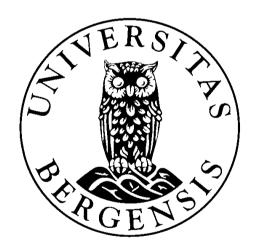# Digitization and English

A study of the role of formal and informal ICT practices in students' development of digital skills through the English subject

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Abstract

Det er et faktum at datateknologien har kommet for å bli, og følgene av dette er at teknologien inkorporeres i fagene i skolen. I engelskfaget er dette et særdeles viktig aspekt ved opplæringen i fremmedspråk, ettersom at større deler av vårt samfunn kommuniserer på engelsk. Dette gjelder både i arbeidslivet, i høyere utdanning, i politikken, økonomi, og i populærkulturen. Dermed er det også viktig at skolen utstyrer elevene med de nødvendige digital ferdighetene som kreves for å samhandle og kommunisere i det moderne globale samfunnet. I følge Kunnskapsløftet (LK06/13) skal engelskfaget sørge for at elevene kan kommunisere både verbalt og skriftlig, og ved hjelp av ulike virkemidler. Det Kunnskapsløftet derimot ikke gjør er å definere hvordan digitale verktøy kan brukes i undervisningen. Digitale verktøy har tradisjonelt sett blitt brukt til å finne, tolke, evaluere og formidle informasjon. Elevenes personlige erfaringer blir sjeldent vurdert som særdeles nyttig i undervisningssammenheng.

Denne masteroppgaven vil derfor utforske i hvor stor grad lærerplanen i engelsk bidrar til utviklingen av de digitale ferdighetene som er nødvendige for at elevene skal være forberedt på å delta som selvstendige og kritisk tenkende individer. I samsvar med dette ser forskningen på hvordan elevenes erfaringer med IKT kan brukes til å utvikle disse digitale ferdighetene. Resultatene viser at selv om det ligger potensial for læring i elevenes måte å bruke datateknologi på, så blir IKT i engelskfaget i praksis rettet mot tradisjonelle undervisningsmetoder som tekstproduksjon og formidling av informasjon.

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Emilie Vårheim Gundersen

20.11.16

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1. Introduction

1.1 Introduction

The aim of this master's thesis is to discuss to what extent the digital world of the English subject curriculum correspond to the digital world of our society by exploring how the students' use of ICT in an out-of-school context potentially promotes development of the digital skills needed in a global networked society. My impression from past experiences is that the ICT practices in the English subject today do not fully prepare students for the digital world they will face when they graduate upper secondary school. My argument is that in order to promote practices that develop digital skills that will be useful to the students' future education, working life, and general citizenship in a globalized online society, one must consider what the students' informal learning with ICT can potentially do to improve the curricular practices in the English subject.

1.2 Motivation

The reason why I chose this topic is mainly due to what I have experienced during my practice as a teacher in upper secondary school. I do not take lower secondary school into account here, as the students in my lower secondary school practice spent very little time interacting with computers. The upper-secondary level students, however, had access to their own personal computer, which they were allowed to bring to every class, though they were not always permitted to use it without the teacher's consent. When my partner and I took over class after a few weeks of observation I took notice of a few things. First of all, whenever we gave our students tasks that involved the use of computers and Internet there were always a handful of students who spent the majority of class on online activities that were not related to schoolwork. These activities, or web pages, included Facebook, online games, online newspapers, blogs, etc. My partner and I figured if we spent some time walking around the classroom and observing the students' progression then perhaps it would keep the students from all the distractions the Internet provided them with. I discovered quickly that this approach was not sufficient to keep the students focused at the task at hand.

Two things occurred to me: First of all students need to be taught how different contexts demand different ways of employing ICT. Writing an essay using digital tools, for example, would require the students to use Word or similar text production program to produce the essay, and to find suitable and reliable sources of information to use in the text

production. Working on an in-depth project, on the other hand, is more open for interpretation as to what sort of digital resources would be relevant to use to acquire the desired information. Out-of-school contexts are different in the way that the students are assumed to use computers for different purposes outside school, such as finding and sharing information, pictures, and videos over various social media, which is not usually considered as relatable to education. The last example, however, leads to the second discovery. Seeing as my theory was that the current curricular practices with ICT in the English subject are not sufficient to prepare students for a global digitized society, I believed that the students' private practices with ICT could potentially promote learning in the English subject without completely rejecting the current practices.

In addition to this, my school experience showed me how students assess online sources when they work on various tasks. I discovered that the first-year-students as well as the seniors appeared to have some difficulties in finding online sources and checking the reliability. Most often they would turn to Wikipedia to find the information they needed to solve the task(s) they were working on. This tendency among the Vg1 students did not surprise me as they had less experience with using computers as a tool and having access to it in most of their classes. As for the senior students I was slightly astonished when I discovered that they often used Wikipedia as their main source of information apart from the textbook. Furthermore, my partner and I had to remind the students of online source assessment and that they should compare the sources they found with at least two other sources. Whether or not they acted upon this instruction is debatable, but we felt the need to stress the importance of source assessment as the students continuously utilized Wikipedia. A reason for this has to do with the various attitudes towards Wikipedia. Both my partner and I have had some teachers who were in favor of using Wikipedia for schoolwork, while others explicitly denounced Wikipedia as a legitimate source of information. These experiences suggest that teachers need to spend more time teaching students to evaluate the reliability of the sources they use, especially because the Internet opens up to a world of resources that are not always as easy to assess.

The argument is supported by the fact that the subject curriculum specifies the need for students to be able to evaluate digital resources in an independent and critical way (LK06/13, the English subject curriculum). The subject curriculum does not clarify what those resources are, meaning that, in theory, any website or program can be used in language learning, even Facebook, blogs, Twitter, etc. However, in practice it appears that the most frequently used digital tools and media are those who are typically associated with formal

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education, such as Word, online dictionaries, websites connected to the textbooks, etc., rather than informal resources like social media, forums, blogs, and so on. The notion of formal education and informal learning will be explained in more detail in the next chapter.

Furthermore, one of the main arguments in this thesis is that the students need to develop digital skills that are directed towards the global society's needs. In other words, the desired digital skills in English should be directed towards future employment, education, politics, or other aspects of society where ICT is used to communicate in English. The Internet has contributed to the globalization of English to the point where international trade, global economics, political debates and elections, etc., often favor English as the language of communication. With an increasingly developing online community the students need to learn how to communicate and interact with people of different nations and ethnic and religious backgrounds on platforms where variations of the English language challenge the formal requirements of syntax and semantics that govern formal language learning. Additionally, he possibilities for interacting with others anonymously

1.3 Research questions

The primary research question of this thesis is the following:

> To what extent does the digital world of the English subject curriculum correspond with the digital world of our society, and how can informal use of ICT promote the digital skills the students need in a globalized online society?

