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Master's Thesis

Digital Learning – Before, During, and After Covid-19

A study on teaching methods based on digital tools in an EFL classroom in a lower secondary school in Norway.

Master of Culture and the Didactics of Language Subjects

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Abstract

This thesis examined how the Covid-19 pandemic may have affected teachers' teaching methods in the English subject based on digital tools. In addition, it investigated how remote earning and digital teaching may have affected students' English learning. The survey was qualitative. Three English teachers conducted a semi-structured interview, and their 128 students in 10th grade at an upper secondary school in a city in Norway conducted an online survey.

The theoretical framework for this thesis was based on the society we live in today is digital, and there are arguments for young people today who are digital natives or digital immigrants. The use of digital tools as a teaching method in an English classroom in Norway is nothing new today. Not only are digital skills part of the basic skills in LK20, but it also helps to motivate language learning for weak students since the access to learning through digital tools is much greater than it has been. In addition, teachers must give students what they need where they are today in teaching and meet students from their reality.

The research in this thesis shows that variation in English teaching is an essential factor for both students and teachers. And when the Covid-19 pandemic hit Norway, everyone was thrown into a situation of digital remote teaching and learning, and the varied teaching and the theory of the importance for teachers to know how the digital tools can be used as a teaching method became even more important. Although this research has examined several variables on how the Covid-19 pandemic may have affected teachers teaching methods and students' English learning, more theory and more research on this particular topic remains.

Sammendrag

Denne oppgaven undersøkte hvordan Covid-19 pandemien kan ha påvirket lærernes undervisningsmetoder i engelskfaget basert på digitale verktøy. I tillegg undersøkte den hvordan fjernundervisning og digital undervisning kan ha påvirket elevenes engelsklæring. Undersøkelsen var kvalitativ. Tre engelsklærere gjennomførte et semistrukturert intervju, og deres 128 elever i 10. klasse på en videregående skole i en by i Norge gjennomførte en nettbasert undersøkelse.

Det teoretiske rammeverket for denne oppgaven tok utgangspunkt i at samfunnet vi lever i er digitalt, og det finnes argumenter for at unge i dag er digitale innfødte eller digitale innvandrere. Bruk av digitale verktøy som undervisningsmetode i et engelsk klasserom i Norge er ikke noe nytt i dag. Ikke bare er digitale ferdigheter en del av de grunnleggende ferdighetene i LK20, men det er også med på å motivere språklæring for svake elever siden tilgangen til læring gjennom digitale verktøy er mye større enn den har vært. I tillegg skal lærerne gi elevene det de trenger der de er i dag i undervisningen og møte elever fra deres virkelighet.

Forskningen i denne oppgaven viser at variasjon i engelskundervisningen er en vesentlig faktor for både elever og lærere. Da Covid-19 pandemien rammet Norge, ble alle kastet inn i en situasjon med digital fjernundervisning og læring, og den varierte undervisningen og teorien om hvor viktig det er for lærere å kunne bruke digitale verktøy som undervisningsmetode ble underbygd. Selv om denne undersøkelsen har undersøkt flere variabler om hvordan Covid-19 pandemien kan ha påvirket lærernes undervisningsmetoder og elevenes engelsklæring, gjenstår det mer teori og mer forskning om dette spesielle temaet.

Innhold

1. INTRODUCTION

School and friends are essential arenas for most children and young people, and changes in their school offers and contact with others can have a great significance (Nøkleby, Berg, Muller & Ames, 2021). The Covid-19 pandemic and the subsequent closure of society, infection control measures, unemployment, and insecurity have affected the entire population – some more than others. However, it is not sure how these restrictions may have affected young students in school. Therefore, it is essential to use the knowledge we have gained to formulate necessary measures and recommendations in the future. It is particularly relevant to see how it has touched students' learning during the lockdown.

As of March 2022, schools in Norway are open and operate normally. However, the global student population has experienced either partially or entirely remote schooling for the past two years. Documenting students' and teachers' initial experienced may help mitigate some of the challenges they have met during the pandemic and if and how it may have affected digital learning as of today (Scully, Lehane & Scully, 2020)

1.1 Covid-19

In December 2019, several cases and an accumulation of pneumonia were observed in the Chinese city of Wuhan. In early January 2020, it was determined by the Chinese authorities that a new coronavirus, called SARS-CoV-2, is the cause of the respiratory disease Covid-19. A pandemic has been identified since the virus began to spread among humans: Covid-19 has spread rapidly worldwide. One year into the pandemic, in April 2021, Covid-19 was described as a flu-like disease with high infectivity and morbidity and a ten percent mortality rate. The severity of the respiratory disease ranges from asymptomatic, mild, moderate, severe, or life-threatening (Norsk Helseinformatikk, 2021).

On March 12th of, 2020, the Norwegian government came up with vital, intrusive, and necessary measures that have taken place in Norway in peacetime. The government had already introduced several measures to prevent the spread of infection in line with professional advice. However, Norway and the world faced a new phase of the pandemic that required new and more challenging measures. The measures significantly impacted the citizens' freedom and immediately impacted people's everyday lives and how society functioned. The

government called it a joint effort to protect the most vulnerable of us (Regjeringen, 2020). Several measures include the closure of kindergartens, schools, and educational institutions, with immediate effect (Norsk Helseinformatikk, 2021). When Covid-19 hit the world, free education became a forced digital education that no one was prepared for. The situation of digital learning created by Covid-19 was created as an emergency solution for students while schools were closed (Yates, Starkey, Egerton & Flueggen, 2020).

In addition, Norway used a so-called traffic light model as an emergency measure. The traffic light model as a measure was done by dividing the measures in the traffic light model by green, yellow, and red levels at school. The measures varied from an almost normal organization of everyday school life (green level) to comprehensive measures with smaller, fixed cohorts and greater distance between students and staff (red level). In some municipalities, the lower secondary and upper secondary were closed during red level when the infection situation was at its worst. However, it was up to the municipality to decide which measures were to be implemented if the conditions in the act relating to control of communicable diseases (Helsedirektoratet, 2021).

1.2 Digital Learning

Today's curriculum includes *digital skills* in the basic skills. Students' digital skills emphasize that the development of digital skills in English goes from exploring the language to being able to interact with others on English platforms, create texts, and acquire knowledge by obtaining, analyzing, and critically evaluating information from various English-language sources (The Norwegian Directorate for Education and Training, 2019). Students' digital skills are established to strengthen their language learning. At the same time, students' reading skills are considered crucial for developing learners' linguistic proficiency (The Norwegian Directorate for Education and Training, 2019; Gilje, 2014). However, digital learning theories were created from a teaching platform where resources, platforms, and teaching methods were carefully considered, and which took time to build from the conditions. The learning situation created by Covid-19 was not carefully planned but an emergency and was intended as temporary (Yates et al., 2020). Therefore, this research will find out how digital learning during the lockdown and red level may have affected students' language learning.

1.3 Research Aims

The measures to limit the spread of infection in connection with the Covid-19 pandemic have been intrusive for everyone. Not least, young people have been affected, and social distance has become an everyday word. We have known little about the effect of such large-scale outbreaks of disease and associated social restrictions on the quality of life (Soest, Bakken, Pedersen & Sletten, 2020).

While online and digital learning is nothing new today, the consequences of Covid-19 were a sudden experience for students who are used to having a school to go to every day. In Norway, schools and teachers have professional flexibility, so several pedagogical methods and techniques have probably been used during this period of using digital tools as a teaching method. Therefore, this study will, among other things, examine how digital tools have been used in an EFL classroom and what kind of impact Covid-19 has had on students' English learning and digital teaching, as well as what teaching methods have been used. The following research question is posed in this study:

> *How has the worldwide pandemic, Covid-19, and teaching based on digital tools affected students' English learning during the school lockdown?*

This study will further present a variety of more concrete aims from this superordinate question. The research aims to find out; (i) what kind of learning methods were used before, during, and after the pandemic, (ii) and track how the pandemics' effects have forced teachers to focus more on digital teaching methods, (iii) and how this may have affected students' English language learning. The theoretical framework and former research on digital learning will be presented in chapters 2 and 3. Further on, the methods and materials used in this study are presented in chapter 4, followed by this research data analysis and results in chapter 5. This study's discussion will be given in chapter 6 and the conclusion in chapter 7.

1.3.1 Relevance and Purpose of the Research

The findings of this study will contribute to knowing which measures can be taken if schools and teachers are put in a similar situation in the future. It will show how the forced use of digital learning has affected students' English language learning and students' vocabulary and/or fluency. I plan to develop my analysis on what kind of teaching methods teachers have

used in English language learning before the Covid-19 pandemic and if and how digital tools as a teaching method have changed their coherence and usage. The research will track how digital teaching became a forced teaching method during the lockdown and how this has forced teachers to be more open-minded about digital learning now and in the future.

These findings can give me an overview of in-classroom teaching in second language learning and help me keep in mind what kind of teaching methods will be helpful when planning my future English lessons. In addition, I hope this project will provide me with, and others reading this thesis, a comprehension of the use of digital tools in an EFL classroom. Further, the results of this study will bring knowledge of how to get through a similar situation in the future, if there will be any, in terms of teaching and learning most efficiently. The use of digital tools in school and education is constantly growing in the modern world, so it is of great interest to find out to what extent digital tools are used and how.

1.3.2 Scope and Limitations

This paper uses a case study to explore how digital tools have been dealt with due to Covid-19 and how this learning method has affected students' English learning and teachers' teaching methods on the background of teachers being forced to use digital tools during the lockdown. Therefore, an interview and an online survey will be used. In addition, to find out if Covid-19 and digital teaching has affected students' English language and/or fluency, this study will focus on the thoughts of the students and teachers because of the time- and space limit.

Further, this study has a significant limitation: the virus is relatively "new." When I started writing this thesis, it was an ongoing pandemic, which means that not much research has been done on the effects of the virus on the population, let alone on students and teachers. Almost the entire world was forced to use digital tools for remote teaching during the lockdown and red level. Therefore, considering this study only uses one lower secondary school in the research, the results can only speak for these specific students and teachers and are expected to be reasonably general. However, further research can provide sound knowledge, and it can be beneficial to see different aspects of how Covid-19 has affected the world.

2. THEORETICAL FRAMEWORK

Because the Covid-19 pandemic is still somewhat "new," given that it has been only two years since the first lockdown, there is no excessive research regarding the theme of digital learning before, during, and after the lockdown. Therefore, this chapter investigates digital tools in an EFL classroom and their advantages and disadvantages. It is used theory about the implementation and use of digital tools in a school section to answer this thesis' research question and, in addition, gain knowledge on Covid-19's impact on students and teachers.

Covid-19 has caused several schools worldwide to close, forcing students to learn through digital platforms and teachers to teach using digital tools. The term "digital tools" refers to how learners carry out learning activities via desktop computers, notebook computers, tablet computers, and smartphones (Lin, Chen & Liu, 2017). Digital tools have been integrated into education over the past couple of decades, which has resulted in the use of an increasing number of devices, the Internet, online learning environments, and collaboration tools, resulting in varying degrees of integration or infusion of digital tools into school systems (Yates et al., 2020). However, teachers had to prepare for an online, emergency remote teaching and learning method when schools closed because of the Covid-19 pandemic in March 2020. A well-planned, online lesson can be experienced as something meaningful as it is planned from the beginning to be online. In contrast, emergency *remote teaching* is defined as "a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (Hodges, Moore, Lockee, Tryst & Bond, 2020, p.6). Further, Hodges et al. (2020) emphasize that digital teaching could only, to a limited extent, live up to the principles of good digital learning because of the sudden change that arose due to the pandemic's infection control measures.

Teachers with long experience in practical pedagogical education have probably noticed the increasing use of digital tools in teaching rather than old-fashioned teaching methods where teachers stood and taught while the students listened. Today, in 2022, there is no doubt that both students and teachers would benefit from more knowledge about the different teaching methods that can and should be used in school. Through conscious choices of teaching methods concerning today's society, the students' prerequisites, and the subject's content, the teacher can contribute to a greater degree of adaptation in the teaching and thus also to more learning.

First, there will be an introduction to the digital society we live in today to give a better overview of this thesis subject. Secondly, the importance and need of using digital tools in a Norwegian EFL classroom will be presented, where the digital skills in the National Norwegian Curriculum LK20, how digital tools as a learning method can function as motivation and as incidental learning for students, as well as how the use of digital tools has increased will be outlined. The importance of using teaching methods outside of the standard textbook teaching will also be presented. Thirdly, I will present the importance of teachers' knowledge in using digital tools as a teaching method. Lastly, a summary and my research's core ideas will be presented.

2.1 A Digital Society

"Today's society" is something all teachers are always supposed to have shared knowledge about and be able to relate to. The Internet has given this century the name "the age of the Internet". Internet and digital tools affect every aspect of society: upbringing, knowledge, education, and democratic participation, which especially concerns school and education. However, several schools are constantly criticized by society for not being up to date with the digital development which is taking place in society. This causes young students not to be able to use the digital skills that they have access to in the classroom. Furthermore, at the same time, several teachers raise questions about using digital learning resources and tools that could lead to better teaching and learning experiences (Løvskar, 2019).

2.1.1 Digital Natives

The digital society we live in today is not just a teaching method that one can choose to take away in the classroom, but it is part of the reality young people, and students grow up with today. Digitally born students today have a different type of childhood than the generations before them, and at school, it is the adults' task to meet the students from their reality, not their own. Therefore, knowledge of the students' upbringing environment, which includes the increasing use of digital tools, is essential, especially for those who work in education. Wang, Myers, and Sundaram (2013) use digital natives and digital immigrants.

> Digital natives are the new generation of young people born into the digital age, while "digital immigrants" are those who learnt to use computers at some stage during their

adult life. Whereas digital natives are assumed to be inherently technology-savvy, digital immigrants are usually assumed to have some difficulty with information technology. (Wang et al., 2013, p.409).

Further, Wang et al. (2013) assume that digital immigrants resist new technology or do not want to, or have difficulties accepting the new, digital society we live in. Even though it is stated that there is a big difference between digital natives and digital immigrants, it is essential to remember that in some cases, some people do not agree with the increasing use of digital tools.

On the other hand, Ann Brenoff's article *There's No Such Thing As 'Digital Natives'* (2017) argues that digital natives do not exist and are just younger people who have taken jobs from the older generation. Brenoff (2017) states that "not only does the myth exist of their existence contribute to ageist practices" (n.p), but it is also a disadvantage for the younger people who could take advantage of being around people with more experience than themselves. In Brenoff (2017), Kirschner argues that the assumption that younger people being born with a smartphone in their hand hurts them rather than helps them in the classroom. However, the idea of digital natives has impacted the expectations in school and, in addition, influenced today's curriculum (Brenoff, 2017).

Furthermore, today, almost everybody is online and uses digital tools throughout their day. The police, the library, shoe- and clothing stores, newspapers, the bank, the map, the property registers, etc., are online and use digital tools. The schools are probably the variable that has not quite gotten there, especially not in the classroom. Some teachers have brought much digitalization into their classrooms. However, many are also reluctant and dare not move very far beyond traditional teaching, apart from a few simple google searches and a few mandatory digital tools such as school iPad and laptops. Although students travel high and low in the digital world both at school and in their free time, educators and schools are often described as being "unwilling to change", which is one of the reasons why students are not allowed to utilize their digital competence in the classroom (Løvskar, 2019).

For many years, the authorities have put pressure on schools to get them to use more digital tools. The main reason for this is that both work and society require more and more use of computer programs and digital services. Learning becomes more motivating and effective using digital learning resources. In a society that has changed as fast as our society has, most

types of education will be updated, and employees must also be prepared for the retraining that will take place (Løvskar, 2019).

2.1.2 Remediation

Any teacher needs to have an intentional relationship with why and how to use digital tools in teaching to fulfill The Norwegian National Curriculum, LK20. The knowledge of digital tools is essential because the typical EFL classroom we have today in Norwegian schools is filled with many minority language students with different cultural backgrounds from other countries and continents because of the global society we live in (Bjarnø, 2017).

In teaching, the teacher needs to think about what makes the difference between using digital tools and not using digital tools when teaching. If you choose to use digital tools in teaching, it must be well thought out and planned to achieve a good teaching lesson. Teaching must be conscious and thoughtful for it to be useful for students to achieve academic gains. Bolter and Gruisin (2002) in Bjarnø (2017) use the term remediation based on how the media transforms previous media forms. Although this definition does not limit remediation to the use of new digital tools, it focuses on the emergence of digital tools. Remediation occurs when content and structure are reworked and further developed. In cases where digital tools are used as a form of teaching, and if a teacher chooses to use digital tools to remediate their teaching, the process requires new and different didactics than the one initially used in teaching. The didactics will thus be different than if we had not used digital tools, the technology utilized to bring a new dimension to professional processes (Bjarnø et al., 2017). Over the years, we have seen how various analog traditions have become digital, such as online newspapers, online radio, and TV, to name a few, which are genres that initially originated from other media. In recent times, these changes have been remediated. The digital versions of newspapers are not the same as the paper newspapers, and something has happened with both content and structure that has become different. The Internet, other programs and software, tablets, and cameras are specific tools that can be a starting point for remediation. Remediation is a process in which content, structure, and associated actions that are linked to an established set of media and formats are reworked and further developed (Bjarnø et al., 2017)

Based on this, remediation means that when a teacher uses digital tools in the classroom, it will have consequences for the students' form of learning and teachers' teaching and guidance, but not necessarily negative consequences. For example, it is not just writing from paper to a

digital form. Furthermore, we rework the text simultaneously and adapt it to the digital tool used. An example of a digital platform that has been remediated that can affect students' learning is the dictionary. On the Internet, several types of thesauruses are good examples of how advanced technology presents a new and different product than a paper-based variant. That is a digital tool often used in an EFL classroom today. One is automatically presented with all words related to each other and can easily click to put other terms in the center or expand the search, have the terms read out, do a direct search on a browser, etc. In contrast, words must be looked up page by page alphabetically in the paper-based version. When a student needs to translate a word, the translation will automatically show in the online dictionary, in addition to several synonyms. The built-in dictionaries provide students with guidance in their spelling and suggestions for alternative words to vary their language. Here one can safely say that there has been remediation from the traditional dictionary many are used to. For example, in an EFL classroom, which this thesis deals with, an online dictionary will serve as an essential contribution to learning new words and/or language in depth (Bjarnø et al., 2017).

