEFR***

The Common European Framework of Reference for Languages (CEFR) points out that communication using educational technology, which includes using machines, will never be identical to face-to-face interactions (Council of Europe, 2020). Online group interactions have qualities which more traditional, analogue interactions do not have. The most prominent is the

availability of resources and the ease of sharing these in real time (Council of Europe, 2020). At the same time, digital interactions do have their challenges. Misunderstandings do for example occur easier in online interactions compared to face-to-face communication. In order to minimize these misunderstandings, the CEFR presents some requirements for successful digital communication.

The framework argues that digital or online messages need to be more explicit and clearer compared to messages in analogue settings (Council of Europe, 2020). Furthermore, the sender needs to make sure the message was understood correctly. Whether a message is understood or not, is easier uncovered in face-to-face conversations where the interlocutors may also use other methods than just language to respond to a message, such as gestures or facial expressions. As a consequence, when taking part in a digital interaction, the participants need to be able to reformulate their message, in order to deal with misunderstandings (Council of Europe, 2020).

#### **2.4 Socio-cultural perspectives on knowledge and learning in the classroom**

All theories of learning are based on the fact that humans may acquire knowledge. What separates them is their description of what knowledge is, where it originates and how we as humans acquire this knowledge (Magnar, Lillejord, Nordahl & Helland, 2015).

Socio-cultural theories are based on three fundamental prerequisites. Such theories claim that humans learn when they actively participate in the process of acquiring knowledge. Moreover, humans are viewed as active co-creators of knowledge. Lastly, in socio-cultural theories, knowledge is not viewed as absolute or static, but as a subject of change. Change is essential. If there were no room for change, humans could not be participating in the process of establishing new knowledge (Magnar et al., 2015).

Socio-cultural theory can be described as an interdisciplinary field, consisting of several independent theories with the same foundation. In the context of this thesis, the theories will be dealt with in a general way, covering the overarching theme and the aspects which are common to most of the theories within the socio-cultural field.

A central aspect for most socio-cultural theories is the interaction between the individual, social and cultural aspects surrounding learning and human cognitive development (Magnar et al., 2015). According to socio-cultural theory, learning occurs when humans use their knowledge in social contexts, through dialogue, interaction and collaboration with others. In a language classroom context, this may involve the students collaborating on a task, with the teacher in a guiding role, supporting and helping them in their work. In doing so, the teacher

needs knowledge on how to help each student to actively participate in the social learning environment and learn from each other (Magnar et al., 2015). The organisation and structure of the learning environment are crucial in doing so.

Socio-cultural theory argues that humans learn together, so that we become able to later learn individually. This again will prepare us to later participate in the social learning environment. The relationship between the individual and the social community thus becomes a perpetual circle (Magnar et al., 2015). The students are according to socio-cultural theory fundamentally active, and learning is described as active participation in different cultural practices. Learning is an interaction between the students and their environment in different contexts. This context is central to what is learned and how it is learned. The students do for example, not only learn language in the classroom, but also every time they are exposed to aspects of the language in their every-day lives outside the classroom (Magnar et al., 2015).

Consequently, socio-cultural theories are concerned with how we can better understand learning and cognitive development by studying the interaction between the individual and their surroundings. On the basis that humans are social creatures, a language using and self-interpreting animal, socio-cultural theory insists on studying learning and cognitive development as social interaction (Taylor, 1985, in Magnar et al., 2015).

In this context, the primary connections between the individual and the social learning environments are language and communication (Dysthe, 2001, in Magnar et al., 2015). As we interact with our surroundings, we also use different physical tools such as gestures, mimicry and language (Magnar et al., 2015). Language is the most powerful tool we humans poses and has therefore a central place in the socio-cultural theory (Vygotsky, 1978). Through the use of language, humans observe, reflect and analyse the world around us; we draw conclusions on how and why our surroundings work as they do. Through listening to others and their opinions, we are given the opportunity to gain different perspectives of our surroundings, and we can also alter or modify our own under of them (Magnar et al., 2015).

#### ***2.4.1 Social interaction and language learning***

Aspects of socio-cultural theories are also present in the Norwegian core curriculum (The Norwegian Directorate of Education, 2020). Here, it is stated that the “school shall support and contribute to the social learning and development of the students through work with subjects and everyday affairs in school” (The Norwegian Directorate of Education, 2020: item 2.1.). Furthermore, the students’ identity and self-image, opinions and attitudes are created through interaction with others. Social learning occurs when working with subjects, but also

through most other activities at school. Quite correlating with socio-cultural theory, the core curriculum states that learning in a subject cannot be isolated from social learning (The Norwegian Directorate of Education, 2020).

Dialogue is central to social learning. The teacher shall therefore work on promoting communication and collaboration in such a way that the students gain confidence and feel safe when expressing their opinions and feelings (The Norwegian Directorate of Education, 2020).

## **2.5 Student-teacher relation**

In a language classroom based on socio-cultural theory, the relations between the teacher and the students can have significant impact on the students' social and academic development, both in short and long terms, as teachers can be important role models for the students (Magnar et al., 2015). The transaction model presents the process of development as a result of mutual and complex interactions between the individual and their environment over a longer period of time. In this model, human relations are one of many systems in constant interaction with other systems which contribute to the students' developmental process. Every relation is unique and will contribute, positively or negatively, to this process (Magnar et al., 2015). Based on this perspective, the relation between a teacher and a student plays an important role in the students' understanding and attitude towards school and the classroom environment. These relations will affect a student's ability to regulate their emotions and behaviour in school, contribute to structures in classroom interactions, and provide a base for safety, exploration, mastery and learning (Pianta, 1999, in Magnar et al., 2015).

In general, close and supportive teacher-student relations result in students who thrive in school, grow both emotionally, socially and in their results (Baker, 2006, in Magnar et al., 2015). A Danish study concluded that the teacher's ability to establish a positive social relation to each student in their class was the most important aspect of their competence in incising the learning in the class. The teacher's ability to lead the whole class and their general knowledge of the subject followed second (Nordenbo et al. 2008, in Magnar et al., 2015). In order to facilitate learning, the subject and the skills it requires also need to have a central role in the relation. Magnar et al. (2015) present several factors crucial in establishing positive relations. First, the teacher needs to show sensitivity towards the students' signals and behaviour. This includes the ability to understand others based on their individual premiss (Magnar et al., 2015). Students with restrained behaviour or indistinct signals also need to be shown sensitivity. In a busy classroom, this can sometimes be challenging. This issue may also be present in a digital teaching situation.

Giving students individual and personalized response and feedback and support when needed is also important in making the students feel seen, understood and respected by the teacher, which in turn will influence the student-teacher relation positively (Magnar et al., 2015). Response through eye contact, personal comments, humour, positive and concrete feedback and using the student's name are all responses which impact relations positively (Magnar et al., 2015). To give the students personalised support, the teacher also needs to know each of them properly. If the teacher does not know each student well enough, it will be difficult to register when they need help and support, or when they can thrive from trying and exploring by themselves (Magnar et al., 2015). Students who know they will receive help and support when they need it, generally spend more time exploring the subject than the students who feel they do not receive help and support when it is needed (Magnar, et al., 2015). All these factors may also be influenced when the language learning context is being digitalised.

Classroom management is also important in establishing positive relations with the students. For the students to feel safe, seen and included in the teaching context, the teacher must be a clear and fair leader. The teacher is the one in charge of the classroom and needs to establish a good structure to the activities, with routines, rules, clear directions and transitions and problem-solving skills, while still maintaining the other aspect described above (Magnar et al., 2015). Finally, all of the above must be done in a way that is customized to each unique classroom and student group, as well as the individual students within these groups (Magnar et al., 2015).

### **3. Research design and method**

All research is based on questions. These questions make up and define the framework of the research. The researcher speculates and makes assumptions about the phenomenon in question. In order to answer the questions concerning the phenomenon, empirical research must be done. The purpose is to answer one or more research questions or to confirm or refute one or more assumptions (Williams, 2007).

In this process, different methods are available to the researcher, which act as tools for the researcher to gather, process and analyse different data. Most of these methods are divided into either qualitative or quantitative methods (Williams, 2007). It is however, also possible to combine aspects from both these categories. This is called a mixed method, and is the selected research method for this thesis (McKey, 2010). By combining a quantitative questionnaire (Appendix A) with a qualitative focus group interview (Appendix B) in a convergent parallel study design, the hope is that the gathered data will contain both a larger selection, as well as

greater detail compared to using either of the methods alone (Grønmo, 2004). In the following chapter, the chosen research methods and the overall research design will be described in further detail.

### **3.1 Mixed methods**

In the process of answering the research questions of this thesis, a convergent parallel mixed methodology was chosen, combining aspects of both the qualitative and the quantitative methods, utilizing the strengths of each method, as well as minimizing their weaknesses (Grønmo, 2004). This method involves conducting the quantitative and the qualitative elements concurrently in the same phase of the research process, and the two methods are weighted equally. Furthermore, the data from the two methods are analysed independently, before the results are discussed together. The act of comparing and combining the findings from the two methods to answer the research questions is known as triangulation (Grønmo, 2004).

The first part of the study consists of an electronic quantitative questionnaire, combining close-ended and open-ended questions, the latter providing more detail of the teachers' attitudes. Using the online service Nettskjema (UiO, 2021), the anonymous questionnaire questioned English language teachers in lower secondary school on their experiences with teaching the English subject curriculum's core element communication during the period with distance teaching using educational technology.

The second part of the study is made up of a qualitative focus group interview with the English language teachers of a lower secondary school in south-eastern Norway. The school was selected through a convenience sampling process. The school is an urban school of quite a large size compared to schools in the same district, both in terms of its number of teachers and students.

The choice of method: combining qualitative and quantitative methods, was done based on the wish to gather a fairly wide range of data material, while also gaining some more detail into the practices and thoughts of the language teachers. Furthermore, McKay (2010) argues that a mixed methodology strengthens the total validity of the research, as the one method may cover aspects of the phenomenon the other method misses, and vice versa. Moreover, the questionnaire was piloted with the intention to test its usability and quality to reveal any faults or poorly structured questions. What was looked for when doing so was whether some of the questions were unclear or easily misunderstood (McKay, 2010).

### **3.1.1 Quantitative research method**

As mentioned, the questionnaire was conducted electronically, using the online service Nettskjema, managed by the University of Oslo, licenced to the Østfold University College (UiO, 2021). The questionnaire was open during the period from April to June 2021. The main aim of the questionnaire was to collect quantitative data indicating a general overview of how English language teachers have been working with the core element communication in the English subject curriculum using educational technology during the period of distance teaching.

One of the main reasons for choosing this methodology is the efficiency of the method, making it possible to gather information from a relatively large sample group. By using questionnaires, it is possible to gather information of three categories: factual, behavioural and attitudinal (McKay, 2010). By doing so, it will hopefully be possible to see a connection between the characteristics of each teacher and their choices of approaches and thoughts on their results. Possible factors impacting the results are age, gender, education and teaching experience.

One disadvantage of this method is that questionnaires may provide quite simple and superficial information (McKay, 2010). However, by combining open-ended and close-ended questions, the questionnaire can produce a comprehensive overview of the topic, while still getting some more specific and detailed answers. The close-ended questions have the respondents answer a set of quite specific questions with a set selection of answers to choose from. This makes the responses a bit more uniform, and such easier to answer, code and analyse (McKay, 2010). These questions provide the general overview and the big picture. By complementing these questions with open-ended questions, the data gains some more details. Open-ended questions are often fill-in questions, where the answer is one or at least a few words and varies too much for the researcher to predict every outcome. They can also require short answers, where the respondents are asked to give detailed information concerning the topic in written form (McKay, 2010).

**3.1.1.1 Piloting the questionnaire.** Before the questionnaire was distributed, it was piloted by a teacher in the researcher's personal network during March 2021. This was done to ensure that the questionnaire worked as intended and to uncover any weaknesses with the questions or the questionnaire's overall structure. By running a pilot survey, the reliability and validity of the final questionnaire increase (McKey, 2010). To get as realistic results from the pilot survey as possible, the structure and implementation of the pilot questionnaire were made

as similar as possible to the main questionnaire, both in terms of methods and content. The pilot teacher received a link to the questionnaire in Nettskjema (UiO, 2021) and answered it online, in the same way as the main questionnaire was to be completed.

The main difference between the two, was the sample size of the pilot (n=1), compared to the sample size of the main questionnaire (n=31). As the aim of the pilot survey was to ensure the quality and usability of the questionnaire, rather than to gather generalisable data, the selection process also differed from the one in the main questionnaire. The respondent of the pilot survey was recruited through the researcher's personal network. In addition, the pilot teacher was asked to write down any comments and suggestions concerning the questionnaire, for example whether the design or the content of any of the questions was unclear. These comments would later be used to render the main questionnaire. The majority of the comments concerned clarification. Also, some of questions were merged, others were removed all together as they overlapped with other questions, and were therefore redundant. The structure of the questionnaire was also altered after the pilot-survey and questions and topics were numbered.

**3.1.1.2 The Main questionnaire.** The main questionnaire was answered in the period between April and June 2021. One of the main advantages of using a questionnaire is that this method may gather a fairly large number of generalizable and standardizable data by surveying teachers' attitudes, values and opinions during a relatively short time span. Another benefit is the fact that this method allows the respondents to be fully anonymous.

The questionnaire was designed based on aspects of the English subject curriculum concerning communication, findings of the previous research, as well as theoretical perspectives presented previously. Based on the feedback provided by the pilot survey, some adjustments were made to complete the main questionnaire.

The main questionnaire was divided into four parts: general information, the use of educational technology in the English subject, organising the digital English language teaching and social learning. The first part of the questionnaire, General Information (Questions 1.1-1.6), contains questions concerning relevant aspects of the respondents' backgrounds, such as gender, age, education and teaching experience. These questions are relevant to get an overview of the sample group, and to uncover any potential connections between the teachers' backgrounds and their teaching methods, experiences and reflections.

The second part of the questionnaire (Questions 2.1-2.4), The Use of Educational Technology in the English Subject, contains questions concerning availability of educational

technology, for the teachers as well as their students and the teachers' attitudes towards the use of educational technology in general.