In relation to the main question, additional questions will be examined, as listed below in random order:

- How noticeable is the difference between how students implement ICT at home versus at school?
- For what purposes do students' engage with computers in the English subject?
- To what extent do teachers prioritize using ICT when teaching EFL?

These questions will be examined in light of theory and results from the research methods employed in this study. In order to gather as much information as possible on the topic of this thesis, the study has employed a mixed methods research approach that involves triangulation

of data from a student survey, teacher interviews and classroom research. The methods and materials used in this thesis will be explained in more detail in chapter 3.

2. Theory

2.1 Introduction

Despite the fact that research on ICT is relatively new within didactics and pedagogy compared to other areas of research, numerous studies on the topic have emerged throughout the years. This chapter will examine theories that discuss ICT and how it is implemented in Norwegian schools. I will explain how theories and research on ICT in education, both on national and international level, are relevant to the English subject, as well as the opportunities ICT represents for teachers and learners of EFL[1]. Although the thesis focuses on ICT in the English subject in Norwegian schools, it is necessary to look at research on international as well as national level in order to better understand what role ICT plays in an educational setting.

 This chapter will take a closer look at the theories that have emerged through the last two decades, particularly theories on how and what computers and the Internet are used for by the students as well as the teachers. The main focus of this chapter is on theories that discuss teachers' digital competence and students' digital learning in relation to the English subject. I will present theories that discuss how and to what degree the implementation of ICT is directed towards the students' future needs of digital skills

2.2 The DeSeCo Report – Choosing and defining key competencies

ICT has been an integrated part of the Norwegian curriculum for Knowledge Promotion. ICT manifests itself through the basic skills required by the curriculum, namely oral skills, reading, writing, digital skills and numeracy (LK06/13, Framework for basic skills). My experience as a student in upper secondary school, as well as a student in teacher training practice, has shown me how much time students spend on computers and Internet. However, being able to use ICT does not necessarily mean that one has the competence to employ various digital tools for different purposes such as writing essays, online research, online communications, et cetera, nor does it mean that the students' personal experiences with ICT should be regarded as useless in an educational setting. The thesis argues that the current curricular practices in the English subject, with relation to ICT, must be subject to change. This is due to the fact that even though the English subject curriculum in theory gives teachers the opportunity to choose how implement ICT when teaching, the reality is that a lot teachers

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[1] English as a foreign language
[2] "ICT in school"
[3] The app was released in 2015 (https://www.vipps.no).

appear to be conservative and reluctant to change in teaching practices where ICT is concerned, which will be discussed in more detail later in the chapter. However, seeing as society is in constant change, particularly when it comes to technology, it makes sense that the schools should follow. Otherwise, one risks that the digital skills the students cultivate at school will be irrelevant to the tasks and communications the students are expected to participate in after graduation. Therefore, it is necessary to examine the language learning possibilities presented in the combination of formal educational use of ICT and informal learning with ICT.

Moreover, it is important to first establish what is meant by the terms 'digital skills' and 'digital competence'. The OECD's Definition and Selection of Comptencies Executive Summary says: "a competency is more than just knowledge and skill" (OECD 4). In other words, digital competence is not simply about knowing how to get access to web resources or write a paper; it is about knowing how to use those skills in a context. The context changes depending on the situation, whether one is at school, at work, or at home. For the sake of simplicity, in the further discussion on the matter, I will use the word 'competence' rather than 'competency'. According to the Oxford Dictionaries competence and competency are defined the exact same way, as "the ability to do something successfully or efficiently" (Oxford.com). Thus I will use the term 'competence' henceforth.

The DeSeCo identifies key competences in three different categories:

- Use tools interactively
- Interact in heterogeneous groups
- Act autonomously

Students need to be able to use an extensive range of tools, engage in activities with people who may have different backgrounds and values than themselves, and they need to be able to take responsibility and make decisions on their own, creating a place for themselves in society without constant guidance from others (OECD 5). These three categories form the foundations of key competences, competences that are required in order to prepare students for life after school. Furthermore, the DeSeCo report states: "competence is an important factor in the ways that individuals help to shape the world, not just cope with it" (OECD 6). Learning new abilities and being competent at something (e.g. reading, writing, mathematics, etc.) are not only necessary requirements for students to face the world; what students learn in school lay the groundwork for future improvement. The school does not give students all the answers to questions and problems they will face in adult life, but it will provide them with the possibilities to take action and create progress in society. It is the next generations'

responsibility to further develop what already exists, as well as make way for new advancements.

While this thesis involves all three fundamental categories of key competences (see the beginning of last paragraph) to a certain degree, the category I would like to highlight is "use tools interactively". The category communicates a need for more than just students having access to assorted tools. As the DeSeCo Project states:

> Using tools interactively requires more than having access to the tool and the technical skills required to handle it. Individuals also need to create and adapt knowledge and skills. This requires a familiarity with the tool itself as well as an understanding of how it changes the way one can interact with the world and how it can be used to accomplish broader goals. (OECD 11)

In other words, it is not enough for students in Norwegian schools to know how to use a computer and how to access Internet. The majority of students have access to this at home either through a shared family computer or a private computer and/or laptop. In my practice at upper secondary school I observed how students navigated the Internet. Some spent time on Facebook or similar websites, some spent time on online games, while others read online newspapers and blogs. This shows that they know how to use computers and Internet for their own personal purposes. What it does not show is whether or not they are able to adapt those technical skills to academic purposes involving the same tools, nor does it prove that these technical skills will be relevant later in life.

In relation to the aforementioned category, the DeSeCo Project identifies three competences in which one of them involves "using knowledge and information interactively" (11). The following list of requirements explains what the individual, or in this case the student, needs to be able to do in order to this particular competency:

- Recognize and determine what is not known;
- Identify, locate and access appropriate information sources (including assembling knowledge and information in cyberspace);
- Evaluate the quality, appropriateness and value of that information, as well as its sources; and
- Organize knowledge and information (OECD 11)

If one, for the sake of argument, assumes that students fulfill the first two points on the list of requirements, then the students have a base to work from. They receive a task to solve, recognize what they have to look for in order to do the task, and later find a book or a webpage where they may gather the information they need. However, when it comes to evaluating the legitimacy of the sources, especially the sources one can find on the Internet, one might find this problematic. First of all, the students need to know how to assess their sources, not just how to access them (Ref. Framework for Basic Skills). For instance, Wikipedia is the online encyclopedia favored by a copious number of students of different ages, which I will get back to later in this thesis. Some people will claim that Wikipedia is an inappropriate source of information as practically anyone can create or edit articles in the encyclopedia, while others will say it is fine as long as they make references to it or if the students only use it for tasks that will not be formally assessed (Blikstad-Balas and Hvistendahl 41).