Another example of remediation that many teachers can recognize themselves in is when using digital tools for writing assignments and being able to give feedback on the work. Here new didactics have emerged. The students can use the Internet to search for inspiration to get started with the work and get a digital response during the writing, which can then further help to give the students a greater motivation for the work further with the texts. Furthermore, the differences between giving feedback on assignments written on paper and giving feedback through digital tools are many and essential. For instance, students do not have to rewrite the entire text after feedback, making it easier for the student and teacher to have an ongoing conversation about the text (Bjarnø, 2017). Carlsen, Dypedahl, and Iversen (2020) state that students have many opportunities to learn English vocabulary online. However, since anyone can write and put out almost everything, it is crucial to pick out what is reliable and what is not.

Furthermore, "it is our duty as teachers to meet students where they are" (Løvskar, 2019, p.35). This is emphasized in the Education Act §1-1 that teachers need good knowledge of students' upbringing environments and culture, online as well, "the pupils and apprentices must develop knowledge, skills, and attitudes so that they can master their lives and take part in working life and society. They must have the opportunity to be creative, committed, and inquisitive" (The Education Act, 1998, §1-1). Another reason for teachers being fully aware and competent in

the digital society we live in today is that they are obliged to take care of every student's needs inside the classroom. Today's society includes digital tools to a large extent. This means that every teacher is obligated to have enough knowledge about today's society and culture. The society to which the Education Act refers here in our time is a hybrid of the digital society and the physical. It unfolds in the traditional, analog reality and digital reality. Society has changed character, and school activities cannot continue old traditional tracks. The school must create new traditions that suit our reality today. This is not just about students learning to handle digital tools and resources, but that they should also understand their contemporaries and act as trading subjects both "offline" and "online".

2.2 Digital tools in a Norwegian EFL classroom

With the increasing use of digital tools in teaching today, this thesis will, as mentioned earlier, examine to what extent digital tools were used as a teaching method before the Covid-19 pandemic struck and led to lockdown in March 2020. It will also be investigated how lockdown may have affected the teaching methods and the English learning afterward. It is important to emphasize that the results found in this thesis apply to students and English teachers for one lower secondary school in Norway. The differences in the results in this survey can vary significantly from school to school and country to country since the pandemic was worldwide. All schools in Norway follow the same education law, but many countries do not have as good access to digital tools for teaching as Norway has. This chapter will provide a good description of how digital tools are integrated into schools in Norway and the importance of digital competence.

2.2.1 Digital Skills in LK20

The English subject is central to cultural understanding, communication, education, and identity development. The National Norwegian Curriculum, LK20, states that the subject's competence goal is to give students a reasonable basis for communicating with others locally and globally, regardless of cultural and linguistic background. English will help develop students' intercultural understanding of different lifestyles, mindsets, and communication patterns. Furthermore, it will prepare students for a possible education and a working life that requires English language skills in reading, writing, and oral communication (The Norwegian Directorate for Education and Training, 2021). In the glocal world we live in today, this is an

essential part of students' education. While Robertson (1992) in Barker & Jane (2016) defines the term globalization as "an intensified compression of the world" (p.192) and "our increasing consciousness of the world" (p.192), a glocal world can be defined using the term *glocalization.* Glocalization is:

> a term used to express the global production of the local and the localization of the global; that is, the way in which the global is already in the local and the production of the local is generated by a global discourse (Barker & Jane, 2016, p.639).

As written in chapter 1.2, the use of digital tools is one of the five basic skills that must be integrated into all subjects and at all levels in primary school according to the National Norwegian Curriculum for the Knowledge Promotion 2020: reading, writing, numeracy, oral skills, and digital skills (The Norwegian Directorate for Education and Training, 2021). The school's task is to support student's development of the five basic skills throughout the training course. These skills are also crucial for developing students' identity and social relationships and for being able to participate in education, work, and community life. In the general part of LK20, it is specified that the school shall facilitate learning for all students and stimulate the individual motivation, desire to learn, and belief in their mastery. "Pupils' learning and development shall be at the center of the school's activities" (own translation, The Norwegian Directorate for Education and Training, 2021, p. 18). All students meet with different backgrounds, prior knowledge, attitudes, and needs at school. It will be the school's and teachers' responsibility that all students are met to provide equal opportunities for learning and development, regardless of their background and prerequisites.

Furthermore, to create motivation and learning joy for the students in the teaching, it is essential to have a broad repertoire of learning activities and different resources within a predictable framework. For students to have the same starting point regardless of their past, teachers must consider that students are different and learn at different paces and with different progressions. Therefore, teachers and schools must know how students learn and what they already know (The Norwegian Directorate for Education and Training, 2021). In addition, according to the new curriculum, LK20, learning English is also about using digital tools to strengthen students' language and understanding. Students are supposed to learn how to use digital tools as a learning method for English language learning.

Digital skills in English involve being able to use digital media and resources to strengthen language learning, to encounter authentic language models and interlocutors in English, and to acquire relevant knowledge in English. This requires critical and reflected behaviours using digital forms of expression in English and communication with others. The development of digital skills in English progresses from exploring the language to interacting with others, creating texts, and acquiring knowledge by obtaining, exploring, and critically assessing information from different English-language sources (The Norwegian Directorate for Education, 2019, retrieved 03.02.2022).

It is stated in the general part of LK20 that it is the school's responsibility to ensure that all students get the best possible benefit from the adapted education that must be completed. "The school can, among other things, adapt the teaching through working methods and pedagogical methods, use of teaching aids, organization, and in work with the learning environment, curricula and assessment" (own translation, The Norwegian Directorate for Education, 2021, p. 19). Digital tools are also well suited to take advantage of the multicultural and bilingual classroom that is common today. Furthermore, given the world's situation when Covid-19 struck, it was up to the school to provide the good and efficient teaching and training necessary for all students to get what they needed and were entitled to (Bjarnø, 2017).

2.2.2 Motivational Learning

The use of digital tools in an EFL classroom can also function as incidental learning. Incidental learning is learning without having the intention of learning. For example, when a student uses digital tools to communicate with others worldwide on social media, their English vocabulary incidentally is improved (Sundqvist & Sylvén, 2016). Kerka (2000) describes incidental learning as:

Unintentional or unplanned learning that results from other activities. [...] It happens in many ways: through observation, repetition, social interaction, and problem solving; from implicit meanings in classroom or workplace policies or expectations; by watching or talking to colleagues or experts abouts tasks; from mistakes, assumptions, beliefs, and attributions; or from being forced to accept or adapt to situations (p.3).

In addition, digital tools can function as an interest-driven movement from students and can contribute to a motivated learner. Garris, Ahlers & Driskell (2002) describes a motivated learner as someone enthusiastic, focused, engaged, and interested in and enjoys what they are doing. In addition, it is essential not to forget that there has also been a significant shift in the field of education regarding the best ways of learning. Learning has gone from a traditional, didactic model of instruction, learning by listening, to a more learner-centered model that emphasizes active student learning by doing (Garris et al., 2002). Lin et al. (2017) use *autonomous learning* when describing digital learning. Autonomous learning "focuses on learners engaging in an online or offline learning activity through digital learning by themselves. It stresses on personal autonomous learning and requires the participation of learners with autonomous learning to precede learning activity" (p.3555). It is further stated that learning requires a driving force from students. "Learning motivation is a mediator between stimulation and reaction. In other words, learning motivation is the learner's individual opinions about affairs, and learners would present different knowledge acquisition needs because of distinct opinions" (p.3556). Block et al. (2013) in Lin et al. (2017) say that learning is led by external motivation from the very beginning. When this external motivation becomes autonomous, external input would no longer be as necessary, and learning would turn towards autonomous learning. Both internal and external motivation would therefore complement each other. Internal motivation could make independent decisions, while external motivation was the learning motivation that came from other people's rewards or feedback (Lin et al., 2017). Furthermore, digital tools as a teaching method have eased teaching and learning for students and teachers. It allows students, especially language learning students, to collaborate better and more manageable with classmates and teachers (Al-khresheh, 2021).

2.2.3 Digital Competence

Technology affects all aspects of our daily lives, and it has changed how we learn, communicate, entertain, find information, and acquire knowledge. The changes that have occurred due to the increasing use of technology are changes that will become more visible at all levels of the education system (The Norwegian Directorate for Education and Training, 2021, p. 1).

The school's task is to be able to give students the knowledge they need in the life that lies ahead of them. Previously, knowledge students gained in the classroom was from the textbooks and the minds of the teachers, and teaching was about transferring the knowledge the teachers gained themselves. The social and professional life that awaited the students after school was not as it is today. Books and schools no longer have all the knowledge; much of what we need to know is online. New knowledge comes all the time. Some of the old are rejected as wrong or useless and are out of date. The digital realities that surround us daily have made it necessary to think differently regarding the basic pedagogical questions of what students should learn and how (Løvskar, 2019). Students are supposed to learn the English language and how to communicate in English, "both orally and in writing, in different situations and by using different types of media and sources" (Norwegian Ministry of Education, 2021). Teachers are supposed to allow the students to learn how to express themselves in English and allow them to be able to interact in authentic and practical situations. Furthermore, regarding digital skills, students are supposed to be able to use digital skills to strengthen their language learning, encounter and interact with others, and acquire relevant knowledge in English (Norwegian Ministry of Education, 2021).

This process creates new challenges for the teacher's working methods in pedagogical, didactic, and administrative contexts, the students' digital education, and the development of their subject knowledge and basic skills. Today, it is more important than ever that children and young people are not just passive consumers of products, services, and information. The role of the training is, among other things, to form students who can identify credible information, cite sources, protect their intellectual property, apply ethical values and attitudes in communication and interaction, produce their digital resources, and develop a reflective relationship with their own and others' actions, cultural differences, values, and rights (Løvskar, 2019).

2.2.4 The Extended Classroom

Løfsnæs and Kjelen (2015) use the term the extended classroom in the form that there should be room for teaching programs to have didactic adaptation as a central starting point and aim to give those who are to learn an experience of being approached in a context that makes sense to the individual student. Long traditions with teacher- or textbook-driven teaching methods mean that the need is there for more examples of learning methods that can provide expanded space for learning. There is a lack of a holistic connection between academic knowledge and the knowledge needed in the field and everyday life. There is still slight variation in the primary school's teaching and learning processes. It has also been accused of not developing the skills that students need to master daily challenges. Today, there is a stricter requirement for targeted knowledge development at an early age which is crucial for the result of further knowledge (Løfsnæs & Kjelen, 2015).

Good learning at all levels of education is about meaningful experiences as a basis for further learning. By moving parts of the teaching out of the classroom to the many learning arenas, we can find in the school environment, the teacher will have a more extensive repertoire to play on. Learning outside the traditional classroom provides increased opportunities for active learning (Løfsnæs & Kjelen, 2015, p. 16). Physical activation and sensory experiences make the teaching physically and emotionally rooted. In addition, Long (1985) states that pedagogical arguments have long supported the use of group work as a second language learning method. It has been recommended to have small group work in a language learning classroom and work in pairs.

2.3 Teachers' Digital Competence

Teachers' general knowledge of today's digital society falls under "the teacher's professional digital competence". Several national management and reference documents set clear expectations for teachers and teacher education in digital skills. Today, the curriculum presupposes that teachers use digital tools in teaching and contribute to developing students' digital skills in language learning and other subjects (Løvskar, 2019; The Norwegian Directorate for Education and Training, 2021, 2017).

One of the school's most important tasks is conveying knowledge, and the increase in the use of technology contributes to people's collective knowledge growing at a tremendous rate. According to the Professional Digital Competence Framework for Teachers (2017) in The Norwegian Directorate for Education and Training (2021), all students should have the opportunity to develop their basic skills during schooling, including their digital skills, so that it will not be a problem for them to search for new and old information, communicate online, in addition to being critical of what they find online. However, it is a requirement for teaching students in the Professional Digital Competence Framework for Teachers (2017) in The Norwegian Directorate for Education and Training (2021) and other guidelines, that they must develop all necessary knowledge to be able to use digital tools effectively in their pedagogical and administrative work in and outside the classroom. "If the teachers of the future are to be capable of developing pupils' digital competence, in line with the stipulated obligatory guidelines and requirements, professional digital competence must be regarded as an integral part of teacher competence and the teaching profession and emphasized in teacher education" (The Norwegian Directorate for Education and Training, 2021, p.1-2).

2.3.1 The Function of Teaching

Emotions and thoughts influence each other to the extent that emotions are essential to guide the decisions made in the future (Løfsnær & Kjelen, 2015). Tiller and Gedda (2017) describe a study done with six teachers, three Norwegians, and three Swedes from both primary and secondary schools. The group discusses goals and the complexity of goal formulations in school. The researchers emphasize that the goal is essential in school and that it cannot just focus on the procedure. In didactic relational thinking, it is pointed out that good teaching and other forms of learning depend on the teacher understanding the connections and relations between the main categories in the didactics. The teacher should understand and have the skills needed to bring it into their teaching practice.

The goals for the school were discussed further in the study. Roughly simplified, Tiller and Gedda (2017) describe three knowledge goals or functions: subject knowledge, traditions, working methods, and the person.

- *Subject knowledge* is about teaching always being about something - it has content. This function indicates that the goal is for students to learn knowledge and skills to be able to solve tasks to function in everyday life and specific tasks within working life.

It is thus about knowledge of something or skills to do something. This function is traditionally the largest in the school and is an important part of being able to participate in society.

- *Traditions and working methods* are about teaching being about traditions and the way things are done. This function points to the goal of being able to participate with others in different contexts, in different communities, such as when we start school different traditions apply there, for example, that the students sit in their place and raise their hand.

- *The person* is about the teaching affecting the person. This feature points to the goal of trying to educate someone. This feature means that we will help students understand and try out who they can be, rather than searching for the way they are special.

<div align="right">(Tiller & Gedda, 2017).</div>

Teaching is something that you can never really be entirely taught. Based on each of the three functions that Tiller and Gedda (2017) present, a complex situation is created in the meeting between teachers and a group of students. Furthermore, digital tools in classrooms have increased over the years. Teachers also need to be fully competent and confident in using digital skills as one of the five basic skills in the framework LK20. However, it is consequently developing and is, as stated above, also something you can never really be entirely taught.

The use of digital tools as a teaching method is a significant trend. Michael Kerres' (2022) article "Bildung in a Digital World: The Social Construction of Future in Education" raises the question if we need new or additional competencies, if traditional qualifications are enough to both teach and learn about digital education, and if it is enough to prepare for the digital age (Kerres, 2022). The encounter in how digital tools is related to teaching and learning is in many ways visible in the educational notion of Bildung, "which deals with how education can help prepare students for a responsible public life within the context of a democratic state and provide students with basic skills for successful identity work from childhood to adolescence and into adulthood" (Gran, Pettersen & Mølstad, 2019, p.23-24). A person receives educational Bildung when they experience that changes their perspective on the world and themselves (Gran et al, 2019). However, the term digital Bildung is defined as digital competence inside and outside the classroom. It refers to an overall intercultural competence addressing more than just having competence in using digital tools, but also being able to be independent, critical, and reflected individuals in the digital age. Using Bildung when focusing on the development of a student can be necessary, and teachers must consider the students'

entire lives and Bildung as a central role in their development. Digital Bildung is based on the theory of Bildung, which is essential when understanding every human needs and helping them acquire knowledge and experience (Gran et al., 2019).

2.3.2 Framework for Teacher's Professional Digital Competence

The Norwegian Directorate for Education and Training (2021) states that for teachers to be able to develop the essential skills and professional knowledge of students, it is important that teachers also develop their professional digital competence in education itself to become a teacher and further through professional learning and development during his career.

The framework for teachers' professional digital competence is a document that policy developers, department heads, teacher educators, teachers, teacher students, and others can use as a reference in the work they do to increase the quality of teacher education and continue and further education of teachers. The framework exists to establish a standard conceptual apparatus and a standard frame of reference for what the teacher's professional competence entails (The Norwegian Directorate for Education and Training, 2021). The framework can be utilized in:

- Developing common national frames and directions for teacher education through the preparation and further development of framework plans and guidelines for teacher education.
- Planning and implementing initial and continuing teacher education through the preparation of local program plans, and the provision of continuing professional development.
- Evaluating and following up on teachers' professional digital competence through the further development of digital forms of assessment and self-evaluation tools for teachers, as well as surveys of the status of digitalization in the teaching profession and teacher education.

  The Norwegian Directorate for Education and Training, 2021, p.2.

The framework plan operates with seven areas of competence: "subjects and basic skills", "changes and development", "interaction and communication", "management of learning processes", "pedagogy and subject didactics", "ethics", and "school in society". These seven

competencies contain descriptions of knowledge, skills, and competence (Løvskar, 2019; The Norwegian Directorate for Education and Training, 2021).

Figure 1: Visualisation of the Professional Digital Competence Framework for Teachers. (The Norwegian Directorate for Education and Training, 2021, p.6).

Each of these competence areas is individually equally important, and the sum of all of them makes up a professional, digitally competent teacher. The teacher's professional digital competence is a dynamic and complex competence affected by digitalization in society. Therefore, this framework will be updated regularly according to the impact of digital development on the teaching profession and the education system in general (The Norwegian Directorate for Education and Training, 2021).