In the third part of the questionnaire (Questions 3.1-3.4), the respondents are asked questions concerning how they have been Organised the Digital English Language Teaching in the course of the Covid-19 pandemic. Aspects such as teaching methods and materials are covered together with the teachers' experiences concerning the work with the core element communication of the subject curriculum. This part consists of both close-ended and open-ended questions. Thus, the respondents may provide alternative views not covered in the close-ended questions.

In the fourth and last part of the questionnaire (Questions 4.1 - 4.3), the teachers' attitudes and experiences towards the phenomenon Social Learning, presented in the core curriculum, are examined.

**3.1.1.3 Nettskjema.** The online tool Nettskjema (UiO, 2021) was used to create and conduct the questionnaire for the thesis. One of the advantages of using this tool was that it made distributing the questionnaire quite easy and efficient through the use of a hyperlink. The questionnaire was made open, meaning no log-in was required. The questionnaire was available only to those who received the hyperlink. The answers from the questionnaire were automatically registered and saved in a database only available to the researcher and Nettskjema (UiO, 2021).

As none of the questionnaire questions asked for sensitive information which could connect any of the respondents to their answers, it was deemed safe to require no login-information. This also made sure the respondents remained fully anonymous, which in turn may have resulted in the respondents answering the questionnaire more truthfully and honestly compared to a less anonymous research method (McKey, 2010).

Despite its administrative advantages, Nettskjema (UiO, 2021) also had one main disadvantage, concerning the ease of use. The respondents had no opportunity to save their answers midway and finish at a later time. This required them to finish the questionnaire in one sitting and set aside enough time to be able to answer all the questions. This may have resulted in some of the teachers rushing through the questions or not answering some at all.

**3.1.1.4 Sample selection process.** Gathering a sufficient sample size was the main challenge of the research process. In the case of the sample for the questionnaire, this was gathered through a variety of sources. The questionnaire was shared twice through the

Facebook (FB) group Engelsklærere. The members of this group are all English language teachers, either in primary or secondary school. The questionnaire was also shared with two other FB groups. These contained fellow students in the master's program, one with students who started in 2017, and one with students who started in 2019.

All the FB groups are private, meaning they are only available to their members, who are all English teachers either in primary or secondary school or student teachers. The group administrator of the group Engelsklærere had to give permission before teachers could be asked whether they wanted to answer the questionnaire or not.

The questionnaire was furthermore shared with English language teachers in the researcher's personal network. All of the teachers receiving the questionnaire was encouraged to share it with their colleges or English language teachers they know. This makes it challenging knowing the exact number of teachers who have received it, and thus also how many of the ones who received it actually answered the questionnaire.

Since participation was fully optional, the research was depending on the teachers answering the questionnaire of their own free will. The sample of the questionnaire is therefore a self-selected sample, meaning it consists of the teachers, who out of all those informed, chose to participate in the research. The sample is thus not randomised (Grønmo, 2011). This may also have resulted in a somewhat skewed data set, based on the assumption that most of the teachers answering the questionnaire were teachers who felt successful in the work with communication during the online teaching.

Furthermore, the sample is quite small and therefore not representative for English language teachers as a whole. Consequently, no absolute conclusions can be drawn, and the results only indicate tendencies.

### ***3.1.2 Qualitative research method***

The qualitative method used in this thesis consists of a semi-structured focus group interview. This method was selected with the intention to cover the possible variations in the attitudes and experiences the different teachers have, and also in order to have the opportunity to alter, customize or add questions during the interview if new perspectives arose (McKey, 2010). By using this method, the aim was to gain a deeper and more detailed insight into the teachers' attitudes and experiences, which may add to the data gathered through the questionnaire.

A central tool in the interview process was the interview guide (Appendix B), which was designed based on the main aim of the thesis, the additional research questions and the

theoretical aspects presented in the previous chapter (Ch. 2). The interview guide, similarly to the questionnaire starts off with questions concerning the respondents' background, giving an insight into the dynamic of the sample group.

Next, the interview guide contains of questions concerning the teachers' reflections and experiences concerning the teaching of the English subject curriculum's aspects concerning communication. These questions are divided into the same categories as the questionnaire: The Use of Educational Technology in the English Subject, Organising the Digital English Language Teaching and Social Learning.

The focus group interview was conducted digitally using the video conference tool Teams (Microsoft, 2021). The interview was recorded using a dictaphone app provided by Nettskjema (UiO, 2021). This procedure ensured that the guidelines of NSD concerning anonymity were met. The app made a recording which was immediately delivered to Nettskjema (UiO, 2021) and its associated project, making it available only to the researcher. To further ensure the respondents' anonymity, all sensitive information about them, such as their names, age and contact information were anonymized in the transcription of the recording.

To compensate for the inconveniences conducting the group interview digitally may have resulted in, the respondents received the interview questions in advance, meaning they were able to prepare and reflect on their answers before the interview. This procedure may have resulted in a more elaborated and detailed discussion during the interview, e.g., better and more precise answers. At the same time, it is worth mentioning that this may also have its drawbacks. By providing the respondents with the questions in advance, their answers may become more staged and refined. The answers may thus not be as instinctive and spontaneous as one might have wanted.

**3.1.2.1 Sample selection.** The main aim of the focus group interview was to gain in-depth knowledge of the practical and didactical choices and experiences of the selected language teachers. Therefore, a non-probability sample was selected for the interviews (McKey, 2010). The sample was selected, combining a convenience sample and a purposive sample (McKey, 2010). First, all interviewees are English language teachers. Second, only lower secondary schools and teachers were contacted. Lower secondary school was chosen based on the assumption that these levels were among the ones who were affected the most by the digital distance teaching. Lastly, in order for the research to be as efficient as possible, only schools in the south-eastern part of Norway were contacted. This is also the region closest related to Østfold University Collage.

The sample of the focus group interview was gathered based on research on schools located in the same region as Østfold University College. The main criterion was the schools' size, both in terms of teacher staff and student in the schools. The initial contact was made through the principals of schools fitting the selected criterion, relying on their willingness to initiate further contact with their English language teachers. This process was twofold, as one school responded quickly and positively, while others needed additional follow-up requests. This lack of response is highly understandable, as the work situation at all schools was even busier than usual during this strange time in history. Some of the schools declined politely, others did not respond. The main challenge in the process of gathering respondents was determining what could be considered a sufficient sample size, and then gathering it. Smith and Osborn (2007) argue that five or six has sometimes been recommended as a reasonable sample size for a student project. This size allows sufficient in-depth engagement with each individual case but also allows a detailed examination of similarity and difference, convergence and divergence (Smith & Osborn, 2007).

### **3.2 Data analysis**

The data gathered through the two methods was analysed using quite different methods. These will be presented separately in the following section.

#### ***3.2.1 Quantitative data analysis***

The quantitative data collected through the questionnaire was automatically classified by Nettskjem (UiO, 2021). The data was delivered and organized in a spreadsheet in the format of an Excel file. This was quite helpful, as the process of classifying the data in such a way manually would have been very time-consuming. The data was enumerated in accordance with the enumeration of the questionnaire. The full dataset can be seen in the appendices (Appendix D).

The data was analysed using a descriptive data analysis method. The data was first considered using a descriptive, univariate statistical analysis, meaning one variable is being considered at a time (Grønmo, 2004). Then, some of the findings were compared, by considering how the results may be connected. Methods such as frequency and cross tables are utilized, as well as measures of central tendency. Some of the findings from the univariate analysis will also be presented using graphical illustrations.

### ***3.2.2 Qualitative data analysis***

The qualitative data collected through the semi-structured focus group interview was analysed using a phenomenological analysis. This analytical method studies the structures of a phenomenon in its context and the variations in the structure (Kvale & Birkmann, 2015). Such methods can be described through both three and five separate stages (Giorgi, 2009). In this thesis, the three stages were used.

As the interview was conducted and transcribed, the structured analysis began. In the first stage of the analysis process the transcribed interview was read thoroughly, in order to get an overall understanding of the respondents' answers (Giorgi, 2009). In this setting, the interview process and the circumstance surrounding it was considered, to grasp the bigger picture, as these factors may impact the answers and the flow of the interview (Giorgi, 2009).

In the second stage of the phenomenological analysis, the elements and sections containing the most important information was identified and separated. Here the task was to identify reoccurring and central themes so that they could be described as accurately as possible (Giorgi, 2009). In doing so, it was also important to do it in such a way that the original message and meaning of the respondent was kept and not altered or changed in any way. By uncovering themes in the interview, the task of further analysis, presentation and discussion was made easier (Giorgi, 2009). When organising and sorting the interview data, the enumeration of the questions was of great help. In some studies, exclusively using a qualitative method, the collected data sample size may be quite overwhelming and unclear. In such cases, further categorization may be of great help in the analysis. In this study, however, the qualitative sample size was not as large, and it was combined with a quantitative method. Therefore, the enumeration of the interview questions was an acceptable way of coding the data from the focus group interview.

In the process of analysing a data set, considering what is important and central may vary between researchers. Giorgi (2009) argues that the researcher at this stage of the analysis considers the answers and descriptions given by the interviewees on their own, without any theoretical connection yet. Thus, the researcher has to consider what criteria are used in the specific context in determining the importance of the data. In this thesis, the research questions were used in doing so. It is, however, important to be open to and aware of the possibility that the respondents may provide new themes or viewpoints not previously thought of.

The third and final stage is the most comprehensive and time-consuming part of the analysis process. This stage does also contain multiple steps. First, the interview was reduced, so that only the selected parts from the previous step, which are considered most important and

relevant, were left. These parts containing the data which will be used in the research. Shared attitudes, feelings and experiences between the different respondents were looked for. These findings were used to make a summary of the respondents' attitudes and experiences of the phenomenon at hand (Giorgi, 2009).

### **3.3 Ethical considerations**

When research involves and depends upon the knowledge about and experiences of human beings, some ethical considerations must be made. In a Norwegian context, The Norwegian Social Science Data Service (NSD) provides the guidelines for ethically correct research. The main goal is making sure research is done in a respectful way towards the respondents. Consequently, a detailed application which described the intended setup and methods of the present research had to be sent to NSD. The application had to be approved before the research process could begin.

The research of this thesis involves two different sample groups. One sample group answered a fully anonymous questionnaire using Nettskjema (UiO, 2021). As no login details were required, it was impossible to identify or connect any answers to any of the respondents. In the introduction of the questionnaire, the respondents were informed about this and ensured that they would remain anonymous (See Appendix A).

The other group participated in a semi-structured focus group interview. In order to ensure that the participants were fully aware of what their participation involved, they were provided with an information letter. The letter described the research and its purpose, that participation was voluntary, that the respondents would remain anonymous, and that their answers would be kept safe and only available to the researcher. The document also acted as a consent form (Appendix C). All the data these teachers provided was anonymized in order to protect their identities.

All data were treated in line with the guidelines of NSD (NSD, 2021) during the research process. Furthermore, all teachers were informed that the research data will be deleted when the research is completed.

### **3.4 Research quality**

Grønmo (2004) describes data collection in research as a production process, where the product is the data needed to illuminate a specific research question. As with any other product, the data of a research project may be of varied quality. Producing data of a certain level of

quality is crucial for the analytical aspects of the research to result in reliable and rewarding results (Grønmo, 2004).

Establishing and deciding what quality research data actually involves can seldom be done in one general way. The quality of the data must be seen in connection with the given context in which it is to be used. The data aim to answer the research question of the research, and its quality can thus be determined based on the degree to which it does so (Grønmo, 2004).

When trying to make a general starting point for determining the quality of research data, some general tools have been established, such as method triangulation, reliability and validity (Grønmo, 2004).

#### ***3.4.1 Method triangulation***

Combining qualitative and quantitative research methods involved method triangulation, which means utilizing both qualitative and quantitative analysis methods. In doing so, the aims of the research are viewed using different data and methods (Grønmo, 2004). By using triangulation, the quality of the research may increase as the qualitative and quantitative findings may complement each other, equalizing the weaknesses of each method and viewing the phenomenon from different perspectives. This may result in a more nuanced and holistic understanding of the phenomenon (Grønmo, 2004).

#### ***3.4.2 Reliability***

The reliability of a dataset is high if the research setup and methods produce the same or highly similar results when used on different occasions, but concern the same phenomenon (Grønmo, 2004). The higher the similarities are between the different data sets, the higher the reliability is.

In an actual research setting, determining this may be challenging. This is due to several factors, e.g., many phenomena are ever changing or too complex, or the research setup may be too flexible (Grønmo, 2004). This is especially relevant for qualitative research. Reliability is still a good base for discussing the quality of a data set, the selection process of informants and the implementation of the data collection process (Grønmo, 2004). By establishing a clear framework in both the empirical and theoretical foundation, other researchers can replicate the work and reach similar results.

#### ***3.4.3 Validity***

The validity of a data set refers to how suitable a research method is to a selected research aim. The validity is high if the research method results in data relevant to the aim of

the research objectives, and the more relevant the collected data is to the research aim, the higher the validity is (Grønmo, 2004).

Johannessen, Christoffersen & Tufte (2017) separates between internal and external validity. Internal validity indicates whether the research actually researches what it is intended to research, i.e., whether the collected data is related to the phenomenon in question (Johannessen, et al., 2017). In the context of qualitative methods, it can be challenging to decide the validity, as well as the reliability of the findings. A general approach, where the overall impression of the research process is considered, and to what degree this appears trustworthy, may thus be implemented (Grønmo, 2004). Continuity and transparency in the presentation of the research procedures are essential in this process. The research of this thesis has strived to follow these guidelines by establishing a clear approach and by following this as consistent as possible. By presenting the research process as transparent as possible, the readers are given the possibility to evaluate themselves whether the study is internally valid (Grønmo, 2004).

External validity involves the transferability of the research, i.e., the extent to which the findings of one research project can be transferred to another (Johannessen et al., 2017). In quantitative studies this involves the transferability of knowledge, while in qualitative studies the results may be generalised based on statistical analysis (Johannessen et al., 2017).