2.3 Related research on ICT

Although ICT is a relatively new field of research in pedagogy and didactics there is a wide range of research on how computers and other technologies affect our way of teaching and learning, such changing genres (Ørevik 2015) and digital challenges in education (Krumsvik 2006, Eide and Weltzien 2013). Among the many contributors to this area of research is Professor Rune J. Krumsvik. In an article from 2006 he addresses "the digital challenges of school and teacher education in Norway" (Krumsvik 239) and how the Internet affects education in terms of new ways of obtaining and constructing knowledge. He acknowledges the Government's implementation of digital skills the Framework for Basic Skills (LK06/13), and he argues that there is an agreement that digital skills in practice needs to be explored further (Krumsvik 240). Still, he also recognizes issues surrounding the aforementioned skill when he says: "However, despite this consensus and good intentions one has to bear in mind that earlier efforts with ICT implementation in school and teacher education have been more strongly anchored rhetorically than in practice" (Krumsvik 240). In other words, despite the fact that digital skills are explicitly stressed as a basic skill and an integrated part of education it does not automatically indicate practice of this particular skill. There is a discrepancy between the idea of ICT and how it is being practiced in school. Krumsvik explains this discrepancy further:

Even if technology access in Norwegian schools is good compared to other countries, we still find that there is a lack of essential digital literacy among teachers and there is too much low-speed Internet access in the schools, neither of which is taken into account in the reformers' ambitious visions for ICT. (Krumsvik 240)

The key word here is digital literacy, which in this case can be loosely explained as "digital competence". The term "loosely" is used because in Scandinavian countries the concept of literacy, particularly digital literacy, is most often replaced by the term "digital competence", which will be addressed in section 2.5. David Buckingham argues that literacy is often defined as "technical know-how" (Buckingham 266), that it focusing on the ability to do something, for instance read and write, when in reality it "implies a broader form of education about media", which he argues is close to the concept of Bildung (Buckingham265). In this thesis, digital Bildung involves the ability "to make independent, responsible decisions about how to use … data and tools in cultural contexts and in interpersonal relationships." (Skulstad 261) In other words, digital Bildung focuses on behavior in online communities and the decisions made with regards to digital tools for different social contexts, which is an essential part of students' digital education. However, the overall argument is that application of ICT in a formal school setting is not sufficient to cultivate students' digital Bildung.

The lack of digital literacy among teachers becomes problematic if one expects to integrate ICT into teaching. How can teachers employ technologies in their teaching if they do not have the competence to do so? Although most students will have some experience with computer technology and the Internet, one cannot assume they know how to transform and adapt this knowledge for educational purposes. Krumsvik uses the word "screenagers" to describe this generation of teenagers. The term means that young people today are "techno-savvy" and have plenty experience with various technologies (Krumsvik 240). Again, even though they are "techno-savvy" it does not imply that they know how to use ICT for academic and professional purposes. Teachers need to be able to help students to adapt technological knowledge and competence into academic purposes rather than letting students take the lead with ICT. As Krumvik says: "Lower-secondary school students are in many aspects *internauts* and are digitally self-confident in this new online, digital "landscape" (Krumvik 243). His article is from 2006, which means this description does not only apply to lower-secondary school anymore. Children and teenagers in general are rather confident in their capabilities with today's technologies, especially with computers and smartphones. The

quote, however, still stands and implies the need for teachers to keep up with the increase of new technologies and the opportunities they present.

Krumsvik refers to Kirsten Drotner who also addresses the digital competence of students and teachers. One of the dangers of *screenagers* is the possible situation where teachers overestimate the students' digital abilities:

> She [Drotner] suggests that if children and youth are used as truth-witnesses for technology us in school, we may get a situation where *Big Brother* and *Playstation* are legitimised in schools. This form of solidarity with the informants, or in some cases the students … termed *ethnographic ventriloquism*, often results in a sympathetic, inside-out-description, in which one can rapidly become house-blind. (Krumsvik 244)

Allowing the students to be the leaders in relation to ICT may only increase the gap between the ideal use of ICT in school and the leisure, entertaining use of computers at home. Furthermore, it does not motivate teachers to cultivate their own digital competence, which in turn will not solve the discrepancy between the visions of educational ICT and the practice of educational ICT. Krumsvik quotes Seymour Sarason: "Educational change depends on what teachers do and think – it's as simple and as complex as that. It would be easy if we could legislate changes in thinking" (Krumsvik 246). This suggests that in order to fully explore all the possibilities ICT presents, the teacher needs to be up-to-date with technology and all its improvements.

In the article "IKT i skolen[2]" Krumsvik explains the difference between *real affordance* and *perceived affordance* where the former refers to the potential ICT represents. *Perceived affordance* on the other hand refers to how technologies are "experienced by its user" (Krumsvik 538, my translation). A person who is digitally competent will be able to see the possibilities for learning with the various digital technologies available in school, and he will also be prepared to independently navigate those technologies. A student or teacher who does not fulfill the requirements for the basic skill *digital competence* might find it difficult to locate the possibilities within educational technologies. Krumsvik emphasizes this problem he says that teacher education students need to be digitally competent when they step into their role as teacher. They must understand the affordances technologies represent instead of only seeing the limitations or issues that may rise from implementing ICT in their teaching

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[2] "ICT in school"

(Krumsvik 538). Krumsvik refers to various studies on ICT where results show deficient digital competence among teachers. In one of the studies the results "showed that the majority of teachers' use of technology goes on behind the scenes, in lesson preparation, grading, and professional email use rather than instructional use or teacher-directed student use" (Quoted in Krumsvik 539). Krumsvik conducted his own study on ICT in Norwegian schools, and the study found that 38 % of the teachers who participated claimed that their digital competence are lacking, which is what caused limitations in their use of ICT (Krumsvik 539).