The digital society touches on several areas of competence, especially the competence of "school in society". The Norwegian Directorate for Education and Training (2021) describes the knowledge of the teacher in the "school in society" with five bullet points:

- has an insight into how digital developments influence the world and society
- understands the influence digital developments have on the distinctive character of schools and the teaching profession, the school's objectives, its core values, legal basis, current curricula, and the various rights of pupils

- understands the influence of digital developments on children's and young people's childhood environment, and child and youth culture, development, and identity
- understands how access to digital resources can create or diminish barriers and has insight into how pupils' cultural, social, and economic conditions are of relevance to how technology is used for learning
- understands the basic principles of algorithmic thinking, and its relevance for digital technology and digitalization in society.
  Norwegian Directorate for Education and Training, 2021, p.5.

Further, it is stated that a professionally digitally competent teacher knows perspectives on digital development. Additionally, teachers should know the value of digital media and the importance of their role in counteracting digital division where students can be active participants in democracy, globalization, and a digital world. The teacher must contribute to students' digital knowledge so that they can contribute to tomorrow's society (Norwegian Directorate for Education and Training, 2021).

2.3.3 Learning to Learn with Digital Tools

Using digital tools in the classroom has been teachers' coercion, punishment, and reward. The curricula set requirements for the use of digital resources in the classroom. Teachers who choose not to use digital resources in their teaching can expect to receive feedback from their managers, who, among other things, can use the learning platforms to keep an eye on what the individual teacher is doing, such as Teams. A new learning strategy that has emerged in the last decade is learning technology. Løvskar (2019) says that the Oslo school had approximentaly 57,000 laptops, 3,000 Macs and 25,000 tablets/iPads, distributed over 63,900 students in 2018. Today, large sums are invested in this type of learning. Despite the large investment the authorities are making in digital learning tools and the fact that the use of digital learning resources has increased, it has nevertheless not led to a huge jump in new digital thinking among most teachers. The main impression of the development has been slow and is possible because of the challenging aspect of using digital tools in the classroom. Andrei (2016) mentioned that studies show that many teachers need time and more skills to implement the use of digital tools in the classroom to give a successful lesson. Teachers need to be equipped with various types of knowledge of technology that is relevant to teaching and learning and mentions three types of knowledge teachers need to be equipped with: content

knowledge, pedagogical knowledge, and technological knowledge. Content knowledge is the knowledge of the content they are teaching. Pedagogical knowledge is the knowledge about how to teach their content. Lastly, technological knowledge is the knowledge about how to use technology - "that would eventually influence their technical pedagogical knowledge and technical pedagogical content knowledge" (p.103) of using digital tools in the classroom (Andrei, 2016).

Løvskar (2019) mentions some factors in the slowness of using digital tools in the classroom: firstly, the school organization is large, heavy, and traditional. Secondly, the teachers are not digitally competent enough. Thirdly, the teachers are too old, or fourth, teachers have not been listened to in the restructuring process. However, Andrei's (2016) study looks at all the available technology in English language learning classrooms. Furthermore, it further states that the study's findings show that the digital tools were insufficient to implement in the classroom. Digital tools should also be educational and valuable for both teaching and learning. The survey further shows that several tools were available, but students used them primarily for entertainment. Andrei (2016) states that direct instructions on using digital tools and how they can support language learning are necessary.

Furthermore, Løvskar (2019) states that the school organization is large, heavy, and rich in tradition can lead to changes in both societies and the curriculum not being changed in a jiffy, but more time is needed. Teachers who are not digitally competent are trying to be solved with courses and continuing education to a greater extent, but this is not as appropriate if the teachers are unwilling. The teachers are too old is not something you can do anything about before a possible generational change or two. Only then will the teachers who have grown up with digital tools in the school themselves become teachers. Furthermore, finally, the teachers have not been listened to in the restructuring process. The authorities have formulated plans which they have then stepped over the head of the classroom educators without asking what they are competent or can, or will, do.

2.4 Summary and Core Ideas

As presented, there are several theories of using digital tools as a teaching and learning method, the advantages of using digital tools in an EFL classroom, and the importance of teachers' having enough competence in teaching with digital tools. I want to portray in this theory chapter that our digital society, the use and importance of digital tools in a Norwegian

EFL classroom, and the importance of teachers' digital competence are all intertwined. I have separated them into chapters, but they are all working together. For instance, digital tools are today's students' reality. Therefore, remote teaching during the lockdown and red level may not have significantly affected students' English language learning, hence them receiving external English language input elsewhere. Furthermore, the access young people have today to digital learning platforms online has increased, and the teacher-student relationship may be affected. Teachers need to be "up to date" in their students' lives and realities and vary in their teaching methods to keep students motivated in the classroom.

Furthermore, the core ideas for the analysis of this thesis will be drawn from the theory of the digital society we live in today (Løvskar, 2019) and how today's young students can be referred to as digital natives (Wang et al., 2013), as well as digital skills being one of the core elements in the Norwegian Curriculum, LK20 (The Norwegian Directorate for Education and Training, 2021). Therefore, digital tools in the classroom can function as an external motivation for students (Lin et al., 2017) and as an interest-driven movement (Garris et al., 2002). In addition, teachers are supposed to have enough knowledge of students' reality and have enough competence in using digital tools to provide an academic gain. Therefore, it is crucial for teachers to be able to vary their teaching methods, both inside and outside the classroom, to keep their students motivated in language learning and to use digital tools as a teaching method, as well as contribute to students' digital knowledge (Løvskar, 2019; Tiller & Gedda, 2017; Garris et al., 2002; Lin et al., 2017, Bjarnø, et al., 2017; Løfsnæs & Kjelen, 2015; Norwegian Directorate for Education and Training, 2021), as well as be aware of its advantages (Carlsen et al., 2020). Further, these theories are this thesis's core ideas discussed in chapter 6.

3. PREVIOUS RESEARCH

In recent decades, digital teaching has become more and more integrated into school and has to some extent, changed the context around education. Digital teaching is when learners learn by extracting some digital teaching material contents. Digital teaching material refers to e-books, digitalized data, or content presented with other digital methods and platforms (Lin et al., 2017). An essential part of learning a language at school is using digital tools and platforms. Today, there are several studies on using digital tools in teaching. However, there are still few studies specifically on which and how this thesis addresses, especially in connection with the Covid-19 pandemic.

Digital tools are an essential part of teaching. Today, children worldwide have access to many different digital platforms for leisure and school use. The European Commission (2010) in Rosén and Billore (2020) describes five of eight critical competencies for life-long learning. These five key competencies are about communication in a foreign language: digital competence, learning to learn, sense of initiative and entrepreneurship, and cultural awareness and creativity - all of which are essential competencies for digitization in teaching hence living in a digitalized world (Rosén & Billore, 2020).

Knowing that language helps people to be able to express their own opinions, hopes, and dreams, language learning is considered one of the essential things in human existence. Several factors play a significant role in language learning when it comes to learning languages. Such as motivation, attitudes, anxiety, what one has previously achieved in learning, abilities, intelligence, age, personality, etc. (Abidin, Pour-Mohammadi & Alzwari, 2012). Research studies that have been done on digital tools in school in the past show that even though the tool has been around us for a very long time now, also in school, there is still little knowledge about how it has affected learning outcomes and why it is essential. However, it is important to know whether digital tools in teaching can influence students' attitudes towards digital learning and whether this, in the long run, can affect progression, motivation, and results. It is also important to keep in mind that we live in a modern world dependent on technology and digital tools, but that does not mean that the use of digital tools in school and teaching is beneficial. Cox and Marshall (2007) in Rosén and Billore (2020) point out that if digital tools are to be used in a teaching context, students are highly dependent on what type of tool is used and in which subjects it is used, and how. Therefore, it is essential for any research on digital

tools and teaching to determine what kind of tools have been used to determine the students' progression (Rosén & Billore, 2020).

Nøkleby et al. (2020) mention several Norwegian studies examining students' remote teaching experiences and digital teaching. Bakken (2020) in Nøkleby et al. (2020) asked almost 13,000 young people aged 13-18 about their experiences with digital school during the pandemic. Nearly half answered that they were either quiet or very satisfied with the teaching, but 61 percent thought they had learned less than they used to when they were in school. In addition, one in ten answered that they had a lousy learning situation at home. However, two-thirds of the students thought that the teachers had more time to give feedback during remote teaching and felt they could focus more on doing their assignments at home. The study showed that many of the students had the opportunity to be seen and heard during digital remote teaching.

Another study asked just over 2000 children and adolescents aged 6-18 years and their parents about learning and feedback from teachers. In grades 5.-10. two-thirds thought that the teachers' feedback had helped them more than usual in Norwegian, English, and mathematics. Some also felt that it had given teachers more time to provide constructive feedback. The digital tools gave students new opportunities to see and hear from their teachers. Sixty-two percent of the students in grades 5.-10. agreed that they had done more homework during the remote teaching than they used to. They justified this by saying they could concentrate better at home in peace at school. In addition to the fact that they received more homework than usual, there were also higher expectations that it was done. The students who thought that less homework was given than before also said that they were more motivated to study in school than at home because they felt that the teachers expected more of them during remote teaching (Bubb, 2020 in Nøkleby et al., 2020).

3.1 Previous Research Example I

Tafazoli, Parra, and Abril's (2018) survey "A Cross-Cultural Study on the Attitudes of English Language Students towards Computer-Assisted Language Learning" is based on the attitudes of Iranian and non-Iranian English students. Gender, level of education, and age were also examined. Today, there are several different language learning programs online, including Computer-Assisted Language Learning (CALL) which this survey addressed. "Computer-Assisted Language Learning (CALL) utilizes some modern methods such as communicative

language teaching, task-based learning, process approaches to improve learners' autonomy, and control during language learning procedure" (Tafazoli et al., 2018, p.34).

At the end of the survey, it was found that all students had a positive attitude to CALL and that they are generally very positive about using digital tools in language learning. They further say that the results of this survey show that most English-speaking students understand that the use of data and digital tools is important for both their professional and daily lives. The study's findings indicate that it is important that all students be able to cope with computer and technology-based interrogation material (Tafazoli et al., 2018).

Tafazoli et al. (2018) sum up the survey by referring to Warschauer and Whittaker's (1997) remarks about succession planning and implementing digital tools in an EFL classroom. They pointed out that teachers must be careful with their teaching goals, given that spontaneous online activities are not very useful in a classroom. Explaining the framework is essential to using digital tools appropriately in the classroom. Another essential aspect of digital teaching is integration so that the teacher thinks about how to integrate digital tools to provide full-fledged teaching and achieve the curriculum's goals. In addition, the teacher must be aware of all the complex variables in a learning environment, such as cultural, infrastructural, and structural difficulties (Tafazoli et al., 2018).

3.2 Previous Research II

Rosén and Billore's (2020) study "Consumption of Digital Education - A Cross-cultural Study of Students' Attitudes into Digital Tools for Language Learning" is based on the attitudes toward students in English learning in Swedish and German upper secondary schools. They have also examined the national guidelines for digitization in schools in both countries. Both Sweden's and Germany's national guidelines suggest that teachers must support students' digital skills and that it is necessary to prepare them for a digitalized world (Rosén & Billore, 2020).

Specifically, the goal of this study was to examine the presence of digital tools in an EFL classroom and analyze the use and attitudes toward digital tools among high school students, one half from Sweden and the other from Germany. In the survey, four research questions were operated on the basis that all students are consumers of language learning and digital tools to a large extent. The first research question was to what extent digital tools were used

at home and school, the second was what attitudes they had toward using digital tools at school, the third was what kind of equipment and tools were used during English learning, and finally, what kind of differences were found between Sweden and Germany regarding the use of digital tools in the classroom and national guidelines for digitization (Rosén & Billore, 2020).

Despite being neighbors, Sweden and Germany have very different approaches to digitalization in the classroom. Sweden is more about the presence of digital tools, where digital tools are looked at as the goal and not a step towards higher performance. There are also no discussions concerning students' and teachers' efficiency in teaching or learning. On the contrary, the results from Germany show that Germans are more careful when it comes to spending time using digital tools, and it is also emphasized by politicians "that technology must follow pedagogy and not vice versa" (p.285). Further, the results show that the national guidelines for digitization are also different. Sweden is a big step ahead of Germany when it comes to having access to and using digital tools in education and at home. Rosén and Billore (2020) point out that their results are not to be generalized but that the results still show that students have different attitudes to digital tools in teaching. This may be due to where the different countries are in the digital society.

3.3 Learning with Digital Tools During Covid-19

The overall impact and the need for change in classrooms are believed to influence the business of digital learning tools. The collaboration between students and teachers shows that it is essential to have efficient and user-friendly digital tools in teaching. This has become even clearer in the last two years during the Covid-19 pandemic, emphasizing the importance of teaching through digital tools. Carlsen, Dypedahl, and Iversen (2020) state that when teachers choose to use digital tools as a teaching method, it is essential to consider that it should be for educational and pedagogical purposes. During the Covid-19 pandemic, Norway has had an advantage in technology, and digital learning equipment is much better than in many other countries. Norwegian schools already use various tools such as learning platforms, interactive whiteboards, pads, laptops, etc. In addition, schools in Norway have digital skills in the Norwegian Curriculum, LK20. Although digital tools have been in use for educational purposes for decades, there are still limited teachers who use digital tools creatively and educationally. The Ministry of Education (2017) in Carlsen et al. (2020) states that digital

tools should be used to improve the quality of teaching, «digital tools are accepted as enabling a whole range of measures and mechanisms to improve the quality of education» (p. 157). However, many teachers are under pressure to use digital tools productively and pedagogically even if they are not adequately trained. In addition, many teachers see digital platforms, such as Google Translate, as a quick fix or as cheating in the context of language learning. Teachers often advise their students not to use such devices to translate, claiming that the translation is poor and that students do not learn from it. However, students will probably use these devices regardless of what the teachers think (Carlsen et al., 2020).

During lockdown and red level, the teachers did not have the opportunity to follow up with all students on how they solved the assignments given in the English subject. In addition, they had less control over reluctant writers and learners who could use to their advantage what Carlsen et al. (2020) call *speech-to-text technology*. Speech-to-text technology is based on various platforms that can recognize voices. Furthermore, one can speak to the platform, and the text will be recognized and written down and translated. In recent years, such platforms have improved significantly. We can now speak Norwegian to, for example, Google Translate and have the entire text written down and translated into English, or any other language, almost immediately. Carlsen et al. (2020) used this example:
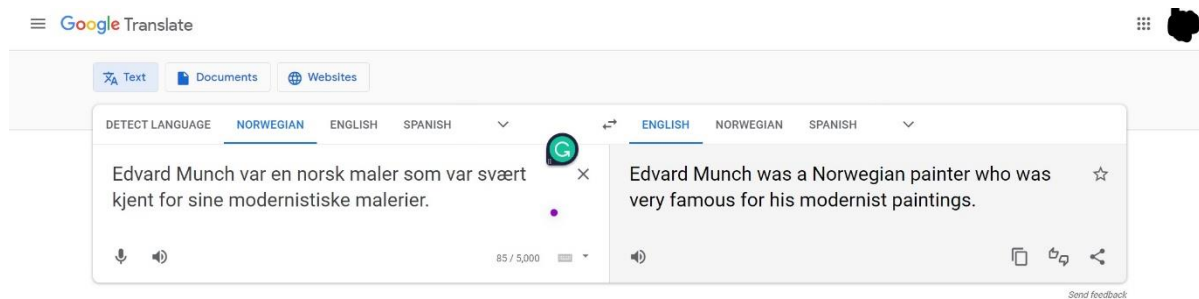
Figure 2: A text spoken in Norwegian, converted to text, and then translated into English in Google Translate, p.162.

Here I read the text into Google Translate using "voice typing." The text had relatively good pronunciation and sound quality. During Covid-19, students may have been given a task to write a text on a topic in English and solve the whole task through Google Translate. Although most teachers do not recommend this method for language learning, it can motivate students who can neither speak Norwegian nor English to a great extent or have English as their third or fourth language (Carlsen et al., 2020). Digital platforms such as Google Translate may be able to give more accurate translations in the future, given the digital society.

In addition, both teachers and learners need to be fully aware of the limitations and possibilities in learning with digital tools and digital platforms, especially for teachers to take an interest in the possibilities digital tools can provide for language learning. "Language teachers therefore need to keep themselves informed, not necessarily at the forefront of research, but at a level where they are able to understand, discuss and make critical consideration about various digital tools and their potential for language teaching and learning" (Carlsen et al., 2020, p.173). However, during the Covid-19 pandemic, the teachers were forced to teach using digital tools. Therefore, it is interesting finding out to what degree the variety of tools were used before the pandemic. Suppose teachers have taken advantage of this forced teaching online and continued to use digital tools to a more significant extent. In that case, the increasing use of digital tools may require teachers to think differently in their teaching methods in an EFL classroom.

4. METHODOLOGY

As stated in the introduction, chapter 1.1., this research project aims to examine how digital tools have been used in an EFL classroom as a teaching method and the impact Covid-19 and its effects has had on students' English language learning. Research has tracked how teaching methods based on digital tools were used before, during, and after Covid-19.

This chapter discusses how the research was conducted and why the method used in the thesis was chosen. First, I will consider a justification for using a case study as a research method and what kind of approach I have used within the qualitative tradition. The choice fell on a semi-structured interview based on the teacher's views and experiences and an online survey based on a larger group of students' views and experiences. The study aims to determine how the worldwide pandemic, Covid-19, and digital education have affected English learning. In addition, the study aims to learn what kind of tools were used before, during, and after the pandemic, analyze how the pandemic has forced teachers to focus on digital learning, and analyze whether this has affected students' English vocabulary or fluency as a result of using digital tools more frequently in a classroom setting.

The collection of the data, the collection strategy, the selection of participants, and the practical implementation of the interview work and the survey are then described. I will also present the thoughts behind the preparation of the interview guide and the online survey, how the transcription took place, and give an account of how I work with the analysis of the collected material to give a good overview and description of the work. Finally, I will end with some thoughts on the validity and possible weaknesses and/or strengths of using this research method, in addition to the ethics regarding this research.