As the qualitative results of this thesis are based on a relatively small sample group ( $n=5$ ), the transferability is limited. One may assume that the findings are similar at schools with the same conditions, e.g., geography, the number of teachers and students, and technological level. However, these factors vary significantly between schools, and it would be difficult to find schools with exactly the same conditions.

The quantitative findings are also based on a limited sample size ( $n=31$ ) compared to the total number of teachers in Norwegian secondary schools. The findings are thus mostly a reflection of the attitudes and experiences of the respondents. Still, the sample is quite varied in terms of the respondents' age, length of education, length of experience and grade in which they teach. There is, however, a dominance of female respondents ( $n=29$ ) compared to male respondents ( $n=4$ ). One may argue, though, that this reflects the skewness between the two genders present in the teaching community in general.

## **4. Results**

In the following chapter, the results of the quantitative questionnaire and the qualitative focus group interview are presented. The responses to the four parts of the questionnaire will be presented chronologically. The findings which are most prominent will be given the most

attention. The results of the questionnaire can be seen in full in Appendix D. Furthermore, the results of the qualitative focus group interview are presented using the four main parts of the interview guide (Appendix B).

## **4.1 Quantitative questionnaire**

### ***4.1.1 General information***

The questions concerning the general information about the teachers are relevant in getting an overview of the sample. These are closed questions, with a set of answers to choose from. The total number of respondents were 31, and the results of the questionnaire show that 27 of these were women, corresponding to a percentage of 87.1. As discussed in connection to the validity of the research (cf. Ch. 3.4.3), the female dominance reflects the skewness of the two genders present in the teaching community in general. The actual skewness is, in fact, not as large. Numbers provided by SSB (Perlic & Foss, 2021) show that, as of June 2021, 74.4 percent of teachers in Norwegian primary schools are women. The questionnaire shows a majority of teachers in the age group 41 – 50 (12 respondents). The other age groups present, 51 – 60, 31 – 40 and below 30, were quite equally represented, with six, seven and six respondents respectively. There were no respondents in the age group above 60 years. All three grades of lower secondary school were represented. Nine teachers taught in more than one grade, resulting in the following division: 17 teachers taught in the eighth grade, 16 in the ninth, and 14 in the tenth grade.

The question concerning the teachers' education, revealed that all the teachers were generally quite well educated, and 87 percent of the teachers had five years of education or more. As regards the teachers' experience, 17 of the teachers had more than eight years of experience, while six had between four and seven years, and six teachers had less than four years of teaching experience. Relatively few teachers had any courses or further education related to the use of educational technology. Only six of the teachers reported of this and said that the course or education often was initiated on a personal initiative and was most often acquired through a university or university college.

### ***4.1.2 The use of educational technology in the English subject***

In the second section of the questionnaire, the teachers were questioned about their use of educational technology. First, they were asked to rate the quality of the available educational technology, both to themselves and their students. This was done using a Likert scale with a range of one to five.

With an average score of 3.97, and 67.74 percent of the teachers rating the available technology to either four or five on the Likert scale, the findings indicate a fairly high level. No one rated their available technology to one, and only one rated it to two. As for the educational technology available to their students, this was, although not at the same level as what was available to the teachers, also quite sufficient, according to the respondents. The teachers rated this to an average score of 3.73. Slightly more than three quarters (77.42%) rated it to either three or four, none to one, and only one to two on the Likert scale.

Furthermore, the teachers were asked to answer to what extent they agree or disagree with a set of statements. A Likert scale was used, where scale score one indicated total disagreement and scale score five full agreement. The teachers' attitudes towards educational technology were in general quite positive, and 80.65 percent claimed that technology is an important part of their English language teaching under normal circumstances (they chose either scale score four or five on the Likert scale).

The teachers also felt that educational technology facilitates new possibilities in didactic thinking compared to more traditional teaching material. The average agreement is 4.16, and 83.87 percent rate it as either scale score four or five on the Likert scale. The teachers believe that educational technology has a motivating effect on the students' learning in English. Eight teachers fully agree (scale score one), and 16 mostly agree (scale score four). Only one totally disagrees (scale score one), and another one mostly disagrees (scale score two).

Lastly, the teachers were encouraged to add any additional comments concerning the topic of the questions. Only six teachers chose to do so. Despite the limited response rate, an interesting finding was done. Of the six additional comments, three concerned the motivating effect of educational technology. One of the teachers argued, despite mostly agreeing with the statement (scale score four), that "[...] the motivational effect of educational technology on students has decreased in the last 20 years because it is not something new to students now, though the quality of the available material has improved a lot" (Respondent No. 14492958, 2021).

Another teacher stated that "educational technology does indeed have a motivating effect; however, the students need to be educated in using technology for educational purposes - not only entertaining purposes or becoming "google" experts" (Respondent No. 14502016, 2021).

The third teacher added that "the types of tasks are more of a motivational factor than the medium" (Respondent No. 14505910, 2021).

### 4.1.3 Organising digital English language teaching

The third section of the questionnaire concerned the way the teachers organised their digital English language teaching. They were asked to use a Likert scale ranging from one to five to show how often they used different didactical methods or learning materials in their language teaching. Scale score one indicated that the teachers never used the specific method listed nor the learning material, and scale five indicated that the method or material was used several times a week.

The average use of the different methods is visualised in the following bar chart (Figure 1).

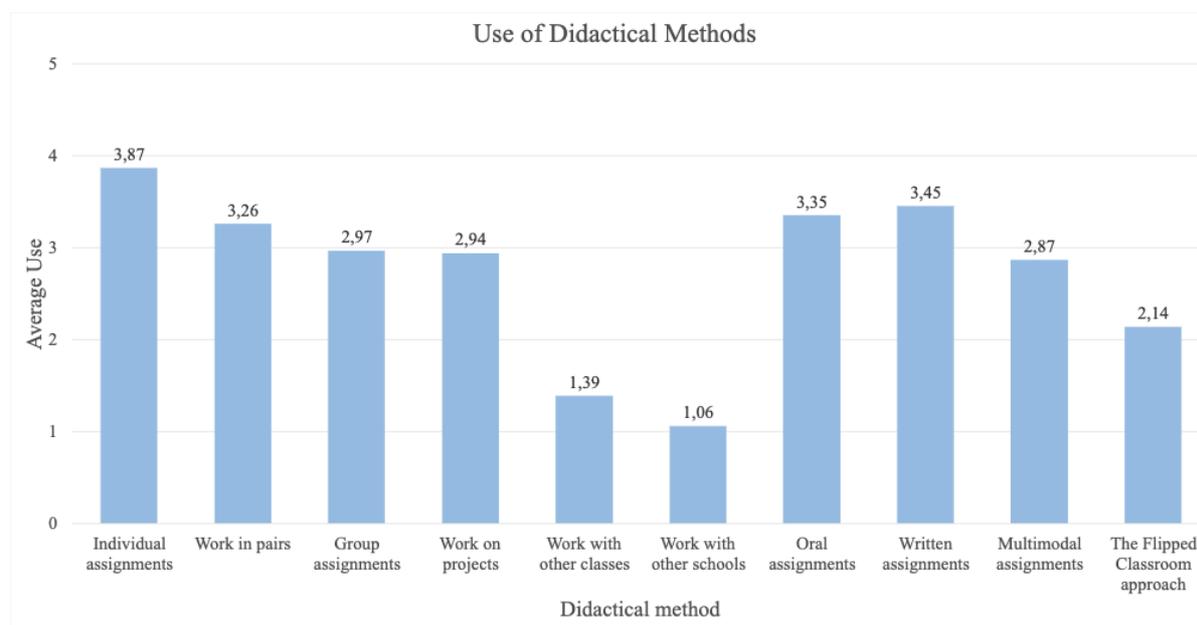


Figure 1 Average Use of Didactical Methods

As can be seen, the digital work was most often organised as individual assignments. The chart displays that the division between oral and written assignments was fairly equal, with a slight favour of written assignments. Further, cooperation between classes, followed by cooperation between schools, are the least used methods. Only eight teachers reported that they cooperated with other classes. Among these, only one did so fairly often (scale score four), two did so on occasion (scale score three) and five had used the method at some point (scale score two). Only one teacher reported cooperation with another school: “We called a school in Tanzania using Skype and are in constant dialogue with them monthly” (Respondent No. 14392783, 2021).

The question concerning the teachers' relationship with the Flipped Classroom Approach, revealed a polarised situation. The teachers either never used this approach (12 responded scale score one), or they used it a fair amount of time (nine responded scale score three, two responded four and one responded five).

As for the learning materials the teachers used, the results are displayed in Figure 2.

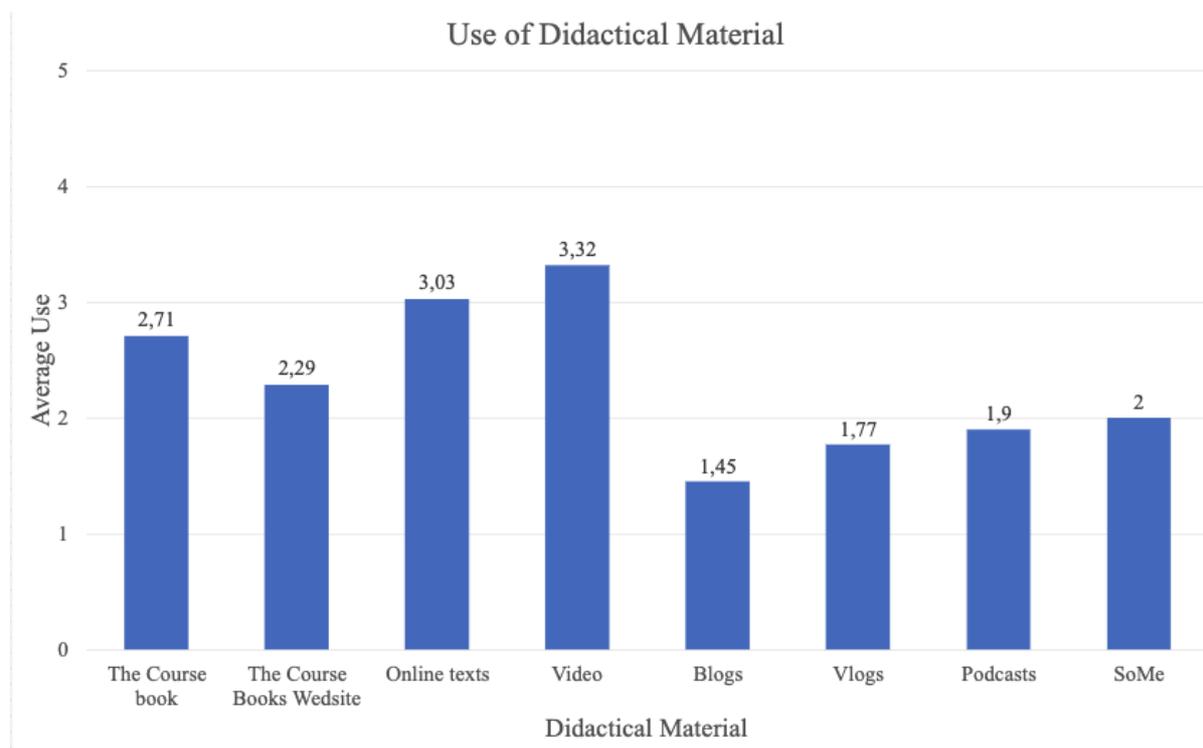


Figure 2 Average Use of Didactical Material

The three most common didactical materials were video, online texts and the coursebook. The results show that more traditional learning material is still dominant in English language teaching. However, other material such as podcasts, which have had a significant rise in popularity in society in general the last few years, seems to gradually enter the classroom.

Furthermore, social media is used fairly sparsely in the context of communication in the digital language classroom compared to its widespread use in society as a whole. Social media has become an integral aspect of our everyday life, and much of the daily communication happens on various social media platforms. Among Norwegian children and youths between the age of nine and 18, an astonishing 97 percent have their own cell phone (Rosenberg & Vesland, 2020). In the same age group, 80 percent use Snapchat (<https://www.snapchat.com/>), while TikTok (<https://www.tiktok.com/en>) and Instagram (<https://www.instagram.com/>) are

each used by 65 percent. Just above half (51 percent) of the age group between nine and 18 use Facebook (<https://www.facebook.com/>)(Rosenberg & Vesland, 2020).

Moreover, the teachers were asked to describe one or two teaching situations containing student language and educational technology they felt were successful. They were asked to do so in written form. The response rate for this question was 15 out of 31. The situations the teachers described were quite varied. The tasks ranged from reading texts through online video communication, playing online games, conducting group discussions online, having online presentations, both live and recorded, having video conferences with other classes abroad and producing podcasts. One of the teachers described the following teaching situation where the students played an online role-playing game:

In my class, we prepared and performed a tabletop role-playing game called Dungeons and Dragons. The students prepared characters using a character builder online, and then they created backstories for these characters to make the role-playing more immersive. We then used a website called Roll20 to play together online. As this game is an English one, where the students need to communicate and work together to create the story they are playing, they are able to exercise the ability "to express themselves and interact in authentic and practical language situations" (cf. a competence goal in the English subject curriculum, The Norwegian Directorate of Education, 2020). The act of storytelling and communicating both individually, in character creation, and in a group during sessions were part of the educational technology used for this purpose. The students were also asked to watch an episode of a stream in which others were playing the game, providing them with expectations and giving them an example to follow (Respondent No. 13758658, 2021).

Another teacher described the following teaching situation:

I have divided the students into groups which have worked together through Teams to read up on and prepare brief presentations on, for example, historical events, literature, and politics. They have then given their presentations in the digital classroom, after which we have had class discussions on what we have learnt from the students' presentations (Respondent No. 14386223, 2021).

A third teacher described a teaching situation where the students held “professional discussions, where they discuss a book or text we have read - and audio-taped the conversations” (Respondent No. 14504886, 2021).