Ola Erstad, Head of Department of Education at UiO, discusses the digital lives of young people today and the challenges that occur between media use and educational use of such technologies. A study from 2009 showed that young people between the age of 16 and 24 spent an average of more than nine hours on media (TV, computers, cellphones, etc.) every day (Erstad 26). In other words, they spend nearly half a day on different technologies whether it is by navigating the Internet, sending text messages to friends, or watching their favorite shows on TV. One argument that Krumsvik and Erstad have in common is the misconception that because of young people's knowledge of technology (as in how to use it) we tend to believe they are digitally competent. Erstad says "it is also important not to get caught up in too general conceptions (Buckingham & Willett, 2006). There is a great variation in how digitally competent and technologically interested young people are" (Erstad 27). Knowing how to use a technological instrument does not necessarily correspond to knowing how to use those technologies in different contexts. One must not assume that because a student in upper-secondary school will (most likely) have plenty of experience with technologies, he or she will know how to perform in a technology-rich educational or work related setting. Furthermore, it is easy to conclude that because teenagers and young adults in contemporary society have grown up with a wide range of technologies they must be highly knowledgeable on the matter, as well as fascinated by all the technologies we have today. Some *screenagers* may not relate to this as their experience in technological field may be varied. One might be capable with smartphones yet lacking in computer skills. I grew up with computers and cellphones, and I know how to navigate the Internet, and speaking as a *screenager* and former student myself even I have to admit I do not know of every function on a computer. I do not know how to fully operate a SMART Board, but I know the basics. Some teenagers might be more efficient with a computer than other because it is in their field of interest, while others have only scratched the surface of computer technology. Some people are immersed in the technological world and follow its expansion, which implies that they will be more experienced in the field. Therefore we cannot assume that contemporary youth

are equally skilled in terms of technology, and that they are equipped to face the challenges in technology-rich classrooms. Skills do not equal competency.

Furthermore, Erstad discusses the *learning lives approach*, which focuses on young people's path of learning that is not bound to one specific setting, but rather moves between different settings (Erstad 28). Erstad emphasizes "the need to study learning among young people within and across different learning sites, exploring the positioning and re-positioning of learner identity across these different 'locations', and on different levels from the digital bedroom to larger spaces such as the family and institutional experiences" (Erstad 28-29). This insinuates that learning does not only happen at school, but potentially in all areas of society.

A study conducted in the West and East end of Oslo about the activity patterns of 14-year-olds supports Erstad's view of *learning lives*. A group of 28 students were tasked with writing a diary of their activities during the course of a week with emphasis on their digital lives (Erstad 36). Erstad uses one of the girls' diary as an example to show how learning may be independent to setting. The entry in her diary shows a shift from activities in a clinic, to conducting research in a computer lab, as well as mentioning pictures for a possible future blog post. In relation to this example Erstad says: "The places and spaces she relates to during school hours are not static and limited to the classroom" (Erstad 37). Her activities reveal a switch between formal and informal learning activities. Research about the Cuba-crisis (Erstad 37) is coherent with the formal aspect of learning and activities, while taking pictures for her personal blog reveals a focus on her personal interests that takes place outside school hours. Further diary entries reveal a great focus on her academic career and how doing well in school is important to her. The entries also reveal that her digital experiences at home are dominating her private life (Erstad 38-39). Erstad points out that this girl's expertise in the field of photo editing and web design is something she has cultivated at home, not something "she reports on using as a part of school activities or that the teacher in any way is conscious about as a resource for learning" (Erstad 39). This is not to say that teachers should depend on the students' expertise with technology when implementing ICT in teaching, but it is an interesting display of how students learn, whether it is knowledge with an academic purpose or if the purpose is for private use. It proves that the learning environment is not limited to school; it transcends the boundaries of location.

In addition to learning lives of young people, Ola Erstad also discusses terms such as competence, skills qualifications, stating that these terms are often abstract and rather difficult to define (Erstad 121). Erstad supports OECD's understanding of competence as something

more complex than skill and knowledge. By his own definition competence involves both skill and Bildung, and he points back to the Latin meaning of the word competence, which is twofold. One part refers to the ability to analyze and receive, listen, read and understand something, while the other part of *competence* refers to the ability to express oneself, to speak and write (Erstad 121). Both of these aspects must be combined in order to understand what competence means, and how to assess students' competence in a given subject.

2.4 The English subject curriculum and ICT

The purpose of this thesis is to explore how the use of ICT in the English subject in a way that provides the students with the tools necessary to meet the digital expectations of society. In relation to the basic skills, having digital skills in English "means being able to use a varied selection of digital tools, media and resources to assist in language learning, to communicate in English and to acquire relevant knowledge in the subject of English." (LK06/13, the English subject curriculum). The subject curriculum explicitly mentions digital tools/media/resources on two occasions. The first competence aim directly linked to digital skills is "evaluate different digital resources and other aids critically and independently, and use them in own language learning", while the second competence aim refers to "produce different kinds of texts suited to formal digital requirements for different digital media" (LK06/13, the English subject curriculum). That is not to say that the development of digital skills is limited to those two competence aims.

The subject curriculum consists of four parts, which include language learning, oral communication, written communication, and culture, society, and literature. The implementation of ICT is supposed to be an integrated part of the English subject, and seeing as English is the most spoken language on the Internet (internetworldstats.com) due to historical and cultural changes that turned English into a global language (Crystal 5). Students need to have the necessary digital knowledge and skills in order to participate in and contribute to society, both in terms of the physical society and the virtual online society that continue to grow in line with the new technological developments.

In order to do so, one must take a closer look at how ICT is implemented in the English subject, and the potential benefits of combining out-of-school practices with ICT and formal education. Out-of-school practices refer to all ICT related activities that students interact with outside school, which will also be referred to as informal learning and use of ICT in this thesis. Formal education, on the other hand, refers to conservative ways of

teaching and learning, e.g. presenting information on the blackboard or doing textbook tasks that usually accompany the texts in the books.

2.5 Digital skills, digital competence and digital literacy

The Norwegian curriculum for Knowledge Promotion (Lk06/13) introduced with its launch five basic skills where one of the covered digital skills. Norwegian schools experienced an increase in technological developments, and with the new national curriculum, the Education Act stated that the county authorities in Norway are required to ensure that all students have the necessary equipment to fulfill the requirements stated in the national curriculum.

> "Educational training in public upper secondary schools or training companies is free. The county authority is responsible for keeping students equipped with the appropriate printed and digitized resources and digital tools. The students are not to be charged for any part of the expenses. (Opplæringslova §3-1, my translation)

According to the quote above, which is extracted from the Norwegian Education Act, the schools are required to make all equipment, printed and digital, accessible to students. However, this does not mean students have a right to have their own computer in school. The county authorities regulate whether or not personal computers will be provided for the students in upper secondary school. Nonetheless, the students will be given access to computers according to the law, as they are necessary in order to accomplish what is stated in the description of the fifth basic skill:

> *Digital skills* in English means being able to use a varied selection of digital tools, media and resources to assist in language learning, to communicate in English and to acquire relevant knowledge in the subject of English. The use of digital resources provides opportunities to experience English texts in authentic situations, meaning natural and unadapted situations. The development of digital skills involves gathering and processing information to create different kinds of text…Digital skills involve developing knowledge about copyright and protection of personal privacy through verifiable references to sources. (LK06/13, basic skills for English subject curriculum)

The quote above describes the digital skills the students are expected to learn and develop during their education. Digital skills need to be cultivated within the classroom by using a

selection of digital tools for specifies purposes, such as writing essays, conducting research on different topics, presentations, etc. Furthermore, the quote describes a specific setting in which the digital skills are defined. It is not digital skills in general, but rather digital skills related to the subject of English. In other words, while a student may have some level of skill with digital tools that he perhaps has acquired at home, it is often quite different from the skills required for schoolwork.