4.1 Choice of Method

Before any research, the researcher must decide what kind of method one wants to use. As a rule, one can choose between qualitative or quantitative research. When a student completes a study, the student enters a research role and must complete all the steps in a research project that a researcher must do, but with slightly different expectations and framework conditions. In my case, I am a student researcher who conducts a study, and hence I am carrying out a research project (Skilbrei, 2019).

The methodology is the superior view that governs how researchers proceed in a research study. The method points to the specific procedures that follow from the researcher's more general choices and how the researcher chooses to carry out a study, such as observation, interviews, or text analysis, which are the main categories of the qualitative method. Within these, there is also much variation. Observation can be carried out by involving different degrees of participation on the researcher's part, from the pure outside view to full participation among the participants. Interviews can be done with varying degrees of involvement and structure and with individuals and groups. Text analysis is used in research because studies aim to understand the overall developmental features and studies of meaning at the sentence level. It is not uncommon for researchers to combine different methods in the same study, for example, by combining observation and interviews in what is then called fieldwork or ethnography. Quantitative methods are mainly about linking and analyzing register data, such as the crime statistics, the drug register, wage statistics, and the population register. The choice between conducting a qualitative or a quantitative study is about what kind of questions the researcher asks, whether you ask questions that are oriented towards quality, about content and meaning contexts, or questions that are more oriented towards quantity, scope, distributions, and statistical relationships (Skilbrei, 2019).

4.2 Qualitative Research

This thesis aims to gain insight into the experiences and encounters of some experienced teachers and their students before the pandemic struck in March 2020 and after and when digital teaching became a required remote teaching method. The choice of method for this thesis is based on the research questions on which this thesis is based. The research questions aim to find out something about personal experiences, not any concrete facts that are conclusive. Qualitative and quantitative research methods complement each other, but in this case, I have only had the opportunity to choose one direction. Therefore, it is appropriate to use the qualitative method as Merrian & Tisdell (2015) states that there is not one specific reality but many different realities or interpretations of one specific event (p.9). That is, it is I, as a researcher, who constructs knowledge based on what I find in the data material I have collected during the study.

This thesis could have been carried out with a quantitative survey on the basis that the pandemic affected the whole world, and it had been both necessary and interesting to find out

about the differences behind the outcome of compulsory digital teaching in an EFL classroom. However, to achieve this, I had to have a much longer time to be able to complete a study that provided sufficient information. The teachers were interviewed in a semi-structured format, and the students were surveyed online as part of a qualitative approach.

Merriam & Tisdell (2015) states that due to all the philosophical, disciplinary, and historical influence on what has become a qualitative method of approach, it is no wonder that there is no single specified and straightforward definition. Furthermore, Merriam & Tisdell (2015) suggests that there are many different branches within the qualitative approach method: phenomenology, ethnography, grounded theory, and case study, to name a few. However, I will only describe phenomenology and case study to outline this research method closer.

4.2.1 Phenomenology

The underlying philosophy is phenomenology. Phenomenology is about focusing on the experiences themselves and how experiences become consciousness. In short, phenomenology is focused on lived experiences. ""Phenomenology is a study of people'speople's conscious experience of their life-world; that is, their ""everyday life and social action"""" (Merrian & Tisdell, 2015, p.26). Furthermore, Johannessen, Tufte & Christoffersen (2016) state that phenomenology is used to study the world as other people see it (p.78). In addition, Merriam & Tisdell (2015) state that to obtain the essential essence of the experience, the phenomenological study must be the primary method for obtaining data. The researcher must also find his own experiences and consciousness in addition to interviewing the people who have directly experienced the phenomenon. This is to become aware of personal prejudice, viewpoints, and assumptions. Merriam & Tisdell (2015) call this process *epoch*, which means that all understandings, judgments, and knowledge are set aside, and then the phenomenon will be put first. Then prejudice and assumptions will be temporarily set aside, the process they call *bracketed*, to examine consciousness itself. This phenomenological study has influenced all qualitative research in that the researchers look at their own life experiences and experiences before embarking on a study (Merriam & Tisdell, 2015).

This research was conducted in line with phenomenology, as half of the research is through conversations with people who are active participants in the phenomenon that I, as a researcher, obtain my information. The phenomenon of teachers' and students' encounters and experiences with digital learning before, during, and after Covid-19 is somewhat over, but a

third person can observe the experience that some individuals have. Developing digital skills and using digital tools as a teaching method is an ongoing process. By focusing on teachers' experiences during the pandemic, an attempt has been made to delimit the process to be examined in a research context.

4.2.2 Case Study

A case study's defining characteristics and characteristics are similar to those of phenomenology in chapter 4.2.1, such as the search for meaning and the understanding of a specific phenomenon. While the study is in line with phenomenological tradition, the strategy for finding possible answers to the research questions in this thesis is a case study. Yin (2014) in Merriam & Tisdell (2015) describes a case study as "an empirical inquiry that investigates a contemporary phenomenon (the 'case') within its real-life context, especially when the boundaries between phenomenon and context may not be clearly evident" (p.37-38).

A case study examines a phenomenon of history that has been terminated, and it is no secret that the Covid-19 pandemic will become historical. A case study is used if the phenomenon concerns a specific group of people or a society. For this study, I have chosen to examine a group of English teachers from secondary school and their students (Merriam & Tisdell, 2015). This means that I have had interviews with a limited number of teachers and students on a specific topic. A specific group performed an in-depth analysis on a specific topic. All participants participated in the personal process during the lockdown. The red level in lower secondary schools began in March 2020, when all schools and kindergartens closed for six weeks in Norway. Today, in the spring of 2022, this is a chapter we have so far left behind despite several weeks of remote teaching between lockdown and now. Therefore, due to the framework I have given this thesis, the study is seen as a qualitative case study within the phenomenological tradition.

4.3 Data Collection

In this research, I used a questionnaire and semi-structured interviews to explore how the worldwide pandemic, Covid-19, and digital teaching may have affected students' English learning during school lockdown and red level in a lower secondary school in Norway. In addition, I wanted to explore what kind of tools teachers in this school used before, during,

and after the pandemic, track how the pandemics' effects have forced teachers to focus more on digital learning and how the pandemic may have affected students' English vocabulary and/fluency.

As a data collection method for teachers, I have used personal semi-structured interviews, where questions are prepared in advance. However, the conversation was open in moving in different directions, and me being allowed to ask non-written follow-up questions (Skilbrei, 2019). This will be further defined in chapter 4.3.1, where the semi-structured interview is defined. This leads me as a researcher to a complete understanding of how teachers view the situation. To learn how other people view various situations and to be able to see them from their point of view, I must talk to them and listen to what they have to say about various events and experiences. Therefore, the survey on teachers' points of view is based on personal interviews, which also compliments the philosophy of phenomenology used in this research.

A questionnaire is a suitable choice for my student investigation in this case because a questionnaire is one of the most common methods to collect data for research on attitudes and opinions from a large group of candidates. This study investigates to find out about students' and teachers' experiences using digital tools as a learning method before, during, and after Covid-19. As will be defined closer in chapter 4.3.2., questionnaires are instruments that present participants with a series of questions and statements where they can either write an answer or select them among existing answers (Mackey & Gass, 2006). When researching students' English learning using digital tools, questionnaires allow me to gather information about the students' encounters and experiences. Therefore, a group of students from a Norwegian lower secondary school has received an online survey, "a means of gathering information about a particular topic, for example, attitudes or opinions about a school program" (Mackey & Gass, 2005, p. 367).

4.3.1 Interviews

Skilbrei (2019) describes qualitative interviews as a method used in many subjects and with many purposes and is about understanding other people's experiences and reflections through talking to the participants (p. 65). Robert Weiss (1994) in (Skilbrei 2019) writes that qualitative interviews give us access to other people's observations. Furthermore, Skilbrei (2019) writes that interviews can be conducted to create knowledge about the past through being about the informants' experiences. They can be about the informants' reflections on and

plans for the future, or the present, which means about a situation the informant is in now. In the case of this study, where the purpose is to find out about teaching methods based on digital use before, during, and after the Covid-19 pandemic, interviews will be appropriate to draw conclusions that apply to several individuals hence this study investigates the informants' reflections on digital tools. Dalen (2011) additionally states that an overriding goal of a qualitative interview is to develop the understanding of phenomena related to people and situations in their social reality. It is about gaining a deeper insight into how people relate to their life situations (p.15). With this thesis, a qualitative approach is well suited because it focuses on an experience dimension and not just on describing the conditions under which the person lives. How students and teachers *experienced* teaching and learning during the pandemic is the most central to a qualitative approach (Dalen, 2011). In order to gain insight into how the teachers experienced everyday life, I had to ask them about their experiences with teaching methods based on digital tools.

In a research interview, the researcher wants to shed light on the topic and the issues that have been selected concerning the research question. Here, a distinction is often made between open and more structured interviews. In an open interview, the informants can tell as freely as possible about their life experiences. In contrast, in a structured or semi-structured interview that this study uses, the interviews are more focused on specific topics that the researcher has selected in advance (Dalen, 2011). In the method I have used, a semi-structured interview, my questions are predetermined, and the same questions are styled in the same order to the candidates. I am also free to set follow-up questions based on what the candidate says. In addition, Johannessen et al. (2016) state that a semi-structured interview has a general interview guide as a starting point, while questions, themes, and order may vary (p.148). Since all candidates receive the same main question, all are treated equally simultaneously, and the interview is also shaped by what they answer. This will give me a relaxed conversation but still be severe and professional since it is based on specific questions.

I had no information about the teachers before I interviewed them, other than that they are English teachers in a lower secondary school in Norway. Therefore, it is essential to acknowledge that the interviews might move in different directions, thus they are semi-structured interviews. The interview guide was made in advance, making it easier for me to create and sort questions that I had to ask in the interview itself. In the interview guide, I addressed the most central topics and questions that covered the essential areas in this dissertation. Conducting the interview guide will be closer described in chapter 4.4.1. The

interview guide can be seen at the end of this thesis is in Appendix 1. However, the follow-up questions asked in the interviews are not presented in the interview guide. It was expected that all the interviews I had with the teachers would vary in length. However, all the interviews lasted for approximately forty-five minutes each.

4.3.2 Questionnaire

As stated in chapter 4.1, an online survey is chosen as a research method to collect data about students' experiences with digital tools in an EFL classroom. Andrews, Nonnecke, and Precce (2003) state that it is well known that questionnaires are not perfect methods for data collection because it usually indicates that participants must recall previous experiences. However, due to the time limit this thesis has, and because the students must answer questions about both previous experiences and current experiences, an online survey will give a significant answer to this research question. Brown (2001) in Mackey & Gass (2005) defines *questionnaires* as "any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting them among existing answers" (p.92). When researching students' and teachers' backgrounds, questionnaires allow researchers to gather information about themselves, such as their views and experiences in specific areas, and remain anonymous (Mackey & Gass, 2005), and in this case, how digital learning during Covid-19 may have affected students' learning in an English classroom.

In the questionnaire, two different question methods and answer alternatives were used. The first three questions have checkboxes, where students could click on two to three answer options that suited them best. The fourth question had statements, where the students' task was to click on whether they strongly agreed - agreed - do not know – disagreed, or strongly disagreed with the statements. This will be more thoroughly explained in chapter 4.5. Systematizing the variables into categories that naturally fell under the same theme was an attempt.

The questionnaire was made online on the website https://www.nettskjema.no and was written in Norwegian. This is to make sure that the questionnaire is suitable to the developmental level of the participants and to attempt to eliminate any extra stress for the students that they might have felt not being able to comprehend all the questions regarding them being Norwegian. Nettskjema.no is a website created by the University of Oslo and is Norway's safest and most used solution for collecting data for research. This service is used by everything from hospitals

to education institutions and private companies (Universitet i Oslo, 2022). The results from the research were not provided to the participants to avoid as much performance anxiety as possible when it comes to their level of English knowledge, fluency, and/or vocabulary. A copy of the questionnaire can be found in Appendix 2, and a translated copy of the questionnaire in English can be found in Appendix 3.

4.4 Composing the Interview

The data collection for the first part of this thesis consists of the interview material from a semi-structured interview aimed at the teachers. A total of three semi-structured interviews. In this chapter, I present the interview guide for the semi-structured interview, the course of the interviews themselves, and the transcription process afterward.

As mentioned in chapter 4.2, the qualitative research method forms information and knowledge about other people's experiences and encounters (Skilbrei, 2019; Merrian & Tisdell, 2015). An overarching goal of qualitative research is to understand phenomena related to people and situations in their social reality. It is about gaining a deeper insight into how people relate to their life situations. Here, the term "lifeworld" is often used to illuminate this dimension (Dalen, 2011; Kvale & Brinkman, 2015). Therefore, I was involved in the interview process since I was a researcher myself. Therefore, the success of the results depended on how the interviews took place and what kind of data I chose to collect. The process before the semi-structured interviews is fundamental. My task as a researcher is to understand the world from the interview participants and their point of view of the survey, unfold the meaning in people's experiences, and uncover their world of life before I could even give the data scientific explanations (Dalen, 2011).

Conducting an interview is a craft that the researcher must master, and a good interview is constantly evolving. Therefore, the researcher needs to perceive and understand the informants. A preconception or horizon of understanding determines all understanding. This means that the researcher should be aware of opinions and perceptions about the phenomenon being researched before the interview is started with the informants. Furthermore, it will be said that in the meeting with the interview informants and with the collected material, the researcher must provide a prior understanding. The most important thing is that the researcher draws on his perception of the phenomenon to open the most significant possible understanding of the informants' experiences and statements during the interview itself (Dalen,

2011; Johannessen et al., 2016). Gadamer (1984) in Dalen (2011) views the term perception as an essential part of understanding the interview informants and further interpretation. My background in working as a teacher has been a great help in conducting the interviews concerning the teachers. Furthermore, being a student myself during Covid-19, I have an advantage in understanding students' experiences and attitudes toward digital learning during an ongoing pandemic. The use of digital tools in a classroom was not an unknown situation for me, and neither was being a student during Covid-19.

4.4.1 The Interview Guide

Dalen (2011) states that all studies that use interviews as research methods should compose an interview guide. An interview guide includes key topics and questions that will cover the most critical areas the study will cover. A semi-structured interview should be structured naturally and not schematically in a predetermined order. It should occur in a safe environment so that there is a certain intimacy between the researcher and the informant. In addition, it should be possible for the researcher to ask further questions to get the participants to elaborate on their answers and talk about experiences and opinions about the problem being researched. Dalen (2011) states the importance of the term "the funnel principle" ("traktprinsippet", p.26) when conducting an interview guide. The funnel principle means that the researcher must start an interview with wide and open questions but still close to the most central topics to be covered in the survey itself. The essential questions to the survey should be those that make the informant feel good and relaxed. Further, the questions will be more and more focused on the most central topics. At the end of the "funnel", it will open for questions about general matters again.

The interview guide connected with the semi-structured interview with the teachers was based on the opening questions for each topic to be dealt with and questions within the same topic. However, the follow-up questions and in-depth questions were developed naturally and spontaneously. The interview guide made in connection with the questionnaire for the students was the basis for how I built the themes of the questionnaire when it was composed on www.nettskjema.no.

The interview guide was prepared in connection with the application for approval of the project from NSD - Norwegian Center for Research Data. In the interview guide, my starting point was Dalen's (2011) and Kvale & Brinkman's (2015) description of the term "life-world",

where it is pointed out that the primary goal of a qualitative study is to understand the people and the life situation they are in, as described in chapter 4.4. However, Dalen (2011) states that the researcher must always look at the type of interview to be conducted to prepare the interview guide. A type of "life interview" does not need an equally detailed guide as a semi-structured interview (Dalen, 2011), but considering that digital use in an EFL classroom is the teachers' teaching situation daily, this concept was considered with questions about how the teachers experienced the "new" learning situation they were thrown into during lockdown and red level. The interview guide itself consists of questions that led me to get answers to the overall research question for this thesis. See Appendix 1.

4.4.2 Conducting the Semi-Structured Interviews

As mentioned earlier in chapter 4.1, the research question and the aims of this study determine what kind of method is best suitable to collect data (Skilbrei, 2019). I made clear to the participants that I wanted to follow their schedule, as I was afraid that they would withdraw. For that reason, the participants chose time and place, and the interviews took place in a room where only me and the informant were present. It was also impossible for anyone else to hear what was going on. All three interviews took place at the school in the informants' workplace. The interviews were recorded with a sound recorder application on the mobile phone to be able to analyze all three interviews later on. Before the interviews, this application was tested several times to ensure that all the data was stored and worked as it should.

The interviews went very well, and all the participants seemed engaged in the questions, which also led to good and relaxed conversations. There was also a good atmosphere throughout the interviews, and I got a holistic impression that the participants trusted me as an interviewer. The fact that I have experience and work as a teacher myself, I think, played a significant role in the credibility and trust in the overall setting of the interviews. All three interviews were conducted in early March 2022 and then later analyzed.

4.4.3 Transcription of the Interviews

After the interviews, I made step-by-step transcripts of what was said during the interviews using dictation tools on a laptop. The transcripts were written in both whole and partial sentences, and it was also made with hints of pauses and that the informant and I spoke simultaneously. Tones, laughter, talking fast and eagerly, and other signals that could be

interpreted later were also written down. Each informant was given a pseudonym in the transcript used in the final research report.

It is essential to remember that the interviews and the transcription were conducted in Norwegian, whereas the translation of the used quotes and this thesis are written in English. In addition, one of the informants, whom I have chosen to call Michelle, did not have Norwegian as her mother tongue. In a transcript, the conversation between two physically present people is abstracted and fixed in written form and, in my case, also translated into another language. In this thesis, the transcription is translated from Norwegian oral language, to Norwegian written language, and lastly to English written language for the summaries. Here, the constructions along the way require several assessments and decisions to get the best possible transcript. However, Kvale & Brinkman (2015) state that transcribing is to transform from one form to another. Directly translated transcripts create hybrids and artificial constructions that may not be adequate for the conversation.