A couple of teachers explicitly expressed that the circumstances hindered them from working on the aspect of the curriculum concerning the students participating and interacting in authentic and practical language situations. One teacher said that the digital teaching period was too short, and the number of English courses too few to assign tasks that let the student “express themselves and interact in authentic and practical language situations” (Respondent No. 14504681, 2021).

Another respondent expressed a similar experience: “They didn't. We've only had the minimum amount of distance learning, when they worked in groups in Google Meet, all the groups talked in Norwegian when I checked in on them” (Respondent No. 14508516, 2021).

The teachers were also asked whether they felt their students had reached a sufficient learning outcome through the digital language teaching, both orally and written. They express this using a Likert scale ranging from scale score one to five. Only 27.59 percent claim that their students have reached a sufficient and satisfactory learning outcome for written communication (scale score four or five). Close to two thirds of the teachers (65.52 percent) claimed that their students have only reached a somewhat satisfactory level in this aspect (scale score three). Only one teacher claimed that the students did not reach a sufficient and satisfactory learning outcome for written communication at all (scale score one).

Generally, most teachers felt that their students achieved a better and more satisfactory learning outcome in the written aspects of the subject compared to the oral aspects. The teachers' average rating of the oral learning outcome was 2.89, compared to the rating of 3.24 for written communication. Also, 27.59 percent of the teachers claim that their students have reached a sufficient and satisfactory learning outcome for oral communication (scale score four or five), which, interestingly, is exactly the same score as the learning outcome for written communication. However, 34.48 percent of the teachers claimed that their students had only reached a somewhat satisfactory level in the oral aspects (scale score three), and 37.93 percent reported that their students had not reached a satisfying and sufficient learning outcome in oral communication (scale score one and two).

Moreover, the teachers were asked about the challenges they faced during the period with digital English language teaching. They were asked to describe the challenges, the

consequences that followed, and how they worked on solving them. This was done in written form. Here also, the response rate was about 50 percent. The most common challenge reported by the surveyed teachers was the limited time available. One of the teachers explained it as follows:

The most challenging experience was the limited time we had available. The students quickly learned how to use the tools needed [...], but in distant learning, most things take more time. Things like starting the lesson or ensuring that every student has been informed at different times during the lesson (Respondent No. 13759473, 2021).

Another challenge was of ethical concern. The teachers cannot, as pointed out by several of the teachers, demand their students to have their web cameras turned on, which made communication and teaching difficult: “Students do not want to participate in a digital classroom. You don't even know if they are paying attention as you can't demand they have their cameras on” (Respondent No. 14391371, 2021). Another teacher expressed it as: “Many students refused to turn on their cameras, which made them invisible (in both a literal and symbolic sense)” (Respondent No. 14386223, 2021). A third teacher said that: “The problem is, the screens are dark. They don't want to participate once they go online from home” (Respondent No. 13758314, 2021).

The third section of the questionnaire also concerns the teachers' professional digital competence and how the teachers felt this has developed through the pandemic. The teachers were again asked to answer a set of statements using a Likert scale, where scale score one indicated total disagreement and scale score five full agreement.

Most of the teachers reported they felt fairly confident in using educational technology prior to the pandemic (question 3.4.1), as 70.97 percent answered either scale score four or five on the Likert scale. Only three teachers responded that they did not feel too confident (scale score two) in using educational technology in their teaching; one teacher did not feel confident at all (scale score one).

As for the knowledge of using educational technology after the pandemic, a majority of the teachers felt their professional digital competence had increased significantly during this period. Of the 31 teachers, 23 claimed that they have considerably better knowledge (scale

score four or five) of the possibilities educational technology provides after this period of distant teaching (question 3.4.2). In addition, 22 of the 31 teachers also reported that they feel more confident (scale score four or five) in using educational technology after the period of distant teaching (question 3.4.4).

When asked whether they have received guidance concerning the use of educational technology or not during the same period, the average result was 2.52 (question 3.4.3). Of the 31 teachers who responded, 12 reported that they had received little or no guidance (scale score one or two) and only six reported that they had received a substantial amount of guidance (scale score four or five).

#### ***4.1.4 Social learning***

In the final section of the questionnaire, the teachers were asked to what degree they consider English language learning as an arena for social learning. They were also asked to what extent they were able to let communication in English be a factor in developing social learning during the pandemic. This was both done using a Likert scale of one to five.

The teachers did indeed consider English language learning as an arena for social learning (question 4.1). More than 80 percent (83.87) answered either four or five on the Likert scale, and no one replied neither one nor two. Despite this, the teachers did not feel they managed to let communication in English be a factor in developing social learning during the pandemic (question 4.2). Only 41.95 percent of the teachers claimed they managed letting communication in English be a central factor in developing social learning during the pandemic (scale score four or five).

## **4.2 Qualitative focus group interview**

When the recorded focus group interview was transcribed, the data was organised using the four sections present in the quantitative questionnaire and the interview guide for the qualitative focus group interview. These categories were: general information, the use of educational technology in the English subject, organising the digital English language teaching and social learning. During this process, a content analysis was conducted, which involved looking for answers which appeared as particularly relevant.

In the following section, the findings of the focus group interview are presented. The interviewees preferred conducting the interview in Norwegian, hence, the quotes have been translated into English. Furthermore, to maintain the teachers' anonymity, their names have

been replaced by the letter R (Respondent) and a number from one to five, correlating to the order they introduced themselves.

#### ***4.2.1 General information***

The first section of the interview concerns general information about the interviewees, such as their age, education, what year they teach, length of teaching experience and any relevant courses or further education related to the use of educational technology.

The interview sample is quite varied. Out of the five teachers, three are women and two men. The age of the teachers varies from the early 30s to the early 60s. The five teachers participating in the focus group interview were divided quite evenly between the three years of lower secondary school. The length of their education in English varied more, ranging from one-year programmes to a master's thesis. All the teachers had extensive experience in teaching English, all having more than ten years of experience in teaching the subject. However, for one of the respondents, only four of these years were in lower secondary school; the rest were at lower levels. None of the teachers mentioned any further education related to the use of educational technology.

#### ***4.2.2 The use of educational technology in the English subject***

In the second category of the interview, the questions concerned the use of educational technology in the English subject. The first question of this category asked the following: "What role would you say educational technology plays in teaching the English subject under normal circumstances?"

The teachers were quite unanimous in their response to this question. Educational technology had become quite central in the teaching of the English subject, and had (in their cases) fully replaced more traditional teaching material. The school where the interviewees worked had fully transitioned from using analogue coursebooks and notebooks to utilising digital resources. The school used a licenced digital coursebook named Stages (Røkaas & Pettersen, 2020) as the main teaching material and the Microsoft software OneNote (Microsoft, 2021) for any written tasks. One of the teachers uttered that: "Practically, it has replaced the coursebook. Instead of struggling with outdated coursebooks, we find the teaching material, texts and tasks, the clips, and the specialization digitally" (R4).

The teachers strongly appreciated this change and the new digital teaching material. They claimed that this made the organisation and execution of the classes easier and more effective. They argue that this resulted in fewer challenges concerning collecting and documenting the work the students do, as everything is gathered in one place, i.e., in OneNote.

This gave the teachers a better overview of the students' work and a more elaborate and solid foundation for giving feedback and assessment, both formal and informal. One of the teachers in the 10<sup>th</sup> grade said, in connection to deciding on the final grade: "I have never had an easier task getting a solid foundation, both written and orally, and that in spite of us not having the students present. It is the use of OneNote and its recording function which does so; we now have two solid sound files which contribute to the final grade" (R3).

In the second question of this section, the teachers were asked: "How would you describe the state of the educational technology available to you during the period of digital English language teaching, both at school and home?"

The state of the educational technology available to themselves was, according to the teachers, quite good. One of the teachers said the following about the digital coursebook: "In fact, I feel that it is extremely good, [...] grammar videos and snacks, sound files and texts, and you have really ... you name it almost, the digital coursebook, it is a huge step up (R5)." The general coverage in terms of available software was, however, a bit better than the hardware: "The teachers have the same PCs as the students, and I think that maybe the teachers should have PCs which were a lot stronger and better" (R5).

Furthermore, the teachers were asked about the quality of the educational technology available to their students. Similar to that available to themselves, the teachers felt that this was generally fairly good. The school has a 1:1 coverage of student computers, even though the quality of these were, according to some of the teachers, not of the highest level: "We have some very inexpensive PCs, to which a lot of strange things happen, for example, suddenly everything can delete itself (R1)".

In addition to the digital coursebook and OneNote (Microsoft, 2021), the school has a licence to Clarify (Searis, 2021), a digital dictionary service. The teachers report some but generally few technical issues. Lack of, or poor quality of students' home internet connection, for example, seldom causes any issues for the language teaching process: "bad internet connection, it is in fact a long time since anyone has complained about that (R3)".

When asked how the availability of educational technology has impacted their digital language teaching during the period of digital language teaching, the teachers argued that the technical aspects of the teaching were not the main issue, but rather the general situation of being separate and other challenges due to exclusively working digitally. When the technology caused challenges, these often concerned lack of or poor sound quality, lost documents or other learning material. Such challenges mainly resulted in the flow of the teaching situation being interrupted or staggered. One challenge, which several of the teachers experienced, was getting

hold of all their students during a school day. This challenge is not directly caused by any digital learning material or method but is closely related to the overall context of digital teaching. Even though the students should be available digitally during the day, this was not always the case, as one of the teachers pointed out: “There are challenges, of course, we can’t always get hold of everybody all the time. I believe the threshold for logging off Teams is much lower than just walking out of the physical classroom and not participating (R1)”.

One of the teachers who experienced this felt that there were similarities between this situation and the ones in the classroom: “The students who are present at school and are actively participating, they are so at home too, and those who [...] skip school, they do so even more when at home” (R5).

#### ***4.2.3 Organising the digital English language teaching***

In the third section of the interview, questions concerning organising the digital English language teaching were the topic. The first question asked: “How have you been organising the digital English language teaching in the period of distance teaching in order to work on the aims concerning communication?”

The teachers explain that they have not had too many periods of full lockdown, but rather every other day at school and home with digital language teaching. When at home, most of the oral conversations were conducted using Teams (Microsoft, 2021) and all written work was done in OneNote (Microsoft, 2021). In terms of the organisation of activities and assignments, the teachers tried to plan these so that they were easily understood and that all the students would manage to solve them without too many technical and organisational issues or questions:

There are fewer instructions (teacher-centred lessons); we try to make assignments which are a bit more self-driven. Students in English are at significantly different levels [...], so R4 and I always try to have the same theme, but divide it into easy, medium, hard [...], and as far as it’s possible, work with the same text (R1).

Much of the work was based around the digital coursebook *Stages* (Røkaas & Pettersen, 2021). The teachers illustrate the digital coursebook as well-structured and rich in content, with a lot of room for variation. Since the coursebook is digital, it is quite simple to provide links to either texts or assignments presented in the coursebook at any given place in OneNote. One of the teachers explains it the following way: “We try to use the texts, sound files and tasks which

come with it (the coursebook), the span in the tasks that come with the texts are very varied and large (R5)”.

In addition to the digital course book and its features, the teachers use teaching methods and material such as recording of sound files, online chat, hyperlinks, screenshots, podcasts (both recorded and self-made), the webpage TV2 Skole (TV2 Skole, 2021), BBC Newsweb (BBC, 2021), The Kids Should See This (Nakaya, R., 2021) and YouTube videos (YouTube, 2021).

Many of the teachers found using sound recording to be a productive learning method in oral assignments. In doing so, the students were given the opportunity to listen to themselves and use the recording when practising speaking. Furthermore, this method also made it possible for the teachers to gather a good impression of the oral abilities of all their students. One teacher described a lesson where video clips from the web page The Kids Should See This (Nakaya, R., 2021) were used, followed by suited tasks:

It is a portal or platform, which have suited, short videos [...], all sorts of things are presented. I had given two small video clips as a digital assignment. The students should write a small summary in English of the first video clip: what was it about? And for the second video clip, I wanted them to note down seven new words (previously unknown to the students) (R4).

The English subject curriculum highlights the students’ ability "to express themselves and interact in authentic and practical language situations" (The Norwegian Directorate of Education, 2020). In connection to this, the teachers were asked how their students had been communicating in English with others using educational technology in the course of the distant learning period. This lack of communication was an area of concern for most of the teachers:

The communication in itself has died in a way, well the natural communication has been very on and off. I feel it’s quite a long time since I had any experience of maintaining any sort of theme (in a conversation) with a student or remember something a student is passionate about, which I could then later pick up on and ask about in English. So, that is completely gone (R4).

Another teacher expressed it in the following way: “It is not that competence aim I focus most on when we are forced to have classes on Teams, then we rather save it and focus

more on it when we are physically present (R1)”. Among the factors influencing communication is the uncertainty of the situation: “I feel that it is easier to focus on written work when..., I have been thinking the whole time that this is very temporary (R1).” Another factor mentioned is the peculiarity of online communication: “There is something strange with oral and authentic communication in Teams as well. Something strange and forced with having the silence, so many awkward situations, and we do not turn on the cameras” (R4). A complementing finding was uttered by R3:

The students we hear now is often those students that I maybe do not hear so much normally, who would not take the floor at school in the same way. I feel that the invisible students who are shy and silent, I feel that they have gotten more opportunities to show what they are good for.

In the context of organising the digital language teaching, the teachers were asked to describe a learning situation they felt was successful, in which the students worked according to the competence goal from the subject curriculum and where they used educational technology for this purpose. One of the teachers described the following learning situation:

I used sound file today. There were two students who had a conversation. Sound file is basically when you record a conversation, making it possible for you to listen to it afterwards. Student One and Two talked in length about the topic we were working on, and recorded it. You get a genuine conversation which you can listen to later (R2).

Another teacher (R5) described a similar experience, where the students had made a stream. This involved them sharing their computer screens with each other, conversing about what they were showing each other and recording the conversation.

As the circumstances surrounding the English language teaching during the pandemic were quite unusual, challenges were unavoidable. This was therefore the topic for the next question of the interview, which asked: “What challenges have you experienced when working on the aspects of the curriculum concerning communication using educational technology?”