The Norwegian national curriculum for Knowledge Promotion describes in detail the five basic skills the students are supposed to learn at school. 'Digital skills' is one of them, and what digital skills in the English subject entail has been described in the earlier quote. The Knowledge Promotion does not, however, mention terms such as digital competence or digital literacy; terms that have often been analyzed and discussed by researchers within the field of education. The reason for this has to do with how the Norwegian government decided what aspects of digital technologies should be prioritized in education. The Ministry argued, "digital competence, as a part of basic competence, must be specified and integrated into the subject curricula" (Erstad 23, my translation). However, the term digital competence was later replaced by digital skills, as the notion of (basic) competence was considered difficult to specify due to the aspect of Bildung, which was associated with 'competence' (Erstad 23). Instead, the government claimed the term 'digital skills' was best suited to describe and "identify fundamental skills that function as basic tools for learning and development" (Erstad 24).

The introductory chapter to this thesis argued that competency is more than skill and knowledge (OECD), meaning that digital competence does not equal digital skills. Those two terms are related, but not the same. Rune Krumsvik defines competence as the "ability to act" (Krumsvik 40). Digital competence implies more than knowing how to use different digital tools; it signifies an ability to apply the necessary digital tools and understanding how they can be used for different purposes. Digital competence is a combination of knowing how various tools function, having the ability to utilize digital tools, and knowing how to apply those tools appropriately according to the situation, whether it is at school, at home, or at work. The question is how digital literacy is related to this?

Professor David Buckingham at the University of London discusses digital literacy and argues "for a particular definition of «digital literacy» that goes well beyond some of the approaches that are currently adopted in the field of information technology in education" (Buckingham 263). Buckingham acknowledges the fact that students interact with various

media outside school and that it is necessary for educators to consider this when working with technology:

> The Internet, computer games, digital video, mobile phones and other contemporary technologies provide new ways of mediating and representing the world, and of communicating. Outside school, children are engaging with these media, not as technologies but as *cultural forms*. If educators wish to use these media in schools, they cannot afford to neglect these experiences: on the contrary, they need to provide students with means of understanding them. This is the function of what I am calling digital literacy. (Buckingham 264)

Digital literacy means to be able to use as well as understand how the various tools and media work, and how these tools can be applied in various settings. The previous quote shows that Buckingham's definition of digital literacy is noticeably similar to how I described digital competence. Rune Krumsvik argues that the term digital competence holds a broader meaning than digital literacy:

> "While digital literacy seems to be the concept which is most commonly used internationally, digital competence is the most commonly used concept in the Scandinavian countries in educational contexts. The main reason for this is that competence as a concept has a broader, more holistic meaning in Scandinavian English than in traditional English." (Krumsvik 44)

In other words, the two terms are not viewed as mutually exclusive, but digital competence seems to hold a more complex meaning than digital literacy. For the sake of simplicity I will from now on refer to the aforementioned concept as digital competence. The word competence is the dominating term in Norwegian education (Krumsvik 39), and because this thesis discusses ICT in Norwegian upper secondary schools, it is more relevant to choose digital competence instead of digital literacy, which is supported by Krumsvik's distinction between the two concepts.

2.6 The role of ICT in Norwegian schools

Rune Krumsvik argues that while the debates about technology in education has been going on for nearly three decades, the debates and political documents have almost always

legitimized the use of technology in education as practical teaching tools aiming to prepare the students to join the "information society" (Krumsvik 41). However, in the beginning of the 2000's ICT became a more vital part of education, not just in primary and secondary school but also in teacher education (Krumsvik 41), suggesting a change in how politicians and educators viewed ICT in educational settings. New technologies made rooms for new ways of teaching and learning, which in turn opened up for the learner to take a more active part in the learning process.

Ola Erstad argues that the changes in society call for changes in school as well. Agriculture and industry is no longer the center of society, but have been replaced by technology. With new technologies we also found new ways to communicate and spread information, which turned society into what Erstad calls "a modern media society" (Erstad 66). The Internet, for instance, has given us access to information that was not as easily accessible before the emergence of the information era. Erstad further argues that the result of such changes in society affect the purpose of our educational system in the way that the focus on fact-based knowledge shifts towards more complex knowledge that will be useful to our society (Erstad 66-67). With an increasing amount of technological tools, we realize the opportunities to discover new ways to acquire and present information. These opportunities also require a change in how the teachers teach, and a change in the teacher education as a whole. Teachers need to have the competence to use different technologies in lessons, as well as being able to teach the students how they should apply these technologies in the learning process.

Debates related to ICT in education tend to simplify the role of technology as instruments to distribute information. This argument is further supported in Tim Rudd's article "Rethinking the Principles of Personalisation and Role of Digital Technologies". He argues that while digital tools offer opportunities to give the learner an active role in how he or she learns there is still a lack of change in how ICT is perceived by educators. Rudd claims that the technology accessible in school is often used "largely as a delivery tool for existing content", although it is sometimes done in ways that encourages participation from the students, and those tools are rarely applied "as a mechanism for empowering learners to take greater control over their learning or as a mechanism through which to have their voices heard." (Rudd 84) It should be noted that Rudd describes the educational situation in the UK, but the argument is relevant for the Norwegian educational system too. Rudd suggests that the schools should allow the learners to use the informal digital knowledge and skills in the learning process in order to give the students a voice, and he backs up this argument by

referring to the UN Convention of the Rights of the Child, article 13.1, which supports children's "right to freedom of expression". Freedom of expression includes how the children choose to find and learn information, as well as how to present it (Rudd 84).