When the transcription was completed, I picked out some quotes used in the final thesis. In quotes where it was unclear what the informant meant, the oral language was also edited for clarity, considering it is an oral conversation. In the research report, I have chosen not to include pauses, repetitions, and expressed bodily signals. In addition to this, each of the questions was written into the correct question that was asked. I did this to get a clear starting point for analyzing and comparing with the results from the students' questionnaire.

4.5 Composing the Questionnaire

The data collection for the second part of this thesis consists of the material from an online student questionnaire. A total of five different English classes participated in the survey. This chapter will present how the questionnaire was composed, how the questionnaire was conducted, and lastly, the participants.

As a student, I have been lucky to already know about the phenomenon of what I was going to ask about in the survey. When you are preparing, you cannot ask of everything you can think of. One must carefully consider which questions should be included and which should be left out (Johannessen et al., 2016). Therefore, the questionnaire was made somewhat short but concrete for a broad overview of students' experiences and learning. In addition, a test was done on my teacher colleagues in primary school to make sure that the questions were

understandable and possible to answer. Important feedback led to adjustments in the final questionnaire. Before the feedback, the questionnaire consisted of fifteen questions with different answer methods. My colleagues stated that some of the questions were vague and difficult to differentiate from each other. Therefore, most of the questions were edited into statements with one answer method.

The edited survey contains three closed questions with the category of *English learning digitally and in the classroom*, such as which learning methods the students like best, which learning method they feel they get the most out of when it comes to learning English, and what kind of teaching methods are primarily used in their EFL classroom today. The fourth question contains twelve statements about digital English teaching and learning, oral and written English learning, and the use of digital tools before and after Covid-19.

4.5.1 Conducting the Questionnaire

Before completing the questionnaire, all students were informed about who I was, what I studied, what this thesis was about, and what type of questions the questionnaire contained. It was emphasized that I wanted honest answers to get a more credible data collection. Therefore, several times, it was also pointed out that the questionnaire was completely anonymous for the students. The students were also told that their English teachers were to undergo an interview each in addition to the questionnaire the students were to conduct. The same information was given to all the classes, and the students were allowed to ask questions.

As mentioned in chapter 4.3.2, the questionnaire was made using www.nettskjema.no. Two classes conducted the questionnaire that same day the information was given, whereas the other classes conducted the questionnaire the following days. The teachers were given a website link to use. While one of the classes was completing the questionnaire, I was lucky to be able to observe it being conducted. The students experienced some technical difficulties initially, as expected, but were able to complete it easily within ten minutes. This gave me an overview of some of the students' dedication and attitudes towards the survey.

4.6 Participants and Selection Criteria

Johannessen et al. (2026) state that regardless of which method of choice is chosen in a study, the researcher must consider who is to participate. Here, a decision must be made as to

the *number of participants*, how many informants are to participate, *the selection criteria*, the principles that form the basis of the selection process, and finally, *recruitment,* how we are to recruit the participants. I will use these three elements in this chapter to explain how the participants and informants were selected.

4.6.1 Participants

When I had decided on what research method I was going to use in my thesis, my main requirement was that the semi-structured interviews should be conducted with English teachers who worked in lower secondary schools and must have worked as English teachers for at least five years. This with the background that Covid-19 has been going on for two years, and I wanted the teachers to have experience in teaching methods based on digital tool from before the pandemic to compare experiences and encounters from before, during, and after Covid-19. In the study, I had contact with one specific school in a town in Norway, making it easy to find out how this group of teachers operated during remote teaching. This might be beneficial for other teachers if their teaching methods functioned as a language learning method for their students. For the questionnaire, I wanted students from 10th grade so that they were not too young to be able to think about experiences around the phenomenon I was going to ask about, as well as lower secondary being my focus for this thesis. When the pandemic struck for the first time, this group of students was in 8th grade, and when the survey took place, they were in 10th grade.

When I contacted various lower secondary schools in an average town in Norway that could be alternatives to participants in the survey, I did not have a specific number of participants I wanted to join. I thought I would like to have at least two teachers and knew from experience that a typical class in Norwegian lower secondary schools has around thirty students. To my pleasant surprise, when I landed the lower secondary school that took part in the survey, I was told that 3 English teachers were working at the grade I wanted to investigate and that there were approximately 150 students. Considering that several students were ill or away from school when the survey was conducted, I ended up with 128 responses to the survey.

All the interviews with the teachers were recorded and then transcribed to a computer. All informants were informed that they could end the interview, and all data would be deleted. Participants were informed and agreed that this thesis could use the collected data. The students are from five different classes and are all students of the teachers who was

interviewed. When the questionnaire and the interviews were completed, I received information from one of the teachers that there were 32 new students in this cohort over the last two and a half years. However, when analyzing the data from the students' questionnaire, there were no answers that stood out from the others that made it easy to see which students were new to this school. Therefore, this information was not taken into account when analyzing.

4.6.2 Selection Criteria

I did not have many specific criteria for the participants for the questionnaire and the informants for the interviews. The students had to be in 10th grade and be in the class the informants teach. I have focused on teachers who teach English in lower secondary school since it is both the subject and the grades I will have in my career. For me, I needed to be familiar with the teachers' working conditions, something I was considering from my experience in school. Hence me being a student during the pandemic, I recognized myself in the mind of the students' experience around digital learning. It was important to me because it would be easier for me to ask good questions and analyze the answers in the questionnaire and the interviews. It will be an advantage for them to have confidence in me as a researcher for teachers and students.

Experienced teachers were used in the research. By that, I mean those who took their professional and pedagogical education a while ago and developed their teaching practice by working for several years in lower secondary school. The three teachers who were used have high competence in their subject, pedagogical education, and long experience in imparting knowledge to students between 13 and 16 years old. All three teachers belong to the generation before digital tools were actively used in school and before there was as much access to digital tools as today. At the same time, the students are born into a time where digital tools have always been there. The students are between 15 and 16 years old and are in 10th grade in an average city in Norway. The reason I wanted students who are in 10th grade was that the questionnaire is based on experiences the students have had in the last two years while the pandemic has been going on, and the older the students are, the more experience they have. This thesis examines, among other things, the students' experiences of how teaching methods based on digital learning has taken place during Covid-19 in an EFL classroom. Therefore, the students needed to be able to reflect on their learning and English competence.

4.6.3 Recruitment

To save as much time as possible in the recruitment work, I sent an email to several lower secondary schools in one town. The email contained information about this thesis, how I intended to conduct the survey, and questions about whether this was something their school might be interested in joining. The downside of recruiting in this way was that I could risk not getting any response. Several secondary schools in the city only collaborated with students from the nearby university, which made it difficult for me to find participants, and the recruitment took longer than planned. Luckily, I got a positive and engaged email back from a lower secondary school where the counselor to whom I sent an email was also one of the English teachers in the 10th grade.

From when the lower secondary school was chosen and made an agreement until when the survey was conducted took several months. Therefore, I continuously updated the school on how I was doing with this thesis to confirm they were still willing to cooperate. When I got close to approval from NSD, I contacted the school once again to make an appointment on a time and place for conducting the survey. In addition, they also received an email when the approval came. The day before, I also sent the last reminder.

4.7 Analyzing Data

Common to all approaches to data analysis is that it is based on people creating or constructing their social reality and giving meaning to their own experiences (Dalen, 2011). Thus, other people's reality can become diverse, meaning that it depends on who is analyzing the collected data. At the same time, people have something in common in their experiences that affects our understanding and interpretation of reality. In an interview situation, the researcher must interpret the informants' statements and accounts of current events and experiences. The interpretation is primarily based on the informants' direct statements, but it is further developed in a dialogue between the researcher and the empirical data material. In this dialogue, both the researcher's prior understanding, as mentioned in chapter 4.4, and the current theory of the phenomenon will influence the interpretation (Dalen, 2011).

"Every qualitative study requires decisions about how the analysis will be done, and these decisions should influence, and be influenced by, the rest of the design" (Maxwell, J., 2008, p.236). The survey analysis took place in the phenomenological tradition, where my own

experience and knowledge helped me recognize and acknowledge the answers given in the survey (Merriam & Tisdell, 2015). My point of view as a researcher is included in the analysis. I have my own experiences and thoughts as both teacher and student. It is impossible to look at the analyzis of the interview material and the survey without it affecting my thoughts. My perception and my experiences are part of the interpretive process in the spirit of phenomenology, where I will examine a world as other people see it (Johannessen et al., 2016) and be able to see the most essential of the research data and participants' experiences, the researcher must also take note of his or her own experiences (Merriam & Tisdell, 2015). After working as a teacher for a few years and being a student for even more, my understanding is part of interpreting what the participants and informants say and has helped develop the final analyzis. Maxwell (2008) states that one's own experiences traditionally should not affect the analyzis in a study, and this was something that had to be eliminated. However, later research points to a broader and more philosophical support for this approach in data analyzis. Sharing one's own experiences in the survey can provide a significant advantage with insight, hypotheses, and validity in a survey. Furthermore, Dalen (2011) states that one's life experience in the phenomenon one is researching can provide genuine insight and opportunities to understand and interpret people's situations.

4.7.1 How to Analyze Data

An essential part of the analyzis process is coding the data material which is one of the most essential main strategies in qualitative research (Dalen, 2011). Coding aims to rearrange and categorize the collected data material to determine if any common categories are relevant to all the informants and participants or to find categories from existing research (Maxwell, 2008). The researcher must present the results that emerge in the analysis to appear as "probable knowledge proposals" within the area being explored (Dalen, 2011, p.68, own translation).

The coding of the material took place after the summaries of the interviews with the teachers had been made to find recurring topics where the main emphasis in the material lies as easily as possible due to the time limit of this thesis. However, it must be pointed out that a theme with very few statements may indicate that there may be something important behind such a silence that should also be investigated further (Dalen, 2011). Before the coding was made, I looked at the main categories in the interview guide for the teachers and then looked at where the main emphasis of the statements was. Dalen (2011) calls this form of

analyzing *thematization*. Within each area, I coded further with the results from the students' questionnaire to see if there were any everyday subcategories or themes that stood out. When the thematization was completed, I used the presentation method that Dalen (2011) calls *contrast*. This method is primarily used when comparing different people's descriptions and experiences of the same situation. Then you get a more holistic picture of the phenomenon being studied.

4.8 Validity and Reliability

Patton (2001) in Golafshani (2003) points out that validity and reliability are two factors that any researcher must think about in a study and the analysis of collected data. For a reader to feel the credibility of a study, the validity and reliability must always be confirmed by the researcher following the study's method. If the researcher has skills in conducting qualitative investigations, the reliability will be a consequence of the investigation's validity (Golafshani, 2003).

The concept of validity is described with several concepts in qualitative research. Creswell & Miller (2000) in Golafshani (2003) point out "that the validity is affected by the researcher's perception and validity in the study and his/her choice of paradigm assumption" (p.602). As a researcher, the validity of the collected data is affected by my perception and assumptions for this research study. In addition, it is essential to consider that several of the students had informed their teachers that they had two different experiences at the different schools they had attended during the pandemic, where it was common for them to be more pleased with the school they attended now compared to the school they attended before when the pandemic started.

4.9 Ethics

In a study, it is essential to emphasize to the participants everything you intend to do through the survey and that all participants know and understand what you expect from them and what they can expect from you. Students under the age of eighteen were used in this survey, but because the survey did not contain any personal information, the questionnaire was carried out without any obstacles. I presented myself and my assignment, and then the teachers were free to hand out links to the survey when it suited them. I applied to NSD, which approved my

research method and gave the approval to conduct interviews with the teachers. All the informants also agreed to be recorded. However, NSD is very consistent and careful when approving applications regarding the approval of data collection for any research, and I spent a tremendous amount of time and work dealing with the application.

This thesis is based on interviews and what is referred to as personal information. NSD describes personal information as "any data linked to any real person. Examples of personal data are social security numbers, names or email/IP-address. Voices on recording devices are also considered personal data" (Norwegian Centre for Research Data - NSD, 2022). Therefore, the assignment was submitted to NSD for approval and was done before the data collection. The interview guide and approval from NSD were sent via email before the interviews. I considered the anonymity of the participants in the questionnaire very important, so all students were able to answer freely about their experiences without being afraid of consequences among fellow students or teachers. The same applies to the teachers. Therefore the informants are described as Michelle, Julie, and Alice and are not written down in the order the interviews took place. In addition, the teachers were informed that they could refuse to answer questions and had the right to cancel the interview at any time.

5. RESULTS

This chapter will firstly present a summary of each interview and a summary of the results of the student questionnaire. Secondly, the categories found in the coding of the data will also be presented. Lastly, the collected data and students' views from the student questionnaire are presented in tables. Each direct translated quote from the interviews will be with quotation marks. As I described in chapter 4.4.3, I transcribed all the interviews in Norwegian hence it was conducted in Norwegian. Further, the summaries for this thesis were written in English, and the quotes were translated. Finally, I will explain how the teachers' interviews and the students' questionnaires correspond with each other considering the categories.

5.1 Summary of the Interview: Michelle

This teacher had several thoughts concerning using digital tools in teaching, both in the classroom and during remote teaching. She seemed very engaged in the theme of digital teaching in an EFL classroom and her role as a teacher. She quickly said that she thought of digital teaching as something negative when asked about it. However, Michelle also pointed out that there is a difference between digital teaching at home and digital teaching in the classroom.

When she is asked what she thinks is positive and what she thinks is negative about digital teaching in general, Michelle thinks for several seconds before she answers. She points out that she finds it easiest to answer what she finds negative because those who have needed closer follow-up in teaching, like special ed students, or those who need school to get away or be seen, have lost this offer periodically for almost two years. It is evident that Michelle connected digital teaching with the effects of Covid-19. Furthermore, she says that it is difficult to capture signals the students give through a screen and those who find things difficult often say "I do not know" rather than asking for help. She further says that she thinks that remote teaching may have affected both the social and students' academics in English but points out that it is not because of this specific school, because the offer has been there. Instead, it is due to the home situation where many family members are at home, poor network, students are tempted to go for a walk, etc.

Another negative thing she mentions is that students do not learn correct grammar due to the high use of digital tools in the classroom. The digital tools do it for them, and she adds that

"students have become lazy, and that is a shame". The positive thing about digital teaching during remote teaching, she says, is that it may have been nice with a bit of break for the students, although it lasted too long. She thinks that the way the tasks have become more pointed and clearer is a good thing and thinks it has been nice with an increase in digital tools after Covid-19 because it is easier for them to contact both students and parents.

When asked what kind of methods she has used in teaching English before Covid-19, she answers that it is very varied. Michelle likes to vary between written and oral assignments so it does not become boring for the students. She feels that she emphasizes written skills and oral skills, even though there is now only one English grade compared to before when written and oral were two separate grades. Michelle also replies that she uses more digital tools in the classroom now after Covid-19 than she did before. However, she points out that she does not think this is due to the pandemic's effects on remote teaching and digital learning but because the offer was not there before, and it is now.

Furthermore, Michelle does not think schools have easier access to digital teaching tools because of the pandemic. However, the accessibility would have come either way because of the digital age. Apart from using more digital tools in classrooms, she does not feel that she has further changed her teaching method. She also says that there are no teaching methods she has brought to the classroom after the period of remote teaching. The only thing she has noticed is that she is much more precise and more explicit in how she presents an assignment, which was then necessary when the assignment was given over digital platforms, like Teams. She states that it has been necessary for some students to get explicit and precise assignments, and she has automatically continued with this after lockdown and the end of the so-called "red level".

Michelle does not feel that the pandemic's effects have affected the students' language learning. She says, "those who are weak would have been weak anyway, and the same goes for the strong", and further acknowledges that the school is not the students' primary English language learning platform since they only have English two hours a week. She says that the students watch a lot of TV and play many games with others from other countries, where almost everything is in English. This is also something she has encouraged students to do. She encourages students to use digital platforms to learn English. Such as listening to English podcasts about something that interests them, watching movies and turning off Norwegian subtitles, and watching documentaries rather than TV series, because they use whole sentences

and go more in-depth in the language. Furthermore, she thinks that the students are afraid that the pandemic has affected their English language learning. However, they have nothing to compare it with at the same time since Covid-19 has been a topic throughout almost their entire time in lower secondary school.

In the end, when asked if digital teaching during remote teaching has influenced students' English learning, she answered that the danger with digital teaching through digital platforms is that it quickly becomes tiresome. Not because the task itself was boring, but because it was behind a screen, it may affect the students negatively. She points out that the world is digital, so it is crucial with digital tools in the classroom, but that it is also essential that it is mixed with books so the students find English learning exciting and fun. She says that, in general, students spend much time fixing their laptops after various accidents. Therefore, she likes to always have something in hand, such as a book or other tasks that students can work on so that they are not dependent on the digital tools. Further, she says, "Yes, it is just one case, but there are always such small cases". So, thus digital tools are a big part of education today, and she thinks it is wise to have some extra work on the side.

5.2 Summary of the Interview: Alice

Alice has worked as a teacher for almost twenty years and has been involved in the development from not using any digital tools to the teaching mostly taking place digitally. Overall, she is very optimistic about the development and thinks it has made teaching more accessible, newer, and updated. However, she also mentions that after the new National Norwegian curriculum was implemented (LK20), there has been a steep learning curve as it has been very vague for some teachers. There has not been any access to books to work with. In the interview, she says that the positive thing about digital tools is that it is always fresh, that you can get new things much faster, and that you have many more excellent choices than not using digital tools for oral and written assignments. However, she also experiences a negative attitude from students' parents who wonder where the handwriting is. She then smiles and says, "if you have learned to ride a bike, then you can ride a bike for the rest of your life", and states that the same goes for handwriting. In general, she has a very positive attitude towards using digital tools in the classroom and thinks it makes things easier, faster, and more comfortable.