One of the main challenges the teachers experienced had to do with the motivation of their students. The uncertainty of the situation was given as some of the explanation: “Getting them to do anything at all at home for a period now has been challenging no matter what you

suggest (R3)”. Related to this are the possible distractions which come with digital technology, as all work is done using a PC:

I am pretty sure that there is much less writing when we have a 90-minute class, and when they (the students) shall sit and write on a PC, it is very easy for a 13, 14 and 15-year-old to get caught up in something much more exiting, some sort of game or something, and I believe that this happens more often than we know (R1).

The teacher felt that the digital teaching made it even more challenging to achieve a holistic overview and continuity in the teaching:

I find that there are more opportunities when we are together, because, I think of such things as in-depth learning, and [...] to follow up, build a competence that I in some way have an overview over. In that respect I feel that Covid-19 and Teams have been an uphill battle! It cannot replace working together at school (R4).

Backing this up, R3 expressed that:

That’s what I have experienced, that it boils down to the number of students, whether it is digitally or at school, whether you are checking the written or oral competence, it boils down to the number of students you have in the room or your Teams group.

Another challenge one of the teachers pointed out was related to the teaching method using recording of sound files:

It is (sound recordings) certainly very good in many situations, but at the same time, we have to be cautious, especially if the students work alone, that the assignment does not turn into a written task: that they write something and simply read it out loud. [...] we must make sure they get to practice authentic communication (R2).

Also related to spoken language, R5 expressed the following challenge: “I find it challenging to get the students to speak English in class, even more so when using educational technology. I have not gotten to where there is an “English environment” in class.”

Lastly, some challenges related to the language and the digital competence of the students were mentioned. One of the teachers explained that some of their students were refugees and quite new to Norway. They had limited communication skills in English, and did in addition, have little or no experience using educational technology. This situation made organising digital learning situations suited for these students even more challenging. The lack of digital competence also resulted in challenges getting hold of some of the students in this category during the distance teaching periods.

The teachers were also questioned about the development of their personal digital competence, for instance, considering the use and implementation of educational technology. The teachers were quite unanimous in their responses. All of the teachers felt that their digital competence had developed for the better, both in terms of knowing what was available to them and in using it. One of the teachers said that “ending up in this situation with Covid-19, learning all the functions with recording and using OneNote (Microsoft, 2021) and being able to master Teams (Microsoft, 2021) and such, has made our job much easier (R3).” This said, they recognized that there may be lots of recourses still undiscovered: “There are surely thousands of very good resources that we have not discovered yet (R1).”

#### ***4.2.4 Social learning***

The last section of the focus group interview concerned social leaning in the English subject. The core curriculum emphasizes that the “school shall support and contribute to the social learning and development of the pupils” (The Norwegian Directorate of Education, 2020). In this context the teachers were asked: “To what extent do you consider English language learning an arena for social learning?” The teachers recognised the importance of social learning in the English subject, but at the same time they expressed that this was one of the aspects which suffered during the pandemic:

If we are talking about distance teaching, social learning is something I choose to wait with until we are physically present. I do it a lot normally, would you rather, for example, meaning having the students choose between two alternative hypothetical scenarios. Sometimes we try to practice becoming a better listener. If they discuss with the student next to them what they would have chosen, they sometimes get a surprise, when I ask them what the other student answered. They then have to explain their partner’s response instead, making them become better listeners. But again, that’s not the most suited for Teams (Microsoft, 2021) (R1).

Furthermore, the teachers were asked to what extent they had been able to let communication in English be a factor in developing social learning during the pandemic. This aspect was also given less focus during digital teaching compared to before. R3 expressed that: “Everybody miss having the students gathered, well, no PC can replace us and the direct communication”. One of the teachers explained how it is possible to organise tasks which contain some sort of social contact, but that this is more challenging when using educational technology: “You could give them assignments in pairs or trios and such, so that they at least get some contact with each other when they are at home” (R2). R5 argued that the grade level has an impact on the success and feasibility of such tasks:

[...] if you have students who are confident and know each other. Lately we have used so called Breakout rooms in Teams, you (the teacher) decide to divide them (the students) into groups, and then they end up in groups of three, for example. They can then discuss something [...], and you can visit all the rooms.

Adding to this, R3 argues that the grade level also impacts the digital teaching in general, e.g., in terms of technology use: “I believe there is a difference having them at the end of the term, where they have learned [...] how to make a sound file and how to use tools properly.”

In connection to maintaining the social interactions between the students in this period and how the student relations have been impacted, the teachers believed that social aspects at their schools were not impacted too heavily, due to the fact that they had experienced few periods of full lockdown. R1 expresses this as follows: “We have not had too much full lockdown; we have mostly had a locked situation every other day. We have had quite regularly contact, just that every other day has been in Teams (Microsoft, 2021).”

Likewise, the teachers felt that the relationship between them as a teacher and the students, was not changed too much. This said, one of the teachers expressed the relation to one group of students to have improved through the period of distance teaching: “I feel that as to the one-to-one contact, there are some, well, the quiet and cautious students, I have much more contact with, I feel I know them better. We talk much more often (R3).”

## **5. Discussion**

The findings presented in the previous chapter were gathered to gain insight into English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic. In this process, three research questions of the thesis were central.

Q1. How did the teachers facilitate the use of educational technology through this period to reach curriculum aims concerning communication?

Q2. To what extent do the teachers now feel confident using technology in their teaching compared to prior to the Covid-19 pandemic?

Q3. The core curriculum emphasizes that “school shall support and contribute to the social learning and development of the pupils”. To what degree did the teachers succeed in focusing on this perspective in the teaching of English during the pandemic?

In the following chapter, the findings of the quantitative questionnaire and the qualitative focus group interview (see chapter 3) are discussed in light of the previous research and the theoretical foundation presented in chapter 2. The findings illustrate the experiences of the two sample groups of the research. Due to their somewhat limited size and the fact that they are not randomized samples, caution is important in generalising the findings and making any absolute conclusions. This being said, by connecting the findings to previous research and established theory, they can indeed provide interesting and practical insight into the use of educational technology in the English subject in lower secondary school.

### **5.1 Accessibility, attitudes and success**

Few would contradict Blikstad-Balas & Kletten's (2020, p. 56) statement that “ICT (educational technology) infrastructure is an obvious prerequisite for integrating digital technology into instruction”. Blikstad-Balas & Davies (2017 in Blikstad-Balas & Kletten, 2020) show that schools feel pressured to provide a 1:1 coverage of a digital device to all students. One may argue that this is in fact essential if any digital distance teaching is to be successful.

The research presented in chapter 2 shows that most lower-secondary schools in Norway can provide a permanent 1:1 access to educational technology, either by lending laptops or tablets to their students or by having computer rooms available at school (Blikstad-

Balas & Kletten, 2020). The latter is, however, not the best fit for digital distance teaching. Fjørtoft (2020) also found that 91 percent of the lower secondary schools surveyed in their work reported a 1:1 coverage of computers or tablets their students could use from home.

The quantitative questionnaire conducted in this thesis resulted in similar findings. With an average rating of 3.97 (Likert scale ranging from one to five) of educational technology available to the teachers and an average rating of 3.73 of the educational technology available to their students, it might be concluded that the general availability and quality of educational technology is relatively high in the sample group.

The results of the qualitative focus group interview show an even greater coverage. The teachers report a 1:1 coverage at all levels of lower secondary school. Furthermore, their school had quite recently transitioned fully from using analogue coursebooks to using the licenced digital coursebook Stages (Røkaas & Pettersen, 2020). The analogue notebooks were replaced by OneNote (Microsoft, 2021).

The teachers' attitude towards the use of educational technology is another key factor in the integration of such technology. The quantitative questionnaire shows that the teachers' attitudes towards educational technology generally are quite positive. As many as 80.65 percent claim that educational technology is an important part of their English language teaching (either scale score four or five on the Likert scale). Furthermore, 83.87 percent of the teachers either mostly (scale score four) or fully agree (scale score five) that educational technology facilitates new possibilities in didactic thinking compared to more traditional teaching material. Lastly, only one teacher totally disagrees (scale score one), and one mostly disagrees (scale score two) with the statement that educational technology has a motivating effect on the students' learning in English.

These results are comparable with the ones recently found by Blikkstad-Balas & Kletten (2020). Their article also shows that many teachers are generally positive towards the use and implementation of educational technology (Blikkstad-Balas & Kletten, 2020). In the study conducted by Gudmundsdottir and Hatlevik (2018, in Blikkstad-Balas & Kletten, 2020), as many as eight out of ten teachers were positive to the use of technology in an educational context. This said, almost half of the respondents were also concerned about the possible challenges educational technology may entail (Gudmundsdottir & Hatlevik, 2018, in Blikkstad-Balas & Kletten, 2020).

## 5.2 Knowledge is key

Although the access and coverage of educational technology were generally at a high level, the teachers' attitudes were positive, and the student teachers viewed their own digital competence and didactical use of technology as relatively high, Røknes & Krumsvik (2016) showed that their actual use of educational technology in English language teaching was dominated by "elementary and basic digital skills" (Røknes & Krumsvik, 2016, p. 17). This was also supported by the findings of Blikkstad-Balas & Kletten (2020, p. 55), who found that a significant amount of the implemented technology was "limited to supporting traditional teacher-centred practices, with low student participation". These findings suggest that good coverage and positive attitudes are not sufficient for the use of educational technology to be fruitful.

As a result of the limitations in educational technology use as shown in the previous research, Røknes & Krumsvik (2016) argue that future English language teacher education needs an increased focus on promoting the more complex aspects of digital competence. With the intention of doing so, knowledge on how to improve this is key, both for teachers, school leaders and educational institutions.

Thronsen et al. (2019, in Blikkstad-Balas & Kletten, 2020) found that one fifth of the surveyed teachers uttered the need for broadening their digital competence and knowledge on how to implement educational technology into their teaching.

Similarly, Gudmundsdottis & Hatlevik (2018, in Blikkstad-Balas & Kletten, 2020) found that many of the surveyed teachers felt that their own training in the use of educational technology was insufficient in preparing them for integrating technology into their teaching.

These are interesting findings when compared to the results of the research conducted in this thesis. The average response to the statement asking the teachers whether they felt confident or not in using educational technology prior to the period of digital language teaching was 3.81 (Likert scale ranging from one to five). Furthermore, only three teachers responded to score point two, and only one responded to score point one to the same question. These results differ relatively much from the findings of the previous research. One possible explanation is that most of the teachers of the sample group are teachers who felt successful in the work (with the core element) using educational technology during the online teaching and therefore, chose to answer the questionnaire.

Despite the sample groups reporting relatively high confidence in using educational technology, the teachers also answered an average score of 4.16 when asked whether they felt more confident in using and implementing educational technology into their language teaching.

This indicate that the teachers still feel there is room for improvement when it comes to the use and implementation of educational technology in the context of English language teaching and learning.

### **5.3 Guidance generates confidence**

In their article, Røknes & Krumsvik (2016) point out the importance of a systematic and reflected approach to integrating and implementing educational technology into English language instructions. They argue that the institutions responsible for the teacher education need to function as role models for the use of educational technology (Røknes & Krumsvik, 2016).

Their point can very well be transferred to the lower secondary school. School- and team leaders must guide their teachers in the work of using and implementing educational technology into language teaching. The quantitative questionnaire results show that relatively few of the teachers received sufficient or any guidance at all in the process of using educational technology during the period of digital distance teaching. The average response is 2.52, and the mode is score point three. As many as nine of the teachers reported that they had not received any guidance at all. This fact indicates that there is much room for improvement in this area. A change is needed, and it should arguably start from the top. If the school's leaders feel insecure in using educational technology, it is natural that they cannot guide their teachers in using it properly.

### **5.4 The social digital classroom**

The rapport Nær og Fjært (Fjørtoft, 2020) showed that the teachers utilized a vast variety of digital resources. One common aspect was the use of tools enabling video communication (Fjørtoft, 2020), findings also emerging from the conducted research in this thesis. The interviewed teachers described learning situations where video communication was used to communicate with the class as a whole, with smaller units, and with individual students.

The results of the quantitative questionnaire show that more traditional learning material still dominates English language teaching, although also taking on new, digital forms. The most used learning materials are videos and online texts. One possible explanation is the fact that such material can easily be distributed and shared digitally. Videos may also be used to provide the students with authentic language, as well as some variation in the language learning process. The coursebook does, however, still stand quite strong, being the third most used learning material (see figure 2, Ch. 4.1.3). This may reflect insecurity and hesitance

teachers have in implementing educational technology into their teaching, as documented by research presented earlier, for example Røknes & Krumsvik (2016) in chapter 2.

Simultaneously, the results show that other material such as podcasts, which are quite popular in society in general, seem to gradually enter the classroom. As teachers get more and more experienced implementing this material into their teaching, one might see a significant increase in its use. The format of podcasts is arguably one which may be utilized successfully in the context of language teaching. By producing podcasts covering various topics, the students can produce and experience authentic language situations. Moreover, as the conversations in the podcasts are recorded, the teacher is given the opportunity to give precise and constructive feedback to the students.

Furthermore, the findings indicate that social media is used relatively sparsely in the context of communication in the digital language classroom. This result contrasts the widespread use of social media in society as a whole, where it has become an integral part of our everyday lives. This is arguably a quite surprising finding. As seen in chapter four, the coverage and use of social media among children and youths are relatively comprehensive.

Therefore, one might assume that all participants in the language classroom have sufficient knowledge about the use of various social media. The limited use of this didactical material must thus be explained otherwise. Lacking knowledge on its use in a didactical context might yet again be an explanation. Another reason might be the fear of losing control over the learning situation, as social media and digital technology can contain distracting content, as pointed out by one of the teachers in the focus group interview.