2.7 Teachers, technology, and the English subject curriculum
Rudd's argument is supported by the International Computer and Information Literacy Study (ICILS) with the conclusion that "the teachers appear to have been using ICT most frequently for relatively simple tasks rather than for more complex tasks" (Fraillon et al. 227, as quoted in Erstad et al. 643). The study found that the teachers who used ICT on a regular basis did so because of factors that promoted implementation of ICT in teaching. Those factors included the teachers' confidence with reference to using technology. The teachers who were confident in their capabilities with regard to ICT used technologies more frequently than others. Other factors were if the environment encouraged collaboration and preparation ahead of lessons, as well as accessibility to technology. Despite the frequent implementation of ICT, the teachers only used computers for the most basic purposes such as producing texts, presenting information through different resources such as encyclopedias and other websites, or giving instructions/presenting information with computer software (Erstad et al. 643). Erstad, Eickelmann and Eichhorn argue that the results from the ICILS support previous research, and they claim that in addition to having trouble with using technology to its full potential, teachers tend to favor practices they are familiar with rather than experimenting with technology (Erstad et al. 643-644). One of the reasons for this, they argue, is that "teachers' beliefs and attitudes towards ICT and its perceived value for teaching and learning play a substantial role." (Erstad et al. 645) If one does not consider technology to be a valuable asset to the students, other than to produce texts as required by the curriculum or to find and convey information, then it is less likely that one would take the time to experiment with technology and the possibilities for learning that technology offers.

In addition to this, research done by Schofield has found that "social organization of the classroom deeply affects how computers are used", meaning computers are not viewed simply as "technological objects" (de Lange and Lund 37). Computers are considered as social objects as well, although the frequency with which computers are used and for what purpose depends on the attitude and connection teachers, as well as students, have with computers. While it is useful to know what factors have an impact on how computers affect teaching and learning, it is insufficient to explain the difference between how computers are used at school and outside school, especially for teachers. Erstad mentions one study that

asked teachers and students what they used computers for. The study distinguished between engagement at school and outside of it, and the study revealed how the teachers were more limited in the way they used computer technology at home compared to the students (Erstad 46). While students used computers for text production, surfing the Internet, playing games, and chatting on social media, the teacher spent the majority of the time on computers for research, e-mails, text production, or for entertainment (Erstad 46). Erstad claims the cause of the teachers' use of computers in such ways is that "teachers use digital media mainly as an extension of technologies they already know, such as the typewriter, calculator, writing letters, and searching for information. Young people use the new technologies to seek out new possibilities of use." (Erstad 46) Teachers often stick to methods and tools they are already familiar with, but that is not to say that teachers do not have an open mind in terms of new technologies. Teachers' attitude towards technology, positive and negative, affects the way they engage with technology in their teaching.

Hatlevik and Arnseth, among others, argue that in order to encourage positive attitudes towards ICT among teachers there has to be clear leadership in school, and that good leadership will help finding innovative ways to implement ICT in education (Hatlevik and Arnseth 56). Furthermore, they argue "clear leadership can promote the development of digitally literate students by providing a good working environment", and that leadership in this case means "to help teachers engage in professional development related to the use of ICT in teaching." (Hatlevik and Arnseth 56) In other words, a clear school leadership is not only for the benefit of the students, but for the benefit of the teachers as well. If we want teachers to have positive attitudes towards ICT then we need to ensure the teachers have the means necessary to develop their digital competence. This can be achieved through budgets and by emphasizing ICT as a priority in school, yet Norwegian school leaders seem to not make these priorities (Hatlevik and Arnseth 57).

The notion of perceived usefulness of ICT refers to an approach in which one seeks to identify a person's attitude towards ICT, which in this case is the teachers' attitude towards ICT. It endeavors to find out whether or not teachers feel satisfied with the technologies they implement in class. Hatlevik and Arnseth have found that in several studies the results show how perceived usefulness has had a positive effect on teachers' attitudes in relation to ICT, as well as how they intend to keep implementing technology in lessons (Hatlevik and Arnseth 58). However, through a study called SITES Norwegian teachers have stated that they use ICT only moderately in comparison to teachers from other countries, suggesting that although Norway is one of the leading countries in terms of accessibility to technology, both in school

and society as a whole (Krumsvik 241), there is still room for improvement in terms of how ICT can be used during lessons, especially with regard to the English subject.

The third section of this chapter provided the definition of digital skills in the English subject, which is a requirement for all students of EFL in Norway and is a mandatory part of teaching in the English subject. Teaching and learning English in upper secondary school demands the teacher and students to explore cultures and language variations in English speaking countries across the globe. Textbooks have been the dominating source of information largely due to the fact that they "are often evaluated and approved by professionals on the subject they concern, written with educational goals according to the national curriculum, and have clear expectations of prior knowledge" (Blikstad-Balas and Hvistendahl 33). The Internet, for instance, challenges the position of textbooks as the dominating source of information. Although the Internet offer texts that "are typically not written to serve educational purposes" (Blikstad-Balas and Hvistendahl 33), they can prove useful in language acquisition. Wikis for instance can teach students to find, produce, present and even edit information (Lund and Hauge 267). Doing exercises such as this promotes the ability to "evaluate different sources … in an independent, critical and verifiable manner" as expressed in the subject curriculum for written English communication (LK06/13, the English subject curriculum), which is an important part of information acquisition. Furthermore, the English subject curriculum states that the students are required to learn how to "evaluate different digital resources … critically and independently, and use them in own language learning", which further legitimizes the application of wikis in language learning.

Andreas Lund describes a "language environment in transformation" through a sociocultural perspective, which "views learning as participating in social practices and discourses, mediated by cultural tools." (Lund 182) The transformation is particularly expressed in what Lund describes as "New Englishes" (Lund 183), which is a result of a cultural and geographical heterogeneity of the speakers of English that have emerged through history (Lund 183). Lund also maintains that though "there may still be a written standard of English serving global communication", one will find an increase of "variants of English that draw on diverse linguistic and (sub-)cultural features" (Lund 183. These variations appear in the network society as well with various acronyms and abbreviations of phrases, such as TTYL (Talk To You Later), brb (Be Right Back), or shortening of words (u=you, y=why, 2=to or too). This calls for changes in how teachers teach students about English language variation, which is a requirement for oral communication in the English subject: "The aims of the studies are to enable pupils to listen to and understand social and geographic variations of

English from authentic situations" (LK06/13, the English subject curriculum). English language variations can be taught with audio files that are normally found on the textbook's accompanying CD, or the teacher can use videos of native (and non-native) speakers of English on YouTube. Using documentaries or interviews that have not been constructed for the sole purpose of teaching students variations will provide the authentic situations the aforementioned competence aim mentions.