Nevertheless, at the same time, she says that she loses some control when they have screens in front of them, and she cannot see what they are doing unless she goes to the back of the classroom. Further on, she says that she only speaks English when she enters an EFL classroom and says that her students also do the same in most cases. However, she noticed that it was more challenging to get the students to be orally active behind a screen during the period of remote teaching than in a classroom. Alice says that she assignments through digital platforms that were oral during remote teaching, but it was either in groups or just teacher and student, which she had good experiences with. She points out that the students must be able to convey what they want to say both inside and outside a classroom, so she has just as much focus on oral and written activities.

When she is asked what kind of learning methods she likes to use, Alice thinks long before she answers but ends up saying that she likes to vary and has been very focused on that and adds that it also depends on what class she has. She says that they have used many teaching methods using digital tools both before and after Covid and thinks that the students take this very quickly and think it is fun. When it comes to oral participation, she says that many do not speak loudly in the whole class but that it goes well in smaller groups. This was also something she did over digital teaching during home school and continued to do so afterward when the students said that it worked very well for them. She says that there has been a progression from the first period of remote teaching to the end. She became better at varying, but at the same time, they did not think it would last as long as it did. So, in that way, her teaching method changed over the last two years because it was more challenging to get the students to keep up and be motivated when they started to get tired of home school. She also answers a straightforward "yes" when I ask if she uses more digital tools in teaching now than before. She also says that most likely, it would be so either way because of many new and good digital platforms that have become available in recent years.

Regarding students' oral English learning, she says that students were not as orally active behind the screen as in the classroom. However, she finds it difficult to answer whether digital teaching during remote teaching was negative for the students or not. She says that the weakest gave the teachers a lot of pressure and questions during home school when they did not understand things more than what they do in the classroom. In general, she does not feel that digital teaching in the period of remote teaching has affected students' English vocabulary and fluency and has not noticed any significant differences. When the students had the exam, which was about understanding, they scored very high, so she thinks that it indicates that they

have done well in their role as teachers. Apart from the fact that they occasionally experienced technical difficulties with networks and such things during remote teaching, she feels that the students got what they needed in its entirety. She concludes by saying that she is not the teacher who has been most critical of remote teaching and digital teaching because she believes the students learned just as much and did not lose anything special. However, she emphasized that she is glad it is over. Further, she points out that it was more work to follow up with the students but does not feel that it affected the students' learning to any great extent.

5.3 Summary of the Interview: Julie

Julie exclaims, "yes please, both" when asked what she thinks when I say *digital teaching*. She finds digital solutions exciting and has talked to several teachers who agree that books and digital tools are suitable for teaching. She adds that if they had access to all the digital platforms before Covid that they have access to today, the situation around remote teaching would have been entirely different. Today, they have several digital platforms they pay for that they did not have during the first lockdown. She further says that she thinks these platforms did not come because of Covid and that they would have come anyway because of the digital development we are in.

Furthermore, in the interview, she also says that she does not necessarily think that the digital teaching during remote teaching was harmful to the students, but instead to the teachers who lost control. They had no control over whether it was the student's brother or the Internet that did the assignment for them. Nor was there any focus on the quality of the answer. The students did the assignments, handed them in, and logged off.

When Julie is asked what kind of methods she has used or likes to use in the classroom, she quickly answers that she likes both. Julie is also very mindful of oral participation in the classroom, but not in the form of oral performances in front of the whole class, which she is not a fan of. Students and teachers were comfortable using digital platforms, so Julie thinks that the only time this was a problem during remote teaching was when the network failed. She says that they have exercised oral language and participation in "Oral English games in the classroom", performances in small groups, and oral group assignments, and experience the students as positive to oral participation during such activities, even the weakest ones. Julie says that she is very much for oral activity in the classroom and always encourages this and defines oral participation as something she likes best in an EFL classroom. Further, she also

points out that it is very 50/50 between oral activities and written activities in English teaching. She also adds that digital tools in her classroom have increased after Covid-19. However, she thinks it would have increased regardless of the pandemic.

When asked how the pandemic may have affected students' English learning, she talks about the fact that there was very little oral participation across digital platforms and that there is not necessarily any oral participation in the classroom either, even though this is something she tries to work towards. She adds that she experienced that even those who were often orally active in the classroom did not bother to be active during the period of remote teaching. However, she finds it difficult to say whether the screen made it challenging for the students to be orally active or whether it had been like that anyway. She says that she does not think that remote teaching and digital teaching did not necessarily affect the weakest students but rather the students who have and need a more structured everyday life. She experienced several times that she had to call students without getting an answer.

Julie finds it difficult to say whether the pandemic has affected students' English learning or not and explains that after several years as a teacher, she sees that students go into something she calls a "slump" once during lower secondary school. So, she finds it difficult to say whether the pandemic and digital teaching during the period of remote teaching affected their learning or whether the "slump" would have come either way. In addition, she says, it is difficult to answer because these students have nothing to compare with. These students can only speak for themselves, and it may be a different outcome if it had happened to the students younger or older than them. The experiences may have been different. She adds that none of the English teachers were upset when they learned that the exam was canceled this year and said: "if there is anyone who should not come up in an exam, then it is these students", but points out that it is not because they are necessarily any worse, but instead that they might have done even better if it were not for the pandemic, because of their inexperience in exams. She says that there has been good progress in the EFL classroom. Although parts of the teaching may have been lost, it is not easy to see the consequences of Covid-19 as they have nothing to compare the results with.

5.4 Introduction of the Categories

As explained in chapter 4.7.1, all data have been categorized. The categories were not predetermined but were developed during the analysis of the interview material from the

informants after the interviews with the teachers were conducted. The categories represent areas where all the informants had common thoughts and corresponded to some extent to the results from the questionnaire the students. This means that all categories are divided into two, where both the teachers' and students' experiences and thoughts will be presented. Teachers' data collection is discussed with each category, and students' data collection is discussed with each category. The following categories proved relevant: 'variation in teaching', 'digital teaching methods', 'oral activities inside and outside the classroom', and 'positivity around digital tools'. However, while doing the analyses, a sixth category was implemented in the discussion: 'how students learn English best'. I will first introduce the contents of the categories, and the data presentations of the students' questionnaire are presented in chapter 5.5.

5.4.1 Category I: Variation in Teaching

This category concerns how each informant tries in the best possible way, and as much as possible, to vary teaching methods in the EFL classroom with both oral and written assignments. The Norwegian Ministry of Education (2021) is relevant here since oral and written skills are included in the English curriculum from LK20. Løfsnæs and Kjelen (2015) confirm these skills with the term "the extended classroom" described in chapter 2.1.3. Here, it is emphasized that good teaching takes place inside the classroom with books, but that to achieve good learning and teaching, the teacher must think outside the classroom and vary in the teaching methods. Here I will also bring in the theory from Long (1985), who emphasized the importance of group work in second language learning. In this category, I will look at whether the informants focus on variation in the classroom both before, during, and after Covid-19. I have also compared this with the student's results from the survey in the questions about the corresponding category.

5.4.2 Category II: The use of Digital Tools

In this category, the focus is on how the individual teacher experiences their need to use digital tools after Covid-19. It explains their existing knowledge and access to digital tools and how they coped with the digital teaching during the lockdown and red level in school. Their experiences and views on how the students coped during the pandemic will be compared with the student's answers to the questionnaire on how they think digital teaching may have influenced their English learning. Here, the theory of Løvskar's (2019) theory is relevant as

she talks about the importance of using digital tools in teaching today and having enough knowledge.

5.4.3 Category III: Oral Activities Inside and Outside the Classroom

This category discusses the teachers' focus on oral activities in English teaching before, during, and after Covid-19. All the teachers in the research are focused on that the students should feel confident in being orally active in the EFL classroom. When discussing this category, how the teachers carried out oral activities via digital teaching, whether oral participation is essential in language learning, and whether the digital teaching affected the students' oral participation and/or results will be emphasized. These subcategories will then be discussed with the answers from the students' questionnaire to see if the students' thoughts about oral participation and digital teaching can be compared with the teachers' answers and what this brings out.

5.4.4 Category IV: Positivity around Digital Tools

In this category, the focus is on teachers' and students' attitudes toward English teaching and learning based on digital tools after Covid-19. Bjarnø (2017) and the Norwegian Directorate for Education and Training (2021) talks about the importance of the use of digital tools, and the importance of knowledge about digital tools in Norway. It is stated that the didactics of teaching are changed when using digital tools, and when the teacher chooses this form of teaching method, it is important that the lesson is well thought out and planned to achieve a good learning lesson for the students. This is awexplained in chapter 2.1.2 about the importance of digital tools in an EFL classroom in Norway. The increased use of digital tools has also been perceived as negative among one the teachers due to, among other things, that it can be boring for the students with one-sided work. The statements about the use of digital tools will be discussed considering the students' claims from the survey.

5.5 Data Presentations of Students' Questionnaire

The findings made in the students' questionnaire reflect all the categories created during the coding of the teachers' interviews, meaning that the data presentation of the students' questionnaire has been based on the categories found during the analysis of the teachers' interviews. However, some crucial aspects are essential to mention regarding digital learning. Therefore, these additional aspects of digital learning are used to further analyze students'

experience of remote teaching during the school closures of Covid-19. The results from the student questionnaire will be presented in tables for a good overview for further analysis and discussion. Results in the questionnaire with a response rate below 10% will not be mentioned or analyzed because there will be too low figures concerning making any relevance to the overall results of the analysis. Due to technical difficulties in the questionnaire, the students could give multiple answers to one question. This was not the intention, and the students were informed about this and mostly complied with instructions. 128 students conducted the questionnaire, but there were between 129 and 132 answers for some claims. When analyzing, I found that there were only between 1 and 4 more checked boxes for each question and/or statement in the answers to these questions. Therefore, I decided that this would not be considered in the analyzis since it did not impact the overall results of the questionnaire.

5.5.1 Students' Views – Variation in Teaching

Table 1 presents the results of the answers to the question: "Which learning methods are mostly used in English teaching today?". The participants were able to check two boxes when they answered.

	Actual number of responses.	Responses in percent.
Oral presentations using digital tools.	61	47.7%
Written assignments in the classroom.	80	62.5%
Written hand-ins.	37	28.9%

Table 1 Percentage of the students' views on variation in English teaching methods.

The results showed that only approximately 110 students out of 128 checked two boxes, whereas approximately 18 students just checked one. In the questionnaire, the students were able to choose from eight different answers: 'oral presentations without using digital tools', 'oral presentations using digital tools', 'written assignments in the classroom', 'written hand-ins, 'oral group presentations using digital tools', 'group assignments with written hand-ins', 'English "games"' and 'other'. However, as mentioned above, results with a lower response rate than 10% will not be analyzed. 'English games' are oral activities in the classroom. With this in mind, 'oral presentations using digital tools', 'written assignments in the classroom', and

'written hand-ins' were all together checked 178 times. There were 61 students, equivalent to 47.7%, who checked 'oral presentations using digital tools', 80 students, equivalent to 62.5%, who checked 'written assignments in the classroom', and 37 students, equivalent to 28.9%, who checked 'written hand-ins'. Most students, 62.5%, checked that there are primarily written assignments in the English classroom today, but oral presentations using digital tools is a close follow up with 47.7%. This shows a reasonable variation in at least these two methods in English teaching today.

5.5.2 Students' Views – The use of Digital Tools

Table 2 presents the results in the actual number of responses in the percent of four different claims. The students had five alternatives: 'strongly agree', 'agree', 'do not know', 'disagree', or 'strongly disagree'.

	Claim 1: My teacher used a lot of digital tools *before* the pandemic.		Claim 2: My teacher uses more digital tools *after* the pandemic.		Claim 3: I feel like I have lost a lot of English learning in the last two years due to digital remote teaching.		Claim 4: I got as much benefit from the English lessons over teams/zoom during remote teaching as I do in a classroom	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Strongly agree	7	5.5%	16	12.5%	19	14.8%	16	12.5%
Agree	49	38.3%	42	32.8%	40	31.2%	31	24.2%
Do not know	48	37.5%	47	36.7%	25	19.5%	24	18.8%
Disagree	23	18%	22	17.2%	33	25.8%	35	27.3%
Strongly disagree	3	2.3%	2	1.6%	15	11.7%	24	18.8%

Table 2 Results in students' agreeing or disagreeing on the use of digital teaching methods.

The results show that there is a certain increase in the number of students who agree that their teachers use more digital tools after the pandemic regarding claims 1 'My teacher used a lot of digital tools *before* the pandemic' and claim 2 'My teacher uses more digital tools *after* the pandemic'. It shows an increase from 5.5% in using digital tools before the pandemic to 12.5%

in using digital tools after the pandemic. The other answers for the same claims do not show a relevant increase or decrease in the number of responses or percentage worth analyzing. For claim 3, only 19 students, 14.8%, strongly agree that they have lost a lot of English learning in the last two years due to digital remote teaching, and 15 students, 11.7%, strongly disagree. This does not show a significant difference. However, there are 40 students, 31.2% who agree. Claim 4 shows that there are altogether 59 students, all in all, 46.1%, that disagree or strongly disagree that they got as much benefit from the English lessons over digital platforms during home school as they do in the classroom. While there were altogether 47 students, 36.7% strongly agreed or agreed.

5.5.3 Students' Views – Oral Activities Inside and Outside the Classroom

Table 3 presents the actual number and percentage of another two claims where the students had five different alternatives to answer: 'strongly agree', 'agree', 'do not know', 'disagree', or 'strongly disagree'.

	Claim 5: I think it was more difficult to be orally active over teams/zoom than in the classroom.		Claim 6: Oral participation is necessary to become good at English.	
	Number	Percent	Number	Percent
Strongly agree	38	29.7%	30	23.4%
Agree	39	30.5%	53	41.4%
Do not know	23	18%	24	18.8%
Disagree	16	12.5%	23	18%
Strongly disagree	14	10.9%	3	2.3%

Table 3 Results in students' agreeing or disagreeing in oral activities and participation in an EFL classroom.

The results of claim 5 show that a significant number of students found it challenging to be orally active during the period of remote teaching. A number of 38 students, 29.7%, strongly agreed, and 39 students, 30.5%, agreed, which are 77 students altogether, equivalent to 77 students and 60.2% of all the participants. Unlike 16 students who disagreed, 14 students strongly disagreed, equivalent to 30 students who did not find it difficult. 23 students, 18%,

did not have an opinion. Claim 6 shows a significant connection between the numbers and percentage as claim 5. It shows that 30 students, 23.4%, strongly agree, and 53 students, 41.4%, agree that oral participation is necessary to become good at English. It was nearly the same number of students that did not have an opinion, 24 students and 18%. 23 students, 18%, disagreed, and 3 students, 2.3%, strongly disagreed that oral participation is necessary to become good at English.

5.5.4 Students' Views – Positivity around Digital Tools

Table 4 and *Table 5* present the results of students' attitudes and thoughts around digital tools in the English classroom. *Table 4* shows results from a question, and *table 5* shows results from two different claims where students were to answer: 'strongly agree', 'agree', 'do not know', 'disagree', or 'strongly disagree'.

Table 4 presents the results from the question: 'Do you have a learning method you like the most in the English classroom?". The students were allowed to check two answers, and the results showed that there were 207 checked boxes altogether. This means that 143 students checked two boxes, and 113 only checked one.

	Actual number of responses.	Responses in percent.
Oral presentations without digital tools.	16	12.5%
Oral presentations with digital tools.	36	28.1%
Written assignments in the classroom.	18	14.1%
Written hand-ins.	15	11.7%
Group work with digital presentations.	33	25.8%
Group work with written hand-ins.	24	18.8%
Oral English games in the classroom.	45	35.2%
Other.	20	15.6%

Table 4 Percentage of students' most favored learning methods in the English classroom.

Results showed that the students preferred various methods, and there was no specific method that stood out in the results. However, 35.2% of the participants, 45 students, checked that

they liked 'oral English games in the classroom' the best in learning English. Regarding the alternatives that included digital tools: 'oral presentations with digital tools' and 'group work with digital presentations', results showed that 53.9% preferred using digital tools in the English classroom, and 46.1% did not prefer digital tools or checked 'other'.

Table 5 presents an additional two claims, and these claims are regarding students' claims about the use of digital tools in an EFL classroom.

	Claim 7: Digital tools like iPads and laptops make it easier for me to learn English.		Claim 8: I lose focus when I use digital tools in the classroom.	
	Number	Percent	Number	Percent
Strongly agree	43	33.6%	5	3.9%
Agree	52	40.6%	17	13.3%
Do not know	24	18.8%	26	20.3%
Disagree	10	7.8%	55	43%
Strongly disagree	1	0.8%	27	21.1%

Table 5 Results in students' agreeing or disagreeing with the benefits of the use of digital tools in the classroom.

Claim 7 shows that 95 students, 74.2%, strongly agree or agree with digital tools making it easier to learn English, and only 11 students, 8.6%, strongly disagree or disagree that digital tools make it easier to learn English. This shows a significant difference. The results from claim 8 show that 82 students, 64.1% do not agree with losing focus when they use digital tools in the classroom, and only 22 students, 17.2%, strongly agree or agree with digital tools making them lose focus in the classroom. As many as 26 students, equivalent to 20.3% of the participants, did not have an opinion.

5.5.5 How Students Learn English Best

The last table, *Table 6*, is not included in the categories coded from the teacher interviews. *Table 6* presents students' answers on how they think they learn English the best. The results are from the question: "What methods do you feel you learn English the best?".