The results of the research also indicate that many of the digital assignments were given as individual work. As all the students were isolated in the learning situation, this is somewhat understandable. Assignments conducted in pairs came in second. Group assignments and project work are relatively evenly used. As many of the teachers describe challenges connected to conducting digital language teaching with the entire class, it is understandable that they divide their classes into smaller units. Several teachers also pointed out that they, due to ethical issues, could not make their students turn on their web cameras. Socio-cultural theory explains that, as we interact with our surroundings, we use different physical tools such as gestures and mimicry in addition to language (Magnar, et al. 2015). Magnar et al. (2015) also argue that response through eye contact, personal comments, humour, positive and concrete feedback, as well as using the student's name are all responses which impact relations positively. When the interlocutors cannot see each other, much of this communication can be difficult, or indeed lost. As the teacher is unable to see their students, they get no visual responses, they are not

able to make sure if the students are paying attention or if they are even there. As pointed out in the CEFR, misunderstandings are more prominent in online interactions compared to face-to-face communication, which also includes online language teaching (Council of Europe, 2020). Thus, teachers need to be more explicit in their messages in a digital environment compared to in a physical one. They also need to make sure the message is understood correctly, which can prove to be difficult when the students are hidden behind dark screens.

The above factors also make the process of following up every aspect of the teaching more time consuming, which was among the main challenges reported of by the teachers. This confirms previous research, as according to many of the teachers represented in the research conducted by Fjørtoft (2020), the use of digital teaching material made the planning process of the teaching more time consuming. Simultaneously, many of the teachers argued that digital resources made it easier to practice differentiation between each student (Fjørtoft, 2020). The same was found in the data from the focus group interview conducted in this thesis, where the teachers further claimed to have a better foundation and insight into the students' competence in the subject than before.

Other aspects impacted by the students and teachers being separated are those dependent on social interaction. According to socio-cultural theories, learning occurs in social contexts, when humans use their knowledge through dialogue, interaction and collaboration with others (Magnar et al., 2015).

The teachers in the focus group interview recognized the importance of social learning in the English subject. They did, however also express that this was one of the aspects which suffered during the pandemic. They felt that they had not been able to let communication in English be a factor in developing social learning through the use of educational technology during the period of distant digital teaching. The teachers argued that although educational technology enables communication, its form varies substantially from the communication present in a physical classroom: "Everybody misses having the students gathered, well, no PC can replace us and the direct communication" (R3).

Similar findings were found in the data from the quantitative questionnaire. The teachers answered an average score of 4.1 when asked to what extent they consider English language learning an arena for social learning. However, the teachers only to some extent felt they were able to let communication in English be a factor in developing social learning during the pandemic. The average response scale score was 3.03. This finding is understandable when considering the division in didactical methods, where individual assignments dominated, and

written assignments outweighed oral assignments, though slightly. Individual work provides few opportunities for social learning.

### **5.5 Limitations to the study**

As presented in chapter 3, data collection in research can be viewed as a production process resulting in a product of varying quality (Grønmo, 2004). The goal of any research is to producing data of as high quality as possible (Grønmo, 2004). This said, eliminating all weaknesses in the research process is close to impossible. Continuity and transparency in the presentation of the research procedures are therefore essential. By presenting the research process transparently, the readers are given the possibility to evaluate themselves whether the study is internally valid (Grønmo, 2004). The research of this thesis has strived to follow these guidelines by establishing a clear approach and by following this as consistent as possible. With this in mind, some potential weaknesses, or limitations, might have affected the findings of the present research.

First, the sample of the quantitative research is a self-selected sample, relying on the teachers choosing to participate of their own free will. The qualitative sample was selected using a non-probability sample, combining a convenience sample and a purposive sample. The samples are therefore not randomized. In addition, the samples of the research are relatively small in size, limiting the reliability of the findings. Because the sample of the quantitative questionnaire was self-selected, it can also be difficult to reproduce the findings of the research, as the teachers who chose to participate may have been the ones who felt successful in using educational technology in their English language instructions.

Another factor which may have impacted the internal validity of the research was the use of a semi-structured interview. This method is relatively flexible, allowing the interviewees to introduce new perspectives on the topic at hand. While this may give new and useful insight into the phenomenon, it may also result in data less relevant for the research (Johannessen, et al., 2017).

The external validity of the present research (see chapter 3) may also be relatively limited due to the small sizes of the two sample groups and the selection process for the quantitative questionnaire. One may assume that the findings are similar at schools with the similar condition such as geography, the number of teachers and students, and technological level. However, these factors vary significantly between schools, and it would be difficult to find schools identical conditions.

As a result, the findings of the research do provide certain indications and insight into the practices and experiences of the teachers in the sample groups, but any absolute conclusions cannot be drawn.

## **6. Summary and conclusion**

The present thesis has explored English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic. The research investigated how the teachers facilitated the use of educational technology through this period to reach curriculum aims concerning communication (Q1), to what extent the teachers now feel confident using technology in their teaching compared to prior to the pandemic (Q2) and to what degree the teachers succeeded in focusing on the perspective social learning in the teaching of English during the pandemic (Q3).

A mixed method, combining a qualitative questionnaire and a qualitative focus group interview was used in collecting the data for this thesis. The choice of method was in general relatively well suited for the purpose of the thesis. The method does, however, have some limitations. The sample of the quantitative research is a self-selected sample, relying on the teachers choosing to participate of their own free will. The qualitative sample was selected using a non-probability sample, combining a convenience sample and a purposive sample. The samples are therefore not randomized. Furthermore, the research sample size is relatively small, and any generalized conclusions can thus not be drawn. With this in mind, the findings of the research do indeed provide certain indications and insight into the practices and experiences of the teachers in the sample groups.

The findings of the research show that the accessibility and quality of available educational technology in the sample groups are at a quite high level. Just as positive are the teachers' attitudes towards the use of educational technology in English language learning and teaching. This is in line with what previous research has indicated (Blikstad-Balas & Kletten, 2020, Fjørtoft, 2020, Røkenes & Krumvik, 2016).

Moreover, the teachers used a rich variety of educational technology and methods in their English language teaching during the pandemic. This said, individual assignments dominated and written assignments were utilized more often than oral assignments, though not much. As a result, the teachers felt their students were seldom given the opportunity to express themselves and interact in authentic and practical language situations. Furthermore, the teachers reported a limited learning outcome in the core element communication after the distant digital teaching. Generally, most teachers felt their students reached a better and more

satisfactory learning outcome in the written aspects compared to the oral aspects of the subject curriculum. Related to this, many teachers found prioritizing and integrating social learning in the English subject through the use of educational technology to be difficult during the pandemic.

The findings of the research indicate that much of the oral communication was conducted using online video communication tools such as Teams (Microsoft, 2021). Written communication was done through online chats or online platforms for producing and sharing written text, for instance OneNote (Microsoft, 2021). The teachers argued that establishing a clear impression of the students' oral competence is made easier by educational technology. They described how this could be done by recording live sound and/or video, making podcasts or streams, or recording prepared presentations on various topics.

The teachers do at the same time argue that conduction language instructions with the entire class present in the same digital classroom is quite challenging. Some teachers solved this by dividing the class into smaller and more manageable units. The teachers argued that, by doing so, they were able to better follow up on each student and their progress. They also claimed that one student group benefited particularly much from this, namely, the quiet and shy students, who seldom participate actively in the traditional classroom.

Simultaneously, the social aspects of English language teaching and learning seem to have suffered during the digital distance teaching period. In general, the teachers did not feel that their students reached a sufficient and satisfactory social learning outcome in the English subject.

Finally, the data showed that most of the teachers felt quite confident in using educational technology in their language teaching prior to the pandemic. As shown by the previous research, this confidence was often not representative for the actual use of technology in the language classroom, which was dominated by elementary and basic digital skills (Røknes & Krumsvik, 2016). Although the teachers felt relatively confident (prior to the pandemic), they still reported an increase in knowledge about the use and implementation of educational technology. This arguably shows that by providing the teachers with extensive opportunities to explore, experiment with and practice using educational technology, their professional digital competence will increase.

## **6.1 Educational implications and further research**

The research conducted by Røknes & Krumsvik (2016) showed that few student teachers considered their teacher educators as role models for the use of educational

technology. The researchers argue that the teacher educators and mentor teachers need to reflect the desired use of educational technology by implementing technology in innovative, creative and inspiring ways themselves (Røknes & Krumsvik, 2016). As discussed in chapter five, the same can be said for school- and team leaders. To improve the teachers' professional digital competence in the future, so it becomes in accordance with the requirements in the PfdK, which reflects much wider competence areas than just technology skills, teachers must receive guidance on their use and implementation of educational technology in their language instructions (Kelentic et al., 2017). The teachers need opportunities to explore the possibilities of educational technology, and its potential for developing language skills, as well as extensive practice using it in their teaching.

An interesting field of research in this context would be to further explore how educational technology can be used to develop the students' language skills.

Another would be to examine the knowledge and practises of school- and team leaders, to see what can be done differently in guiding and inspiring teachers in the use and implementation of educational technology in English language teaching.

Lastly, researching the students' experiences with the digital distance English language teaching during the Covid-19 pandemic would also be of interest. Do these correspond with those of their teachers, or have the students experienced the language teaching completely different?

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## Appendices

### Appendix A

#### **Educational technology and communication in the English subject curriculum**

The following questionnaire is part of the research in my Master's thesis at Østfold University College. I kindly ask for your time and will be very grateful for your help in answering the thesis' question:

What are English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic?

The questionnaire consists of four parts: general information, the use of educational technology in the English subject, organising the digital English language teaching and social learning. Most of the questions are replied to by scales and are quick to answer; others require responses in written form. All answers are completely anonymous and cannot be traced back to the teacher in any way.

#### **1. General information**

##### **1.1 Gender**

Female

Male

Other

##### **1.2 Age**

-30

31-40

41-50

51-60

61-

##### **1.3 In which year do you teach English?**

Year 8

Year 9

Year 10

##### **1.4 Length of relevant education**

3 years

4 years

5 years

6 years

More than 6 years

### **1.5 Teaching experience**

- 3 years

4 - 7 years

8 - 11 years

12 - 15 years

More than 15 years

### **1.6 Further education**

Do you have any ICT-related education exceeding your teacher education?

Yes

No

#### **1.6.1 Further education**

This element will only show if alternative «Yes» is chosen in question «1.6 Further education»

Describe your education. Who facilitated it?

## **2. The use of educational technology in the English subject**

### **2.1 Availability of educational technology**

On a scale of 1 to 5, where 1 indicates very low, and 5 indicates very high, describe the state of the educational technology available to you in the period of digital English language teaching, both at school and at home, e.g., internet connection, availability of hardware and software such as PCs, tablets, learning management systems and licenced online resources.

### **2.2 Availability of educational technology**

On a scale of 1 to 5, where 1 indicates very low, and 5 indicates very high, describe the state of the educational technology available to your students in the period of digital English language teaching, both at school and at home, e.g., internet connection, availability of hardware and software such as PCs, tablets, learning management systems and licenced online resources.

### **2.3**

Answer the following statements using the scale of 1 to 5, where 1 indicates total disagreement and 5 full agreement.

#### **2.3.1**

"Educational technology is an important part of my English language teaching under normal circumstances."

#### **2.3.2**

"Educational technology facilitates new possibilities in didactic thinking compared to more traditional teaching material."

### **2.3.3**

"Educational technology has a motivating effect on the students' learning in English."

## **2.4 Additional comments**

### **3. Organising the digital English language teaching**

#### **3.1**

On a scale of 1 to 5, where 1 is never and 5 is several times a week, how often do/did you organise your digital English language teaching using the following teaching methods or materials in the course of the period of distance teaching?

##### **3.1.1**

The students work individually

##### **3.1.2**

The students work in pairs

##### **3.1.3**

The students work in groups

##### **3.1.4**

The students work on projects (thematically, in groups, of longer duration)

##### **3.1.5**

Cooperation with other classes

##### **3.1.6**

Cooperation with other schools

##### **3.1.7**

Oral assignments

##### **3.1.8**

Written assignments

##### **3.1.9**

Multimodal assignments

##### **3.1.10**

The Flipped Classroom approach

##### **3.1.11**

The textbook

##### **3.1.12**

The textbook's website

**3.1.13**

Online texts

**3.1.14**

Videos (YouTube, Vimeo or similar)

**3.1.15**

Blogs

**3.1.16**

Vlogs

**3.1.17**

Podcasts

**3.1.18**

Social media

**3.2 Communication**

The ability "to express themselves and interact in authentic and practical language situations" is highlighted in the core element of Communication in the English subject curriculum.

Please describe one or two successful learning situations in which your students worked according to the introductory statement and used educational technology for this purpose, in the course of the distant learning period.

**3.2.1**

On a scale of 1 to 5, where 1 is very little, and 5 is very high, to what extent did the individual student reach a sufficient and satisfactory leaning outcome in the core element communication through distant learning?

**3.2.1a**

Written communication

**3.2.1b**

Oral communication

**3.3 Challenges**

What challenges do/did you experience when working on the aspects of the curriculum concerning communication using educational technology, e.g., time, availability, knowledge on use etc.? Please provide examples.

**3.3.1 Challenges**

What consequences did these challenges result in? Please provide examples.

**3.3.2 Challenges**

What did you do to solve these challenges? Please provide examples.

### **3.4 Teachers' professional digital competence**

Answer the statements using the scale of 1 to 5, where 1 indicates total disagreement and 5 full agreement.

#### **3.4.1**

"I felt confident using educational technology as a didactic tool prior to the period with digital English language teaching."

#### **3.4.2**

"I have better knowledge of the possibilities educational technology provides after this period of distant teaching."

#### **3.4.3**

"I receive/have received guidance on how to use educational technology during the period with digital English language teaching."

#### **3.4.4**

"I feel more confident in using educational technology after this period of distant teaching."

### **4. Social learning**

#### **4.1**

The core curriculum emphasizes that the "school shall support and contribute to the social learning and development of the pupils". To what extent do you consider English language learning as an arena for social learning?

#### **4.2**

To what extent were you able to let communication in English be a factor of developing social learning during the pandemic?

#### **4.3**

Comments are appreciated

Thank you for all your answers!

## Appendix B

### Interview guide

#### Intro

- Thank you for participating! Appreciated!
- Audio recording using Nettskjema, password protected online service for doing recordings safely, only available to me answers will be fully anonymous in the thesis
- By participating today, you give your consent to participating in the interview and that your anonymized answers may be used in the thesis.
- You can at any point withdraw your consent, via e-mail and answers are deleted!
- The recording and transcription will be deleted when the thesis is approved
- Details in the informational document as well.
- Why this thesis?