I argue that teaching EFL in upper secondary school in Norway does not have to completely revolutionize the teaching methods that already exist in the Norwegian school system, but teachers need to open up for some changes in the way they teach. The Internet will not disappear any time soon, and modern society requires more from the students than the most basic instructions with digital tools can teach them. My main argument is that teachers need to consider how students' learn with technology in an out-of-school context and how those experiences influence the students' attitudes towards and engagement with ICT in school. Even if students were to opt out on the English subject after vg1, it is necessary to provide them with the proverbial building blocks that will aid them in the transition to adult life, which can be achieved by combining current ICT practices with the students' personal experience with computer technology. The concept of multiliteracies reinforces the need for changes as it describes complexity of the multiple ways of communicating and changing media in modern day society. The term indicates a combination of different literacies, or competences, one needs in order to access and participate in society (Skulstad 258). Aud Skulstad quotes Buckingham on his description of the need for multiple literacies on modern society:

> The increasing convergence of contemporary media means that we need to be addressing the skills and competencies – the multiple literacies – that are required by the whole range of contemporary forms of communications. Rather than simply adding literacy to the curriculum menu, or hiving off information and communication technology into a separate school subject, we need a much broader reconceptualization of what we mean by literacy in a world that is increasingly dominated by electronic media. (Buckingham 275, as quoted in Skulstad 258).

ICT is not taught in a separate school subject in Norway, but teachers of EFL do need to consider the implications of an increasingly technological society and how this will affect educational institutions as well as the political and economic situations. Doing textbook tasks

with Word or having an oral presentation about the history of Australia are not sufficient baggage for the students who will soon have to continue the technological progressions of society without the support of teachers. Communication in English on different platforms, such as debate forums or comment sections, can improve students' ability to communicate efficiently with other people regardless of where the communication happens, which is one of the aims of teaching EFL: "produce different kinds of texts to suited to formal digital requirements for different digital media" and "express oneself fluently an coherently in a detailed and precise manner suited to the purpose and situation" (LK06/13, the English subject curriculum). Being able to do so is important in modern day society in Norway where a large part of the communication in English happens over the Internet. Social media can be employed in communication activities, such as Twitter, or using Facebook to comment on newspaper articles. Communication does not have to be restricted to the English classroom.

  Ola Erstad also addresses the notion of literacies, and he argues "that literacies change over time due to socio-cultural processes." (Erstad 40) Erstad further emphasizes the increase of remixing in relation to digital technologies and the accessibility to those technologies in in- and out-of-school contexts (Erstad 44). About remixing, he says: "Digital tools create new possibilities for getting access to information, for producing, sharing and reusing." (Erstad 44) The main implication of remixing is, according to Erstad, that almost anyone can partake in the remixing activities previously mentioned. Remix is a cultural practice, which everyone is a part of, not just a few elite people or groups of people (Erstad 44). The next section will take a closer look at what is meant by out-of-school and in-school contexts, and how the notion of digital Bildung emerges as a relevant concept for this thesis.

2.8 Students in a digital age

Another aspect of how ICT is implemented in education is how and what students do with technology. Students in lower and upper secondary school are part of the generation who grew up with digital media as an integrated part of their childhood. To them, digital media and tools such as smartphones and Internet are not new inventions (Erstad 33). Ola Erstad presents the two terms "media native" and "media immigrant" (Erstad 34) with the first term referring to the digital media generation: the children who grew up in the era of online communication with the introduction of the World Wide Web to the public in 1991 (Liseter, Store Norske Leksikon). This generation is considered digital experts as they navigate the pool of digital media on a regular basis, and hence are often responsible for developing new practices with technology that will benefit society. The second term refers to people born and

raised before the rise of the information society. Erstad explains the concept as a situation where "adults are immigrants in the land of the young" (Erstad 34), meaning when adults interact with technology they enter the playing field where the younger generations are assumed to be the expert players, although this is not necessarily the case.

Erstad problematizes this view of the young generation's digital (or media) competence claiming that previous studies that support this view tend to "over-generalize how children and young people are competent media users" (Erstad 34). Even though children and young people today grew up with an array of digital tools it does not mean that all of those children are digitally competent. As I established earlier in this thesis, digital competence requires more than just the skills to work with different tools and navigate the vast global space that is the Internet. Skulstad warns that the concept of digital competence can be misinterpreted, saying that "adding digital competence to subject-related activities opens for certain misinterpretations: it may be interpreted as the ability to operate digital tools." (Skulstad 261) However, this misinterpretation can be avoided if "the concept of Bildung (is) introduced as a central component." (Skulstad 261) The English language does not have an accurate translation of the concepts, which is why the Germen word is used instead. In Norwegian the term translates to the concept of *dannelse*. Skulstad states that the notion of Bildung is not easily defined. However, one attempt at doing so is "the process and product of personal development guided by reason" (Gundem and Hopmann, as quoted in Skulstad 261).

Skulstad also discusses Klafki's classic idea of the concept, which focuses on three elements: Self-determination, co-determination, and solidarity. Still one should not ignore the knowledge of digital media that the younger generations possess and how that knowledge affects the way students learn through digital tools. The first term refers to the goal of "enabling every member of society "to make interpretations of an interpersonal, vocational, ethical or religious nature", which Skulstad argues is typically expressed through the development of intercultural competence (Skulstad 261). The second term, co-determination, refers to people's right and responsibility "to contribute to the cultural, economic, social and political development of the community". (Skulstad 61) It is the second aspect of Bildung that is particularly relevant to this thesis, seeing as my argument is that teaching with ICT in the English subject needs to be guided towards aims that will prove useful to the community in the future. The purpose of education in primary and secondary school in Norway is to develop democratic individuals with the ability to think independently, to cooperate with other, and contribute to the development of the community on a political and economic level. In order to achieve this in the English subject, one needs to consider how ICT affect the way one

understand Bildung. The third and last aspect of Bildung, namely solidarity, "refers to the recognition of equal rights and at the same time recognition of the need for active help for less privileged groups whose opportunities for self-determination and co-determination are limited or non-existent." (Skulstad 261)

Contemporary society transcends the physical boundaries in the way that business, economics, communication, politics, as well as education have been introduced to the virtual community that exists online. Political debates are no longer limited to the physical forums in which debates held before, e.g. government buildings or televised debates. Every individual with access to a computer and Internet has the opportunity to contribute to political discussions that occur in online forums and comment sections. Similarly business meetings and transactions do not have to happen in a conference room where physical attendance is required. Video conferences allow people to communicate and conduct business over great distances without being in the presence of everyone involved, which in turn gives each person the opportunity to decide where the video conference will be held.