Students were allowed to check three alternatives. Results show a definite answer in students learning English the best when watching English language movies and/or TV series, with 101 participants, 78.9%, choosing this alternative. 65 participants, 50.8%, checked that communicating in English on social media is also how they learn English the best, and 50 participants, 39.1% when they speak English in their spare time. All these alternatives do not include learning English in the classroom. Oral participation in the classroom and listening to the teacher talk only includes 48 participants and 37.5% of the participants. Gaming with others from the whole world is also one of the alternatives that show that English learning in the classroom is not where the students learn English the best, with 48 participants, 37.5%, choosing this alternative.

	Actual number of responses.	Responses in percent.
Oral participation in the classroom.	26	20.3%
Listen to the teacher talk in English.	22	17.2%
Talk English in my spare time.	50	39.1%
Watch English language movies and/or TV-series.	101	78.9%
Gaming with others from the whole world.	48	37.5%
Communicate in English on social media.	65	50.8%

Table 6 Percentage of how students think they learn English the best.

This table is included because of my hypothesis that students' do not feel that the pandemic has affected their English learning and vocabulary hence we are living in a digital world, and students conduct English everywhere they go. TV, Internet, and cell phones, to mention some. This question may show that the pandemic did not affect the participants of this study's English learning because students' primary English learning method does not happen in the classroom or at school.

6. DISCUSSION

This thesis investigates how the Covid-19 pandemic and the digital teaching during the lockdown and red level may have affected students' English language learning. The study also examines what kind of teaching methods based on digital tools, and not, teachers at this school have used before, during, and after Covid-19. Furthermore, what methods do students feel they learn English best on, how do the effects of the pandemic seem to have forced teachers to use digital tools more often, and lastly, how do lockdown and red level may have affected students' English vocabulary and fluency.

During the 45 minutes I have spent on each teacher informant, much information has emerged about how this group of English teachers solved the situation with remote teaching during the pandemic and how they view digital tools in teaching in the digital age we are in. Therefore, in this chapter, I will look at the connections between the teachers' information and the students' correspondence by using the four provided categories: *Variation in teaching, digital teaching methods, oral activities inside and outside the classroom,* and *positivity around digital tools.* This correspondence is essential to respond to this thesis' research aims in how the pandemic may have affected the use of digital tools in the English classroom and if and how students and teachers experience if it has affected their English learning and/or vocabulary. Further, the corresponding categories' correspondence will be analyzed with theories and previous research in the same field presented in chapter 2.

The Covid-19 pandemic has affected us worldwide. This paper has shown how the Covid-19 pandemic has affected English language learning and how teaching methods based on digital tools is used before, during, and after lockdown and red level. The given categories presented in this study are not all necessarily linked to Covid-19. However, digital learning is not only a part of students' learning method during the lockdown and red level but also a big part of teaching and learning today. Students and teachers have experienced using digital tools as a learning and teaching method regardless of Covid-19, but not necessarily to the extent as it has the last two years. The theoretical framework chapter (2.) presented how we live in a digital society, digital tools in an EFL classroom, and teachers' digital competence. It is also emphasized how digital tools can function as a learning method for language learning, how digital skills are a part of the Norwegian Curriculum, how teachers can use digital tools in a pedagogical way and how it can function as a motivational way of language learning. In addition, how teaching based on digital tools is essential for students today. I will, in this

chapter, discuss these causes up against my research and discuss how the Covid-19 pandemic and digital learning may have affected students' English learning.

6.1 Variation in Teaching

This study showed that all the informant teachers find variation in teaching as something important in an EFL classroom. The informants claim that they try their best to vary between oral and written activities. However, Julie was probably the informant who emphasized the most how conscious she was of varying her teaching methods. As mentioned earlier, I got the impression that these three teacher informants collaborated on how they could plan and conduct their English lessons. Nevertheless, even though this might be due to the answers from the 32 new students who went to different schools during the past two years of the pandemic, it is interesting to see that the student questionnaire shows that most students, 62.5%, claim that they usually get written assignments in the classroom. Løfsnæs and Kjelen (2015) state the importance of having room for different teaching methods to have didactic adaption as a central starting point and further say that good learning at all levels of education is about meaningful experiences and a basis for further research. Løfsnæs and Kjelen (2015) further use the term *The Extended Classroom* and emphasize that the teacher will gain a more extensive repertoire to play on by moving the teaching outside the classroom and away from the long tradition of teacher- or textbook-driven teaching methods. The variation of teaching is also shown to be important in the National Norwegian Curriculum LK20, where the importance of variation in obtaining digital skills in English is emphasized in the English subject curriculum in digital skills. It says that "the development of digital skills in English progresses from exploring the language to interacting with others, creating texts and acquiring knowledge by obtaining, exploring and critically assessing information from different English-language sources" (Norwegian Ministry of Education, 2021).

Further, the study shows that the teacher informants claim they use more digital tools today than before the Covid-19 pandemic. Michelle also emphasizes that she has not brought any new teaching methods she learned from the digital remote teaching into the classroom. She has, however, learned to be more precise and to vary a lot more during her English lessons, to prevent students from getting bored. This correlates with the students' questionnaire results where they were asked which methods are used most in today's English teaching. The

questionnaire clarified that oral presentations using digital tools, written assignments in the classroom, and written hand-ins were the teaching methods primarily used in the EFL classroom today. The number of students who checked these three alternatives did not differ much (see *Tabel 1*).

Furthermore, the teacher informants found out that group work is something they felt was a good didactic learning method during the lockdown and remote teaching and in the classroom today. Long (1985) claims that several pedagogical arguments have supported the use of group work in second language learning, but this also requires many follow-ups by the teachers if this is to work optimally for the students. The informants in this study did not mention how small or large the groups were when they divided into groups during the English lessons, but Long (1985) says that small groups, preferably only with two and two, will provide a much more adequate second language learning and that will make it easier for teachers to follow up on the development of each student. The teacher informants further claimed that working in groups made the students speak English aloud to a much greater extent than they did in a whole class, both before the pandemic and during remote teaching. In addition, they claim that the students work much better in groups than what they do alone. Alice says that group work is something that she still conducts in the EFL classroom after the pandemic. She saw the effectiveness of group work during digital teaching and tries to use this much more active today. However, the study showed that only 18.8% of the students find group work with hand-ins as a learning method they prefer, and only 25.8% find group work with digital presentations preferable. One can assume that the students switch to Norwegian when working in groups and only stick to English primarily if they work with someone they trust and are comfortable with.

6.1.1 How to Try to Vary Teaching and Learning Methods

To vary teaching and learning methods sounds like an easy task, but I know I can speak for myself and think I can speak for most teachers when I say it is not. Teachers should be aware of varying their teaching methods to keep their students motivated. The theory presented in this research shows that digital tools can function as an interest-driven learning method for students and contribute to a motivated learner (Kerka, 2000). Hence, we live in a digital society, and some theories present students today as digital natives (Wang et al., 2013). Teachers need to keep in mind that students today have a different upbringing than themselves. It is the teachers' task to meet students where they are and let them develop using digital tools

(The Norwegian Directorate for Teaching and Education, 2021). Therefore, it is crucial to have knowledge of students up bring and the increasing use of digital tools to keep them motivated in learning English and conveying a good pedagogical lesson (Wang et al., 2013; Løvskar, 2019; The Education Act, 1998; The Norwegian Directorate for Education and Training, 2021).

6.2 The Use of Digital Tools

The theory presented in this thesis emphasizes the importance of the use of digital tools in a classroom, let alone in a language learning classroom, hence the digital society we live in today, and the use of digital tools in the classroom is something that increases all the time (Tiller & Gedda, 2017). Løvskar (2019) states that teachers are supposed to have common knowledge about society when teaching, and the use of digital tools affects every aspect of today's society, including today's education. Furthermore, it is stated that several teachers are reluctant to use digital tools for better teaching and learning experience (Løvskar, 2019). All the teacher informants work at the same school and have done so both before the pandemic struck and until today, the access to digital tools was similar. In the study, all three teacher informants claimed that they use more digital tools in the EFL classroom today than they did before the pandemic. However, they all further state that this is not due to lockdown and red level but because the digital platforms are more accessible than they were two years ago because of our digital society and the increase in the use of digital tools in our everyday life.

In addition to all three teacher informants agreeing to use more digital tools in the classroom today than before the pandemic, Michelle emphasized the importance of using digital tools in teaching today, regarding digital tools being their reality. The teacher informants also point out that the pandemic and digital remote teaching have not necessarily affected English language learning because the offer to learn has always been there. However, it is possibly the external influences that may have affected their learning, such as technological difficulties, many family members at home at the same time, poor network, etc. Furthermore, the students' questionnaire shows that 43.8% of students agree with their teacher that they use digital tools more today than before the pandemic, with 43.8% of the students strongly agreeing or agreeing (see *Table 2*). Further, Løvskar (2019) also emphasizes the importance of not just using digital tools but also having good enough knowledge about digital platforms to give a good language learning lesson. All three teachers state that teaching through digital platforms was not

necessarily a problem because of the digital tools but rather because of the technical difficulties. Alice claims that they must have done something right in their English teaching, regardless of digital tools or not, since the students scored very high in an exam, including the understanding of English.

However, Michelle claims that she does not believe that digital teaching during the pandemic has affected students' English learning and adds that the weak students are weak regardless of remote teaching. The results from the students' questionnaire vary between strongly agreeing or strongly disagreeing with the statement "I feel like I have lost a lot of English learning the last two years due to digital remote teaching". However, the most significant number of students agreed, totaling forty students and 31.2%. The number of students who disagreed followed up closely with thirty-three students and 25.5%. The same is for the statement, "I got as much benefit from the English lessons over teams/zoom during remote teaching as I do in a classroom" (see *Table 2*). Michaelle claimed that she is afraid that the students feel like they have lost a lot of English language learning in the last two years. However, the results suggest that the students have very individual thoughts regarding their thoughts on how the pandemic may have affected their English language learning. The theory of Bildung emphasizes this self-reporting. One can say that the teachers have digital Bildung without intending to. We can assume that the teachers have understood their students' needs and helped them acquire knowledge and experience more than they think of themselves during remote teaching (Gran et al., 2019).

Furthermore, Michelle mentions that using digital tools in teaching has led to students becoming lazy and not learning correct grammar since technology does it for them. However, it can be assumed that these teachers have had in mind the educational and pedagogical aims during the lockdown and red level hence the students' answers in the questionnaire if they have lost language learning during the past two years. Løvskar (2019) said that the Oslo schools had invested in 57 000 laptops, 3000 Macs, and 25 000 tablets/iPads, and during the lockdowns and red level in schools due to Covid-19, the importance of Norway investing in students learning technology came through. Having these devices available for students made remote teaching a lot easier for teachers, which all informants emphasized. Alice said several times that all the school's digital tools made teaching a lot easier, especially during remote teaching, where digital tools made it easier for students and teachers to communicate with each other and deliver assignments and feedback. Al-khresheh (2021) also claims that digital tools ease teaching and learning for students and teachers. However, many teachers advise their students

not to use digital learning platforms, such as Google Translate, as a learning method for language learning. Carlsen et al. (2020) emphasized teachers' importance in not working against these platforms since it can motivate reluctant learners and students who do not have English as their second language. So rather than calling students lazy because of the help they get from digital tools, it can be beneficial for teachers to see the possibilities digital platforms can give learners but still be aware of the limitations. Teachers need to work with digital tools, not against them.

6.2.1 The Pandemic's Effect

A pandemic such as Covid-19 has also shown the world the importance of being familiar with digital tools as a teaching and learning method. When teachers choose to use digital tools, they must think carefully about the differences between using digital tools and not and how it can be beneficial for students to achieve academic gains (Bjarnø et al., 2017). I am not denying the negative consequences of using digital tools as a teaching method in the classroom, but a pandemic such as Covid-19 has put teachers and students in an unfamiliar situation where digital teaching was necessary. On that note, the extended use of digital tools, and the gained knowledge from both students and teachers, showed its importance during digital remote teaching. In addition, as Andrei (2016) claims, direct instructions on how to use digital tools and how they can support language learning are essential in providing a good teaching lesson. The use of digital tools as a learning method can also function as incidental learning for digital natives, such as these students, which can contribute to a motivated learner (Garris et al., 2002). Furthermore, it is crucial to remember that the digital teaching teachers provided during the first lockdown is seen as an emergency online remote teaching and learning method and differs significantly from a thoroughly planned online lesson.

6.3 Oral Activities Inside and Outside the Classroom

The study shows that all three teacher informants use the same oral activities inside the classroom and outside. However, Julie was the informant who seemed somewhat a little more engaged than the others and emphasized the importance of the use of oral activities during remote teaching and now in the classroom. Julie also made it seem like oral activities were committed to and something that her students found interesting and had a positive attitude towards. She was engaged when talking about oral activities, which she found helpful for

students' academic progression. The National Norwegian Curriculum LK20 (2021) also includes oral skills as one of the English subject's basic skills. Each teacher informant claims that they use both oral and written assignments in the EFL classroom. All three teachers mentioned an oral activity called '*Speed Dating',* which I found interesting in making learning English easy and fun. The class would line up in two rows, and then the teacher would give the students a topic or a question, for example, "what do you like to do during the summer holidays?" then the students would only talk to the person in front of them about the given topic or question. The students would then, later, change partners and get a new topic. This oral classroom activity was an activity that all three teachers mentioned and which they thought also worked well for the students and made even the quiet students dare to talk a little. On the other hand, this was an activity carried out in the classroom, not with digital remote teaching.

During remote teaching, the teachers stated that it was more difficult to make students orally active behind the screen, which correlates to the students' questionnaire results. As much as 60.2%, equivalent to 77 students, found it more difficult to speak English during digital remote teaching than in the classroom, even though teachers also found it easier to talk aloud in smaller groups (see *Table 3*). Julie further states that even those who are usually orally active in the classroom were often quieter during the period of remote teaching. However, it is essential to remember that even those students who claimed that they found it more difficult to talk during digital remote teaching do not mean that they did not talk. In addition, it is also important to remember that students need an environment that is speaking friendly to feel comfortable speaking English aloud. And even though group work was something most students found helpful and fun, it does not necessarily function the same way over digital platforms. To make students comfortable in an EFL classroom is essential for them to speak English aloud. Therefore, teachers need to step aside from the long tradition of teacher- and textbook-driven teaching methods and focus more on physical activation when learning English, making learning more physically and emotionally rooted (Løfsnæs & Kjelen, 2015).

Michelle and Julie further claimed that even the orally active students in the classroom did not bother being active during remote teaching. Julie further says that every time she asked a question in the classroom, a typical situation would be that the class would wait on those few students who usually answer. Everybody would feel some tension while waiting. However, during digital remote teaching, students could not recognize this tension which made the whole situation a little embarrassing.

Furthermore, even though group work was a teaching method that functioned in students' oral participation during remote teaching, it is up to further research to find out if this was something teachers focused on. In addition, the teacher informants did not mention how often these methods were used and how often students' felt comfortable enough, or had the confidence, to be orally active during digital remote teaching. Despite several students not being orally active in the classroom and even less active behind a screen, as much as 64.8%, equivalent to 83 students, strongly agree or agree that being orally active in an English classroom is essential to becoming good at speaking English. Only 20.3%, equivalent to 26 students, strongly disagree or disagree (see *Table 3*). This category shows that students' and teachers' answers correlate. Students found it more challenging to be orally active during digital remote teaching than in the classroom, even though a large percentage of them think it is essential to be orally active to learn English.

6.3.1 Covid-19's Effect on Students' English Vocabulary

Since the results from the statement on students' vocabulary were self-reporting, we do not precisely know if the Covid-19 pandemic has affected their vocabulary or not. However, we know from the results of this study that many students' oral participation was not present for several periods of two years during the lockdown and red level. Furthermore, the study shows that the percentage of students feeling they have lost English learning the last two years during remote teaching is very induvial. However, the highest percentage of students agree with the statement of losing English language learning (see *Table 3*). Furthermore, it is up to further research to determine if the effects of the Covid-19 pandemic have affected students' English language learning.

6.4 Positivity Around Digital Tools

Each teacher had different reactions when asked what they thought when they heard the words *digital teaching*. Michelle was the informant who seemed the least interested and engaged in the topic of digital tools as a teaching method. However, Alice expressed a positive attitude. Alice mentioned several times that digital tools as a teaching and learning method make it easier to access different platforms. Furthermore, it makes it easier to deliver and receive messages from students and co-workers and easier to follow up with students through digital platforms. At the same time, Michelle found the digital remote teaching scary because

she was worried that it would get boring for the students and that they would further lose their motivation. On the other hand, Michelle also points out that the world is digital, and therefore, teachers need to include digital tools in the classroom. This is also emphasized in theory, where the importance of being able to use digital tools as a teaching method and not using digital tools are presented (The Norwegian Directorate for Education and Training, 2021; Løvskar, 2019; The Education Act, 1998; Gran et al., 2019).

Alice also emphasized that she was happy that she did not have to deal with all the paperwork like she had to do before. She further states, "I must admit that I am not the teacher who has had a negative attitude towards using digital tools". In addition, she finds it helpful and thinks that digital tools positively affect students' English language learning. The theory presented in this study also emphasizes how digital tools make it easier for students to learn a language (Carlsen et al., 2020) and how digital tools make students and teachers interact effortlessly when using several digital platforms. In addition, digital tools improve the overall experience, teaching, and learning process (Al-khresheh, 2021). And as presented in the theory chapter 2, it is evident that the use of digital tools as a learning method is very significant today, as well as in the digitized school we have today, and the use of digital tools in the classroom has become a trend (Kerres, 2022).

Furthermore, results from the study show that the use of digital tools when learning English comes in second in what the students prefer. The results show that students prefer various learning methods, which is also presented in chapter 6.1, but English "games" as an oral activity for learning English came in as the most preferred learning method with 35.2%. However, it is shown in the results that students prefer using digital tools more than not using digital tools, with 74.2%, equivalent to 95 students, strongly agreeing or agreeing with digital tools making it easier for them to learn English (see *Table 5*). This corresponds to Carlsen et al. (2020) claims that digital tools make language learning easier for reluctant students or students who do not have English as their second language.