#### Aim:

English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic.

#### 1 Framework, introduction sample group

- First Name
- Age
- Education
- Which year do you teach?
- Teaching experience
- Relevant ICT courses or further education

#### 2 The use of educational technology in the English subject

##### 2.1

What role would you say educational technology plays in teaching the English subject under normal circumstances?

##### 2.2

How would you describe the state of the educational technology available to you during the period of digital English language teaching, both at school and at home?

For instance, internet connection, availability of hardware and software, such as PCs, tablets, learning management systems and licenced online resources?

##### 2.3

What about the educational technology available to your students?

2.4

How has the availability of educational technology impacted your digital language teaching in this period?

### **3 Organising the digital English language teaching**

3.1

How have you been organising the digital English language teaching in the period of distance teaching in order to work on the aims concerning communication?

For instance, teaching methods, teaching materials and type of tasks.

3.2

In the English subject curriculum, the students' ability "to express themselves and interact in authentic and practical language situations" is highlighted.

How have your students been communicating in English with others using educational technology in the course of the distant learning period?

3.2.1

Can you please describe a learning situation you felt was successful, in which your students worked according to the statement above and used educational technology for this purpose?

3.3

What challenges have you experienced when working on the aspects of the curriculum concerning communication using educational technology?

For example, time, availability, knowledge on use etc. Either your or your students'

3.4

How have your professional digital competence developed during this period, e.g., considering the use and implementation of educational technology?

More/less confident using ICT, better insight into the opportunities,

### **4 Social learning**

4.1

The core curriculum emphasizes that the "school shall support and contribute to the social learning and development of the pupils".

To what extent do you consider English language learning as an arena for social learning?

4.2

In this context one may argue that communication plays a central role.

To what extent have you been able to let communication in English be a factor of developing social learning during the pandemic?

### 4.3

How have you been working on maintaining the social interactions between the students in this period?

#### 4.3.1

How do you feel the relations between the students have developed or changed during the distance teaching?

#### 4.3.2

What about the relations between you as a teacher and the students, how have these developed or changed during the distance teaching?

#### 4.3.3

Do you feel that this has impacted the language teaching and its results? If so, how?

## Appendix C

### Vil du delta i forskningsprosjektet:

“English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic?”

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å undersøke hvordan engelsklærere på 8. og 9. trinn gjennom perioden med hjemmeskole har jobbet med delene av læreplanen i engelsk som omhandler kjerneelementet kommunikasjon. I dette skrivet gir jeg deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

### Formål

Forskningsprosjektet gjøres i forbindelse med en masteroppgave i masterprogrammet “Fremmedspråk i skolen”, Høgskolen i Østfold, med fordypning i engelsk. Målet med oppgaven er å se på hvordan engelsklærere på 8. og 9. trinn gjennom perioden med hjemmeskole har jobbet med delene av den læreplanen i engelsk som omhandler kjerneelementet kommunikasjon. I tillegg er elevenes sosiale læring og utvikling sentralt.

Problemstillingen og tilhørende forskningsspørsmål ser ut som følger.

What are English language teachers' experiences of using educational technology teaching the core element communication during the Covid-19 pandemic?

Q1. How did the teachers facilitate the use of educational technology through this period to reach curriculum aims concerning communication?

Q2. To what extent do the teachers now feel confident using technology in their teaching compared to prior to the Covid-19 pandemic?

Q3. The core curriculum emphasizes that “school shall support and contribute to the social learning and development of the pupils”. To what degree did the teachers succeed in focusing on this perspective in the teaching of English during the pandemic?

### Hvem er ansvarlig for forskningsprosjektet?

Høgskolen i Østfold, Halden, er ansvarlig for prosjektet.

### Hvorfor får du spørsmål om å delta?

Utvalget er gjort med utgangspunkt i skolens geografiske beliggenhet og dens struktur. Først og fremst fordi den er en ungdomsskole i Østfold, som underviser i engelsk. Deretter enten

fordi den er en “byskole” eller en “bygdeskole”, som både omhandler geografisk beliggenhet, og størrelse målt i antallet elever og ansatte. Førstekontakt er gjort via skolens ledelse.

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

Hvis du velger å delta i prosjektet, innebærer det at du deltar på et gruppeintervju sammen med dine kolleger. Det vil ta deg mellom 45 minutter og 60 minutter. Intervjuet inneholder spørsmål om hvordan engelsklærere har jobbet/jobber med å løse utfordringer tilknyttet læreplanens kjerneelement kommunikasjon ved hjelp av IKT. Dine svar fra intervjuet blir registrert som et lydopptak og senere transkribert.

### **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. Innhentet data vil kun være tilgjengelig for veileder og undertegnede. Lydopptak gjøres ved hjelp av applikasjonen Nettskjema, som er et av høgskolens verktøy i innhenting av data. Applikasjonen er passord-beskyttet, og vil derfor kun være tilgjengelig for de overnevnte. Innhentet data vil bli anonymisert, slik at ingen av deltagerne eller deres skoler kan bli identifisert.

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

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er sommeren 2021. Ved prosjektslutt vil all innhentet data bli slettet.

### **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 Høgskolen i Østfold 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: Høgskolen i Østfold ved Isaac Øgaard Solløs, [isaacos@hiof.no](mailto:isaacos@hiof.no) eller Karin Dahlberg Pettersen, [kdp@hiof.no](mailto:kdp@hiof.no).

Vårt personvernombud: Martin Gautestad Jakobsen, [martin.g.jakobsen@hiof.no](mailto:martin.g.jakobsen@hiof.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,

Isaac Øgaard Solløs (Student)

Karin Dahlberg Pettersen (Veileder)

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### **Samtykkeerklæring**

Jeg har mottatt og forstått informasjon om prosjektet English language teachers' experiences of using educational technology teaching the core element *communication* during the Covid-19 pandemic, og har fått anledning til å stille spørsmål. Jeg samtykker til:

- Å delta i gruppeintervju
- At mine opplysninger behandles frem til prosjektet er avsluttet

---

(Signert av prosjektdeltaker, dato)

## Appendix D

### Quantitative Questionnaire Data

No.	Oprettet	Endret	1.1	1.2	1.3	1.4	1.5	1.6	1.6.1
13757973	25.04.2021 12:49	25.04.2021 12:49	Female	51-60	Year 10	More than 6 years	More than 15 years	Yes	Høgskolen i Nesna some years ago
13758008	25.04.2021 13:02	25.04.2021 13:02	Female	41-50	Year 8	More than 6 years	8 - 11 years	No	
13758232	25.04.2021 14:10	25.04.2021 14:10	Female	-30	Year 9	5 years	- 3 years	No	
13758314	25.04.2021 14:25	25.04.2021 14:25	Female	41-50	Year 8	5 years	More than 15 years	No	
13758658	25.04.2021 15:43	25.04.2021 15:43	Male	-30	Year 10	5 years	- 3 years	No	
13759473	25.04.2021 18:33	25.04.2021 18:33	Female	41-50	Year 8	6 years	More than 15 years	-	
13760251	25.04.2021 20:55	25.04.2021 20:55	Female	31-40	Year 8, 9, 10	5 years	8 - 11 years	No	
13760735	25.04.2021 22:12	25.04.2021 22:12	Female	41-50	Year 8	4 years	4 - 7 years	No	
13761007	25.04.2021 23:19	25.04.2021 23:19	Female	-30	Year 9	4 years	4 - 7 years	No	
13762022	26.04.2021 08:58	26.04.2021 08:58	Female	41-50	Year 9, 10	More than 6 years	12 - 15 years	No	
13858159	29.04.2021 09:41	29.04.2021 09:41	Female	31-40	Year 8, 10	More than 6 years	8 - 11 years	No	
14164916	20.05.2021 10:01	20.05.2021 10:01	Female	41-50	Year 8	4 years	More than 15 years	Yes	Innføring i kommunikasjonsteori (Høgskolen i Østfold) Programmering (Høgskolen i Volda) Læringsdesign og klasseromledelse i digitale klasserom (Høgskolen i Volda) IKT i læring (Høgskolen i Sør-Trøndelag)
14369315	02.06.2021 13:12	02.06.2021 13:12	Female	-30	Year 8, 9	5 years	- 3 years	No	
14370608	02.06.2021 14:55	02.06.2021 14:55	Male	41-50	Year 10	5 years	More than 15 years	No	
14386223	03.06.2021 10:41	03.06.2021 10:41	Female	51-60	Year 9	More than 6 years	More than 15 years	No	
14387674	03.06.2021 11:38	03.06.2021 11:38	Female	31-40	Year 10	4 years	4 - 7 years	No	
14391371	03.06.2021 15:02	03.06.2021 15:02	Male	31-40	Year 9	More than 6 years	4 - 7 years	No	
14392783	03.06.2021 16:51	03.06.2021 16:51	Female	31-40	Year 10	More than 6 years	4 - 7 years	Yes	Østfold university college
14492938	09.06.2021 09:21	09.06.2021 09:21	Female	-30	Year 9, 10	6 years	- 3 years	No	
14492958	09.06.2021 09:21	09.06.2021 09:21	Male	41-50	Year 8, 9, 10	More than 6 years	8 - 11 years	Yes	Had 1/2 yrs as a part of my teacher training.

14493332	09.06.2021 09:39	09.06.2021 09:39	Female	41-50	Year 8, 9	More than 6 years	More than 15 years	No	
14493468	09.06.2021 09:44	09.06.2021 09:44	Female	41-50	Year 8	5 years	- 3 years	No	
14494014	09.06.2021 10:05	09.06.2021 10:05	Female	31-40	Year 8	5 years	4 - 7 years	No	
14495796	09.06.2021 11:06	09.06.2021 11:06	Female	41-50	Year 8	More than 6 years	8 - 11 years	No	
14496679	09.06.2021 11:48	09.06.2021 11:48	Female	41-50	Year 8, 9, 10	6 years	8 - 11 years	No	
14502016	09.06.2021 15:57	09.06.2021 15:57	Female	51-60	Year 9	5 years	12 - 15 years	Yes	various MOOC - a personal initiative
14504681	09.06.2021 19:37	09.06.2021 19:37	Female	-30	Year 9	5 years	- 3 years	No	
14504886	09.06.2021 20:00	09.06.2021 20:00	Female	51-60	Year 8, 9, 10	5 years	8 - 11 years	No	
14505910	09.06.2021 21:17	09.06.2021 21:17	Female	31-40	Year 9	5 years	8 - 11 years	No	
14508516	10.06.2021 06:21	10.06.2021 06:21	Female	51-60	Year 8, 9, 10	6 years	More than 15 years	Yes	OsloMet Coaching
14521649	10.06.2021 22:58	10.06.2021 22:58	Female	51-60	Year 8	5 years	More than 15 years	No	
2.1	2.2	2.3.1	2.3.2	2.3.3	2.4.				
4	4	5	5	5	Flipped Classroom is good				
3	3	4	5	1					
4	3	5	5	5					
5	5	4	4	4					
4	3	4	4	4					
5	4	5	5	5					
4	4	3	3	4					
5	5	4	3	4	I "gameify" vocabulary learning -- I either use Quizlet (including Quizlet Live) or Blooket, even 10th grade likes them!				
3		3	5	4					
5	5	4	4	4					
4	4	4	3	3					
3	3	3	4	4					
3	3	4	4	4					
5	4	4	4	3					
4	4	5	5	5					
4	4	5	4	5					
3	3	2	2	2	Motivation				
2	3	5	5	4					
5	4	4	4	4					
5	4	4	5	4	I think the motivational effect of ET on students has decreased in the last 20 years because it is not something new to students now, though the quality of the available material has improved a lot.				
3	3	3	4	5					
5	5	3	4	4					
4	4	5	5	5					
3	2	4	4	4					
5	4	4	3	5					

3	3	4	4	4	educational technology does indeed have a motivating effect; however, they need to be educated in using ICT for educational purposes - not only entertaining purposes or becoming "google" experts												
4	3	4	5	3													
4	4	4	4	3													
4	4	5	4	3	The types of tasks are more of a motivational factor than the medium.												
3	4	5	4	4													
5	4	4	5	4													
3.1.1	3.1.2	3.1.3	3.1.4	3.1.5	3.1.6	3.1.7	3.1.8	3.1.9	3.1.10	3.1.11	3.1.12	3.1.13	3.1.14	3.1.15	3.1.16	3.1.17	3.1.18
2	2	2	2	1	1	2	2	2	4	3	3	3	3	1	1	1	1
3	4	3	2	2	1	3	3	2	1	1	1	3	4	2	2	1	1
2	3	2	4	4	1	4	2	5	5	2	2	4	5	1	5	5	5
5	2	2	1	1	1	4	4	4		2	1	5	5	2	1	1	1
4	3	4	4	1	1	4	4	4	3	1	1	4	4	2	2	2	2
4	4	4	4	1	1	5	5	4	3	4	4	2	3	2	2	2	4
4	3	3	2	1	1	2	2	2	3	4	2	2	5	1	2	1	2
5	1	1	1	1	1	3	5	1	2	5	1	1	2	1	1	1	1
5	5	4	3	1	1	3	3	3	3	2	2	3	2	1	1	1	2
3	4	2	5	1	1	3	3	2	3	2	2	2	3	1	1	2	1
4	4	3	5	1	1	3	3	3	1	2	3	3	2	1	1	1	2
2	3	4	4	1	1	3	3	4	2	1	1	4	2	1	1	1	3
4	3	2	2	2	1	4	4	2	2	4	4	3	2	2	2	2	2
4	3	3	3	1	1	4	4	1	1	3	3	4	3	1	1	1	1
5	4	3	3	2	1	4	5	4	3	4	3	4	4	3	3	3	2
3	4	5	4	3	1	3	2	3	4	3	2	2	4	1	3	2	4
4	2	2	2	1	1	2	4	3	1	4	3	4	4	1	1	3	1
4	3	3	3	3	3	3	4	4	2	4	1	5	4	3	3	3	3
5	5	5	2	1	1	3	4	4	1	1	1	1	4	1	4	4	1
3	2	2	3	1	1	3	2	2	3	4	3	4	4	1	2	2	2
5	5	4	4	1	1	4	4	2		3	4	4	3	2	2	2	3
4	2	3	2	1	1	2	2	2	1	3	4	2	3	1	1	1	1
5	5		5	1	1	5	5	3	1	4	4	4	4	1	1	1	1
2	5	4	2	2	1	4	4	2	2	2	2	3	3	2	3	1	2
5	3	3	4	1	1	4	4	4	3	4	4	4	4	1	1	2	2
3	3	3	2	1	1	3	3	3	1	2	2	2	3	1	1	2	4
5	1	1	1	1	1	2	4	2	1	3	1	2	1	1	1	1	1
3	3	3	3	1	1	5	3		1	2	1	2	3	1	1	3	1
4	4	3	2	1	1	3	3	2	1	2	1	3	3	2	1	2	1
4	3	3	3	1	1	3	4	3	3	2	2	1	4	3	2	3	3
5	3	3	4	2	1	4	3	4	1	1	3	4	3	1	2	2	2
3.2 Communication														3.2.1a		3.2.1b	
Reading texts for me to assess using Showbie														3		4	
														3		2	
-														-		-	
														4		4	

In my class we prepared and performed a tabletop role-playing game called Dungeons and Dragons, 5th edition. The students prepared characters using a character builder online, and then they created backstories for these characters to make the role-playing more immersive. We then used a website called roll20 to play together online. As this game is an English one, where the students need to communicate and work together to create the story they are playing, they are able to exercise the ability "to express themselves and interact in authentic and practical language situations". The act of storytelling and communicating both individually, in character creation, and in a group during sessions, were part of the educational technology used for this purpose.	3	4
The students were also asked to watch an episode of a stream in which others were playing the game, to provide them with expectations and to give them an example to follow.		
	4	4
	3	2
	4	3
They play argumentative games, describing and trying to understand the information given from others. They have listening exercises, with different type of approaches.	3	3
Group discussions after working with a topic for a time. The pupils are interested and engaged.	3	3
	3	3
	1	1
	3	4
I have divided the students into groups which have worked together through Teams to read up on and prepare brief presentations on, for example, historical events, literature, and politics. They have then given their presentations in the digital classroom, after which we have had class discussions on what we have learnt from the students' presentations.	3	3
Making, recording, handing in and presenting interviews in pairs	4	3
	3	2
Did not do anything that came close to fulfilling what the statement from the core element of the curriculum asks for.	3	2
We called A school in Tanzania using Skype and are in constant dialogue with them monthly	3	4
	3	3
Group work on Australia using Teams.	3	2
They made a Screencastify where they made a presentation about their role model. After having read and worked with texts about Gandhi, Rosa Parks, Malala etc. Still got a few Kardashians back though....!/:	3	5
	3	2
	4	2
	4	3
digital teaching period was too short, and the number of English courses too few in order to assign tasks that let the student "express themselves and interact in authentic and practical language situations"	3	2
	3	4
1. The students make podcasts where they discuss various themes 2. Professional discussions - where they discuss a book or text we have read - and audiotape the conversations	3	3
They didn't. We've only had the minimum amount of distance learning, when they worked in groups in google meet, all the groups talked in Norwegian when I checked in on them.	5	2
They did make videos where they talked English, but that is not an authentic or practical application of English. As we're all Norwegians, it would be more practical and authentic to stick with our L1.		
Podcast	3	3
Working on the Genius Hour project. Working in Book Creator: Industrial revolution and Charles Dickens Presenting a poem (multi modal presentation)	4	2
3.3.	3.3.1.	3.3.2.
Many without Wi-Fi	Did not do tasks	Did not
Time, availability. We have a limited number of computers an iPad.	Communication within the class only.	Try to book computers in advance. Plan ahead.

The problem is the screens are dark. They don't want to participate once they go online from home.	Less oral activities that had a high success rate	I tried to motivate them by having them work in breakout rooms where I would pop in or have them record themselves in convo with their family or friends
..	..	..
The most challenging experience was the time we had available. The students quickly learned how to use the tools needed to play, but in distant learning most things take more time. Things like starting the lesson, or ensuring that every student has been informed at different times during the lesson.	Less playtime, more time spent between dialogue rather than in it and a few times, it lead to some of the students being unable to attend the conversations.	Written messages before the lessons with information on the schedule for the lesson, as well as a few answers to frequently asked questions. Example (a message from the classroom in Teams) Today we are playing D&D! Remember to press launch game when you are ready. 08:30: We meet, here on Teams 08:35: We join the game and start playing 09:55: We exit the game, and I'll provide some information on tomorrow's lesson. 10:00: The lesson is over. FAQ: How do I roll to hit? - When rolling to take an action, make a death save, or an attack use this command: /r 1d20 How do I roll that (investigation, insight, deception, medicin, etc.)? - When specified, press your character sheet, find and press the corresponding text to roll for specific actions: Investigation It's my turn in combat, what can I do? - Two main things. You can move to a certain spot (depending on movement speed) and you can make an attack, or ready an action.
The time is the biggest challenge, together with the variety of the pupils' skills.	That the more skilled pupils lose time to develop at their level, due to time spent on making sure everyone understand and or can participate.	Put the strongest together and talk to them as a group.
ny læreplan uten bøker er utfordring i seg selv.	Mye tid brukt på å lete på nett.	teste nye verk og nettsider
No particular challenges, except that many students refused to turn on their cameras, which made them invisible (in both a literal and symbolic sense). Students could also disappear from lessons, especially when something was required of them, only to write to me afterwards and say that their internet connection had failed etc.	No consequences to speak of, this has been 14 months of "everything goes".	
Following up students was difficult	Not all students participated - face to face communication in the classroom seems to be more real and engaging	I contacted some students and explained that it was important to participate - had to assess more written than oral work
Opplever at elevene er mindre deltakende i samtaler når undervisningen er på zoom. Jeg pleier å gå mye rundt i klasserommet og snakke med hver enkelt, noe jeg tror de er mer komfortable med. Det har blitt bedre, men i starten av pandemien ville de helst unngå å snakke høyt på zoom/ha fremføringer.	De elevene som var dårlig på muntlig fra før, har blitt enda vanskeligere å få med i diskusjoner over zoom.	Jeg har gitt de mulighet til å holde fremføringer for meg gruppevis. De har også fått mulighet til å spille inn fremføringer på forhånd som de viser for klassen.

That students do not want to participate in a digital classroom. You don't even know if they are paying attention as you can't demand they have their cameras on.	What always happens: No/little effect on the stronger and more resourceful kids, poor learning outcomes for those less fortunate.	Prioritized weaker kids to a larger extent than i have before. More communication and help directed their way.					
Data equipment availability, access to online books	Pupils often wonder off the task to other resources such as entertainment, YouTube videos	Check the work progress more frequently					
I found students focus less on schoolwork in digital sessions than they do in the classroom, and they finish the assignments quicker (less thorough).	see 3.3	I made the assessment criteria more specific.					
I haven't used any other technology than screencastify. We use 3 tasks through 8th grade to learn it and they know it by 9th grade. It is available from the school we use all the Google platforms. No challenges except a few	The students from low- income immigrant families didn't have the technology or the help or the gear to finish the tasks. They didn't want help or couldn't let me know why they were late. I had to get them to hand in 3 tasks in April may when we were back at school. The different was quite visible in several classes	I let them hand in when they came back to school and didn't give them marks or reports for being late. I had to spend a great deal of extra time with them reminding and assisting to make it happen.					
insufficient time! no possibility of helping student pairs/groups when a class is split into break-out rooms (teams)	students are not used to solving the assignment through break-out rooms (Teams). Difficult for the "silent" and "shy" ones to show their communication skills	give students another chance to show communication skills by contacting them one by one and having a conversation with them in English, without other students having the possibility to interrupt, "kick out" from break-out room etc					
Time consuming Spending much time on technology skills takes time away from knowledge about culture or literacy skills - for instance. And we only have 2 hours each week in EFL.	Felt that we did not have enough knowledge about various themes for oral exam. Knowledge about how to edit pictures, for instance is not relevant for exams - even though it can be skills which may come in handy to master.	Chose oral exam tasks that our themes would cover, and reduced the number of tasks.					
In March 2020 there were some issues with students not logging on and it was hard to help them. Itslearning could not cope, and we had to switch over to Google, so we had to teach them to use G-suite through email and Facebook. After the schools re-opened we taught them all the platforms.	We got other programmes that does the same stuff more reliably, but not as well as when the old ones worked.  I have not really changed my teaching. I already used a mix of digital and non-digital materials.	I provided several ways for the students to reach me and contacted those who neither logged on to meetings or did the daily tasks. I manually changed 30 passwords in order to force updates to their accounts, I made and distributed how-to guides to all the new software.					
Time Not see the students live	Relations with students are harder to get	Breakout rooms Small groups Individual messages					
Depending on the age group and maturity, the older it tends to be easier to communicate and working with feed backs. Another factor: the back up from home plays a part.	Easy for some students to «give up» instead of asking for help. It is more difficult to follow up the ones that need extra help.	Calling up, talking «face to face», online. Give written feed backs during the work given.					
3.4. 1	3.4. 2	3.4. 3	3.4. 4	4.1	4.2	4.3	Svartid
4	5	2	5	4	4		6 minutter 36 sekunder
3	4	3	5	4			12 minutter 17 sekunder
5	5	1	5	4	5		4 minutter 26 sekunder
4	5	4	5	4	2	Good luck!	5 minutter 11 sekunder

5	4	3	4	5	4		45 minutter 50 sekunder
4	4	4	4	4	4		4 minutter 1 sekund
4	5	1	4	5	3		3 minutter 33 sekunder
4	4	2	4	5	2		10 minutter 59 sekunder
2	4	2	4	5	2	We have been lucky having spent most of the time at school. Not many days home schooling.	13 minutter 57 sekunder
5	3	3	3	4	4		8 minutter 54 sekunder
3	5	1	5	4	4		4 minutter 29 sekunder
4	3	3	2	4	2		10 minutter 44 sekunder
3	5	3	4	4	4		10 minutter 2 sekunder
4	5	3	5	3	3	If the school situation we have had these last 14 months had become the new normal, I would have quit tomorrow. I have learnt to teach in new ways, for sure, but those ways are far less interesting, satisfying, giving... Good luck with your Master's!	26 minutter 51 sekunder
4	4	3	4	4	3		14 minutter 17 sekunder
4	5	4	5	4	4		12 minutter 28 sekunder
3	3	1	3	3	1		7 minutter 49 sekunder
4	3	3	3	3	4		9 minutter 21 sekunder
4	4	4	4	5	4		3 minutter 31 sekunder
5	5		5	5	4		10 minutter 22 sekunder
1	5		5	5	1	I didn't. The social learning was in their native language	13 minutter 24 sekunder
5	5	4	5	4	3		5 minutter 1 sekund
5	3	1	3	4	3		2 minutter 46 sekunder
4	5	3	5	5	2		6 minutter 1 sekund
4	5	5	5	4	3		7 minutter 54 sekunder
4	4	1	3	3	2		14 minutter 29 sekunder
2	3	1	3	4	1		5 minutter 26 sekunder
3	3	1	3	4	4	During the pandemic, my English groups had several collaboration tasks - podcasts, professional discussion that were recorded.	20 minutter 23 sekunder
5	2	1	2	4	3	We've been on yellow most of the year (business as usual, but now with hand sanitizer and fewer breaks).	26 minutter 34 sekunder
2	4	3	4	3	2		6 minutter 42 sekunder
5	5	3	4	4	4		13 minutter 36 sekunder

## Figure list

*Figure 1* Average Use of Didactical Methods

*Figure 2* Average Use of Didactical Material

## Reflection notes

### **English language teachers' experiences of using educational technology in the teaching of the core element communication during the Covid-19 pandemic**

The very phenomenon which made the base for this thesis, i.e., the teaching conditions during the period of digital distance teaching caused by the Covid-19 pandemic, also resulted in challenges for the research process itself. The circumstances during this period were very demanding for the teachers, making their working days unusually hectic. Because of this situation, the biggest challenge of this research project was gathering a sufficient sample, mainly for the qualitative focus group interview, but also to some extent for the quantitative questionnaire. It is fully understandable that many teachers had other tasks which needed to be prioritized and they could therefore not participate in this research project. In hindsight, a solution could have been to contact even more schools for the interview(s). Repeated rejection, although polite, became demotivating, and I eventually decided to make do with the interview I had got.

The limited sample size is arguably the largest weakness of the research. Ideally, the qualitative sample group should at least consist of the teachers from one more school, preferably a school with different characteristics, for example a rural school of smaller size, both in terms of teacher staff and the number of students. It is not unlikely that the reflections and experiences of the teachers at such a school would vary from those of the teachers interviewed in this thesis, who taught at a relatively large, urban school.

Based on the varying response time on the questionnaire, ranging from 2 minutes and 24 seconds to 45 minutes and 50 seconds, and the fact that almost half of the respondents chose not to answer most of the open-ended questions requiring them to respond in written form, the questionnaire may have been too long and complex. If the questionnaire was more specific and shorter, the response rate to all the questions would probably be higher.

The starting point for the research process was my own insecurity and lacking knowledge of educational technology (or at least the feeling of this) and how to use it productively in my English language instructions. Unfortunately, (one might say), I was not alone feeling this way. What is uplifting to see is the fact that Norwegian English language teachers are positive to the use of educational technology in language teaching, which, in my opinion is a great foundation for exploring and learning about its use. It is also motivating to see that the teachers feel more confident and knowledgeable in the use and implementation of educational technology after using it for an extensive period of time.

As it is quite directly targeting the practical and pedagogical use of educational technology in the context of English language teaching and learning, this thesis can, hopefully, contribute positively to an increased insight and understanding of how to further develop the teachers' knowledge and use of educational technology in English language teaching in Norwegian lower secondary schools.