The use of digital tools in an EFL classroom, or a classroom in general, has become integrated into school and has changed the context around teaching (Yates et al., 2020). Therefore, with the increased use of digital tools in teaching today and digital skills being a part of the National Norwegian Curriculum LK20, it is emphasized in this thesis' theory chapter (2.) the importance of using digital tools as a learning method. In March 2020, when the pandemic hit Norway, and all schools were closed, it would have become difficult for both students and

teachers if they did not have any knowledge of digital teaching and learning. Julie also stated that she was happy that they did have access to all the digital platforms they did during remote teaching, or else everything would have become much more difficult. Bjarnø (2017) also emphasizes how necessary it was for all students and teachers to take advantage of the knowledge of digital tools when Covid-19 struck. Bjarnø (2017) also mentioned the positive consequences of digital tools when learning and how technology has made it much easier for students to search the Internet to get answers and use the online dictionary.

6.4.1 English Language Learning through Digital Tools

Young people today are known to be digital natives, and the participants of this study are digitally born students. Wang et al. (2013) assume that digital immigrants, such as the teacher informants who participated in this study, resist new technology or have difficulties accepting the digital society we live in today. However, the result from this study shows that all three teachers show a positive attitude towards digital teaching in the classroom. Regarding digital teaching during home school, they had somewhat different views and feelings, which is understandable. Further on, *the Law of Education* (1998) also states that every teacher is obligated to have enough knowledge about today's society and culture, and today's society and culture consist of digital tools. Digital tools are a part of the reality of young students' lives today, and teachers must meet the students where they are (The Education Act, 1998, Løvskar, 2019). This brings us to what can seem to be students' primary English language learning source.

6.5 Did the Effects of the Covid-19 Pandemic Affect Students' English Language Learning?

All three teachers state that they do not think that the effects of the Covid-19 pandemic have affected students' English language learning. However, Michelle mentioned an essential learning method in her interview, which also changed the direction of this thesis after analyzing the data. She said that she acknowledged that students' primary English learning platform is not the school or in an EFL classroom. Michelle further says that the students play many video games where they communicate with others in English, and they watch a lot of movies and TV series as well. Furthermore, she also encourages students to learn English with this learning method. By listening to English podcasts, watching English movies and TV series, watching English documentaries, and using English in your spare time. Michelle's

statements correspond to several of the claims given in the students' questionnaire. The results show a definite answer 78.9% of students learn English the best from watching movies and TV series, 50.8% of students learn English the best from communicating in English through social media, 39.1% from communicating in English in their spare time, and 37.5% through gaming with others from the whole world (See *Table 6*). Compared, only 17.2% of students learn from listening to their teacher speaking English and 20.3% from oral participation in the classroom. These results from the questionnaire are specific to students' learning English the best outside of the classroom, which builds up Michelle's statement that school is not students' primary source for English language learning.

External English input is a factor that influences students' English language learning. Michelle stated that she did not think that students learned most of their English from school, thus they only have English lessons two hours a week. Therefore, she encourages students to listen to and read English outside of school during remote teaching and otherwise, such as English books, English podcasts, movies, and series. Alice also states that the students' scored very high on their last exam about understanding.

Students' questionnaire results show that they do not feel like the pandemic has affected their English language learning, strengthening my hypothesis. Hence, we live in a digital world, and these students are digital natives (Wang et al., 2013). The effects of the Covid-19 pandemic did not affect their English language learning, nor their English vocabulary and/or fluency. However, it is essential to remember that the statements that students answered in the questionnaire (see *table 6*) are students' self-reporting and their own experiences. Furthermore, these students are not capable on reflecting their English language learning even though they can have an opinion on how they learn best. Further, even though we live in a digital society, the results from the teacher informants are based on their own experiences and encounters with the same students. Julie also says that it is difficult to understand if the pandemic effects have affected students' English language learning because they have nothing to compare it with. These students have gone through lower secondary school with the pandemic affecting their everyday lives in some way all three years in lower secondary school. Therefore, it is not easy to see how their English grades would have been if those three years were normal.

It is evident that the English language is to be heard everywhere, hence globalization, and that students get much external English input outside of school. However, this does create a division between teachers and students (Sitthirak, 2013). It is essential to have in mind the role

of the English teacher, and just as crucial for the English teacher to promote the English language in a fun and exciting way not to lose their students' motivation. Some students need their teacher's support when learning something, which the teacher informants of this study also emphasize. As Alice stated, the pandemic's effects did not necessarily affect students' language learning but rather students' daily need for structure. Students' can assume that they learn English the best from external input regardless of what their teacher does in the classroom, but it is not said that students *know* how they learn English best.

7. CONCLUSION

In the introduction of this thesis, a research question and three research aims were presented, and in this chapter, I will present a conclusion and give a possible answer to these questions. The main focus of this study is students' English language learning in a lower secondary school in Norway, and their teachers' teaching methods based digital tools, before, during, and after Covid-19. The following question was asked: How has the worldwide pandemic, Covid-19, and teaching based on digital tools affected students' English learning during the school lockdown and red level? In addition, this study has three research aims. Which were to find out what kind of learning methods the teachers used before, during, and after the pandemic, and secondly, to track how the pandemics' effects have forced teachers to focus more on digital learning. And lastly, find out how this has affected students' English language learning.

The findings indicate that the EFL classroom is not students' primary English language learning source. Their primary language learning source is external and comes from English movies, TV series, podcasts, documentaries, etc. Therefore, the school lockdown and red level have not affected students' English language learning to any great extent. However, students' self-reporting can be questioned to be a valid source of their academic results. Furthermore, the teacher informants' that participated in this study seemed sure of how they varied their teaching methods in the classroom. However, the students did not fully agree with the statements from the teachers regarding their teaching variation. During lockdown and home school, oral participation was a challenging teaching method because students' lacked confidence and seemed not comfortable enough to talk aloud behind a screen. The difficulty of teaching methods for a teacher in the classroom seems to be linked with students' motivation and interest-driven movement. The informants explained that they did not think that the remote teaching would last as long as it did, so they lacked motivation in the beginning. However, further on in the process, they managed to vary the teaching method more when they understood that the Covid-19 pandemic would last longer than expected. Furthermore, we can indicate from the teachers' answers that they use digital tools in the classroom more today than before because of the increase in access to digital teaching platforms. However, we do not know if these platforms would have been accessible or not to the degree that they are if it was not for Covid-19. We can assume that the Covid-19 pandemic induced the access to digital learning platforms, but we can also assume it is because of our digital society. Furthermore, because of our digital society, it should come naturally to teachers to use digital tools as a

teaching method, not only in an EFL classroom but in every classroom. In addition to it functioning as an interest-driven learning method for students today hence digital tools being a part of their reality.

English teachers' digital competence and pedagogical competence need to be updated continuously. The study shows that it is essential to focus on varying their teaching methods, both digital and in the classroom, and to become more aware of how the students learn English best. We can assume that teachers' teaching methods are essential through external English input and keeping students engaged in learning English. Further, group work and English games as a learning method were preferred by many students, and all teachers expressed that group work functioned well during the period of remote teaching. This is something to have in mind and build on further to keep the students motivated. The research did not discuss the extent to which they use English games and group work as a teaching method, but this study's result shows that it can be focused more on.

It is emphasized that we live in a digital world, and young students are argued to be digital natives, and teachers should be aware of their students' culture outside of school to promote the best possible teaching methods. In addition, student welfare should also not be forgotten, not in "normal" times and not during remote teaching. Cooperation between different contributors, such as teachers, parents, and students, is essential to focus on and take care of, especially regarding the younger students. Hopefully, the Covid-19 threat will soon be a memory and only to be heard of in history books. Furthermore, when this day comes, teachers should not simply forget to use digital tools in their teaching methods but rather build on what they have started.

Furthermore, building on their already gained knowledge in using digital tools as a teaching method is important today and an important asset if and when a similar situation comes. Of course, in lower secondary school, the chances of remote teaching at home are low and probably much more relevant in high education. However, the chances of future pandemics or natural disasters should not be forgotten.

7.1 Suggestions for Further Research

The limitations of this study are related to the number of participants that this study has. Even though I, as a master's student, was pleased with the number of students participating in this

study, the Covid-19 pandemic was worldwide. It did not only affect one specific group of students from one school in Norway. In addition, I have only interviewed three teachers from the same school, so the findings from the teachers' interviews can only be viewed as opinions of a small number of participants. Nevertheless, during the study, I discovered common categories that will occur in many EFL classrooms. Therefore, this research's theoretical framework was built on my hypothesis on how students learn English best and how the Covid-19 pandemic may have affected their English language learning. It functions as further validation for my study. At the end of my research, I achieved the aims I set for this master thesis. However, there are still parts that I have not been able to investigate in depth. In my study, several categories can be found, but the ones discussed are the ones that emerged from my research. Despite the explanations for why I chose these specific categories, there are still limitations to the validity of this study and several categories that could have been considered.

On that note, it would be interesting to investigate the degree these students scored any lower than other students that were not affected by the pandemic for further research. However, since the pandemic just ended at the beginning of 2022, the English grade form in lower secondary emerged from two separate grades, oral and written, to one, and the exam form being changed - it is difficult to find valid, comparable studies yet. Further, it would be interesting to find out if the teacher informants' statement that they have easier access to digital learning platforms today than before is valid regardless of the pandemic. The teachers state that they do not think that the Covid-19 pandemic had anything to do with having more accessible access to different digital teaching platforms. However, this would be up to further research to find out. In addition, I would suggest further investigating common categories that students and teachers correspond to, as a more quantitative study might present more valid results on how the pandemic may or may not have affected students' language learning.

I am fully aware that this study does not mention several theories and research. However, the reader should be aware that the beginning of this master thesis was in the fall of 2021 when the pandemic was still going strong and forced schools to operate on a yellow and red level. Little research was done about digital teaching and learning during Covid-19 and home school one year ago. The best advice I would give to further research is to focus more specifically on students' academic results during Covid-19 and investigate the digital platforms used to learn English that exist today that did not exist before the pandemic. This area needs more research when the time allows it.

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Appendix 1

INTERVJUGUIDE

INTERVJU INTRODUKSJON

Formålet med denne masteroppgaven er å undersøke hvordan covid-19, pandemien som har pågått på verdensbasis, har eller kan ha påvirket elevers engelsk læring på bakgrunn av at lærerne ble «kastet» inn i en hverdag med kun digitale verktøy.

Oppgaven skal inneholde en 2 parts spørreundersøkelse hvor lærere vil bli intervjuet, og elever skal gjennomføre en anonym spørreundersøkelse på nett om hvordan bruken av digitale verktøy har vært før, under og etter Covid-19, og evt. hvorvidt lærerens og elevenes kunnskap rundt digital læring har utviklet seg. Deretter skal jeg velge ut noen respondenter som skal svare på en mer nøyaktig og grundig nettspørreundersøkelse.

Dette intervjuet, eller denne samtalen, vil vare i ca. 45 min og er anonym. Informasjon om hvilken skole som jeg har jobbet med vil bli gitt.

KONSPETUELL RAMMEVERK

- Metodespørsmål

Her vil jeg vite hva slags metoder du har pleid å bruke, og om det har endret seg noe i løpet av de siste to årene.

- Hvilke metoder/verktøy likte du å bruke best før lockdown for å øke elevens engelske læring? og hvor har du funnet eller lært disse metodene?
- Hva er hovedårsaken til at dette er favorittene dine?
- Har du brukt noen metoder i det engelske klasserommet som ikke har gitt et positivt utfall?
- Sett bort ifra "sjokket" om å kun bruke digitale plattformer under lockdown, føler du at du har lært nye læringsmetoder?

- Spørsmål om metode før, under og etter lockdown?

Her vil jeg vite litt mer konkret hva du gjorde før, under og etter lockdown, og hvilke tiltak du som lærer spesifikt gjorde for å gi elevene god læring.

- Syns du digitale verktøy var negativt for elevenes engelske læring under lockdown?
- La du merke til noe forskjell i elevenes ordforråd og engelsk læring generelt under og etter lockdown? - positivt eller negativt?
- Hvor godt kjente du til plattformer som "zoom", "teams" og liknende før lockdown?
- Følte du deg, som lærer, godt rusta i form av å ha nok kunnskap om diverse digitale plattformer til å bli kastet ut i en slik situasjon hvor digital læring ble tvunget?
- Hvilke metoder har du tatt med deg til i dag som du lærte under lockdown eller hjemmeskole som har hatt positiv innvirkning på elevene?
- La du merke til noen forskjeller på elevenes muntlige deltakelse på digital plattform enn i klasserommet?
- Fokuserer du mer på digital undervisning i dag enn hva du gjorde før mars 2020? - har pandemien generelt endret dine læringsmetoder i det engelske klasserommet?

SLUTTEN AV INTERVJUET

Her vil jeg gjerne vite om det er noe du har lyst til å tilføye i samtalen vår som du føler du har lyst til å dele med meg rundt dette tema som vi ikke har snakket om.

Appendix 2

1. Hvilke måter føler du at du selv lærer engelsk best?

Hvilke metoder føler du selv du får utbytte av i form av engelsk læring. Du kan krysse av på max 3 svaralternativer.

Du må velge minst ett svaralternativ.

Muntlig deltagelse i klasserommet

Høre på læreren undervise

Snakke engelsk i fritiden

Se på filmer/serier/TV med engelsk tale

Gaming med andre fra hele verden

Kommunisere på engelsk på sosiale medier

Annet

2. Har du en læringsmåte du liker best i engelsktimene?

Max 2 svaralternativer.

Du må velge minst ett svaralternativ.

Muntlig framlegg uten digitale verktøy

Muntlig framlegg med digitale verktøy

Skriftlige oppgaver i klasserommet

Skriftlige innleveringer

Gruppeoppgaver med digitalt framlegg

Gruppeoppgaver med skriftlig innlevering

Engelske muntlige "leker"

Annet

3. Hvilke læringsmåter blir brukt mest i engelsk undervisning i dag?

Max 2 svaralternativer.

Muntlig framlegg uten digitale verktøy

Muntlig framlegg med digitale verktøy

Skriftlige oppgaver i klasserommet

Skriftlige innleveringer

Gruppeoppgaver med digitalt framlegg

Gruppeoppgaver med skriftlige innlevering

Engelske "leker"

Annet

4. I hvilken grad er du enig med disse påstandene i forhold til digital undervisning og læring i engelskfaget?

	Veldig enig	Enig	Vet ikke	Uenig	Veldig uenig
Digitale verktøy som læringsbrett og laptop gjør det lettere for meg å lære engelsk. *	☐	☐	☐	☐	☐
Jeg mister fokus når jeg bruker digitale verktøy i arbeidsoppgaver. *	☐	☐	☐	☐	☐
Digitale verktøy skaper tekniske problemer i undervisningen. *	☐	☐	☐	☐	☐
Jeg fikk like mye utbytte av engelsktimene over teams/zoom under hjemmeskole som i et klasserom. *	☐	☐	☐	☐	☐
Jeg syns det var vanskeligere å være muntlig aktiv over teams/zoom enn i klasseommet. *	☐	☐	☐	☐	☐
Det er nødvendig med muntlig deltagelse for å bli god i engelsk. *	☐	☐	☐	☐	☐
Muntlig er like viktig som skriftlig i engelsk læring. *	☐	☐	☐	☐	☐
Jeg bruker mye engelsk utenfor skolen. *	☐	☐	☐	☐	☐

Læreren min hadde nok kunnskap om de digitale plattformene som ble brukt på hjemmeskolen for å kunne gi en god engelsk undersving. *

☐ ☐ ☐ ☐ ☐

Læreren min brukte mye digitale verktøy i undervisningen til vanlig FØR pandemien. *

☐ ☐ ☐ ☐ ☐

Læreren min bruker mer digitale verktøy ETTER pandemien. *

☐ ☐ ☐ ☐ ☐

Jeg føler jeg har mistet mye engelsk læring de siste 2 årene på grunn av digital hjemmeundervisning.

☐ ☐ ☐ ☐ ☐

Appendix 3

In what ways do you feel you learn English best?

Which methods do you feel you benefit from in English learning. You can check a maximum of 3 answer options.

You must choose at least one answer option.

Oral participation in the classroom

Listen to the teachers

Talk English in my spare time

Watch movies/series/TV in English

Gaming with others from around the world

Communicate on English through social media

Other

2. Do you have a learning method you like the best in English class?

Maximum 2 answer options.

You must choose at least one answer option.

Oral presentations without digital tools

Oral presentations with digital tools

Written tasks in the classroom

Written submissions

Group assignments with digital presentation

Group assignments with a written submission

English oral «games»

Other

3. What teaching methods are primarily used in the English lessons today?

Maximum 2 answer options.

Oral presentations without digital tools

Oral presentations with digital tools

Written tasks in the classroom

Written submissions

Group assignments with digital presentation

Group assignments with a written submission

English oral «games»

Other

4. To what extent do you agree with these claims concerning digital teaching and learning in the English subject?

Strongly agree – agree – do not know – disagree – strongly disagree

Digital tools such as pads and laptops make it easier for me to learn English.

I lose focus when I use digital tools in my assignments.

Digital teaching creates technical difficulties during class.

I benefited from the English classes using teams/zoom as in the classroom.

I found it more challenging to be orally active during remote teaching than in the classroom.

It is necessary with oral participation to be good at English.

Oral is just as important as written in English language learning.

I use the English language a lot outside of school.

My teacher has enough knowledge of the digital learning platforms used during remote teaching to give a successful English teaching.

My teacher used digital tools as a teaching method BEFORE the pandemic.

My teacher uses more digital tools AFTER the pandemic.

I feel I have lost a lot of English learning in the past two years because of digital remote teaching.