As for the economic aspect of society, it is not difficult to imagine how ICT is applicable. A lot of transactions these days happen online. Banks have developed online services where people can administer their account, pay bills, transfer money, and so forth. Some have even developed apps that make it easier to transfer money to friends and family, such as the DNB owned app Vipps,[3] which only requires that both sender and recipient have registered their (Norwegian) phone number in the app. Shopping in contemporary society is not the same as it once was either. One can buy more or less everything online these days, from appliances to clothes, cosmetics, food, technology, etc. While it is assumed that most students have experience with purchasing goods online, and paying bills or transferring money on the Internet, it is not easy to determine how experienced they are when it comes to communicating fluently and appropriately in online public spaces (e.g. the comment section for an online newspaper), in accordance with the concept of digital Bildung

Erstad argues for an understanding of digital competence as a combination of formal and informal way of learning and using digital tools (Erstad 26). Formal learning refers to learning that happens in school or in an academic setting, while informal learning involves learning processes that happens outside school. The latter could for instance be a hobby the students cultivate at home, which is not necessarily related to school practice with technology. However, Erstad claims "digital literacy…bridges what young people know or do not know in

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[3] The app was released in 2015 (https://www.vipps.no).

using digital media, and how education could create the context that further develops these skills, knowledge, and attitudes." (Erstad 35) In other words, schools hold the potential to build on the groundwork that students have developed at home, further shaping and developing their knowledge and skills.

The main problem with introducing informal learning in a formal educational context is that formal education is rarely subject to major changes, if at all. Jenkins et al. describes the relationship between formal and informal learning quite perfectly:

> While formal education is often highly conservative, the informal learning surrounding popular culture is often experimental; while formal education is static, the informal learning surrounding popular culture is innovative. The structures which sustain informal learning are more provisional, those supporting formal education are more institutional. Informal learning communities can evolve to respond to short term needs and temporary interests, whereas the institutions supporting public education have remained little change despite decades of school reform. Informal learning communities are ad-hoc and localized; those impacting formal education are bureaucratic and increasingly national in scope. We can move in and out of informal learning communities if they fail to meet our needs; we enjoy no such mobility in our relations to formal education. (Jenkins et al. 26)

Informal learning offers opportunities that formal education cannot compete with in the twenty-first century. While the schools in Norway have been subject to many reforms the last few decades, the methods of teaching and learning have not changed much. What informal learning can do for students is to provide the knowledge required by society in that particular moment. As the quote said, one has the opportunity to move between formal learning communities as one pleases, which is not possible in a formal educational context. Jenkins et al. explain how the participatory culture we live in "offers many opportunities for kids to engage in civic debates, to participate in community life, to become political leaders – even if sometimes only through the <<second lives>> offered by massively multiplayer games or online fan communities." (Jenkins et al. 27) Knowing this, it would be interesting to examine how using such digital tools and webpages to promote learning can improve the students' digital skills.

Additionally, Jenkins et al. argues that

Participating in these affinity spaces also has economic implications. Our hypothesis is that young people who spend more time playing within these new media environments will feel greater comfort interacting with each other via electronic channels, will have greater fluidity in navigating information landscapes, will be better able to multitask and make rapid decisions about the quality of information they are receiving, and will be able to collaborate better with people from diverse cultural backgrounds. (Jenkins et al. 27)

The present study argues that all of the skills mentioned above are skills needed in order to participate in a globalized society. The quote further supports the need to explore the possibility that students' informal interactions with ICT can promote those skills. Andreas Lund argues that

"...people participate in and move between different contexts; the school as a cultural-historical institution, the circle of friends who share an interest, the emergent practices in online environments. Each context is constituted by a distinct discourse, but in everyday lives we cross the boundaries between them by making connections across contexts." (Lund 182).

Teachers of EFL need to acknowledge the fact that people are generally not bound by one context in which they participate and interact with one another. In accordance with Lund's viewpoint, I argue that in order to develop digital skills that will aid the younger generations in future education, employment, political debates of international interests, etc., the teachers need to consider the opportunities that resides in a learning environments that combine formal education and informal learning.

2.9 Online language learning in the English subject
One must be careful not to assume young people in contemporary society are able to engage with different digital tools in different context despite the amount of time they engage with different digital media. However, if one truly wants students to be a part of and continue the progression of modern society, one must accept the possibility of changing the way teachers teach and implement digital tools. Students are expected to be able to navigate a society that has become more globalized with the introduction of computers and the Internet. In order to do so, they need to know how, and for students in Norway, the English subject curriculum

presents plenty of opportunities for students to practice and learn how to behave in an online global society. The competence aims in the curriculum do not specify how students are supposed to learn, they only state what students need to learn. Thus the teacher has quite a few options in terms of how to teach English. Seeing as digital skills is a requirement in Norwegian schools it is natural, as well as mandatory, to apply digital media in the English subject.

The competence aims of the subject curriculum is structured in four main parts focusing on different aspects of learning English: language learning (methods and strategies to language acquisition), oral communication, written communication, and culture, society, and literature (LK06/13). As previously mentioned, digital tools are typically applied in text production and presentation of information. Some of the things students of EFL in upper secondary school are expected to learn are how to "produce different kinds of texts suited to formal digital requirements for different digital media", "evaluate different digital resources and other aids critically and independently, and use them in own language learning", as well as "discuss and elaborate on English language films and other forms of cultural expressions from different media" (LK06/13). These competence aims all relate to digital tools and media, but implementation of ICT in the English subject is not limited to those three aims. The entire subject curriculum offers opportunities for the teacher to experiment with computers as instruments for language learning. Learning English in upper secondary school in Norway means to be able to discuss language, culture, and news from the English-speaking world. The notion of digital skills in English is defined in a way that allows digital skills to be applied to every aspect of English language learning. The definition of digital skills in the English subject provided by the Directorate for Education and Training was introduced earlier in the chapter. However, I will stress yet again that digital skills in EFL means to be "able to use a varied selection of digital tools, media and resources to assist in language learning, to communicate in English and to acquire relevant knowledge in the subject of English." (LK06/13, basic skills for the English subject curriculum). In other words, the students are required to learn how to appropriately apply digital tools in English language learning. Digital tools are a requirement for oral and written communication, as well as assessing the validity and reliability of digital sources and being able to use digital media in and independent and critical way.

As for cultural and literary aspect of the English subject, To be able to discuss "the growth of English as a universal language" (LK06/13) it is necessary to look at how society has been transformed with the introduction of the Internet, and also what role the English

language holds on our society. English is a called a global language and is taught as a foreign language in more than 100 countries (Crystal 5). English is not a global language because it is spoken all across the globe, but because countries have decided to give English "a special place within their communities, even though they may have few (or no) mother-tongue speakers." (Crystal 4) David Crystal argues that there are two ways a language, such as English, can achieve the status as a global language. One way this can happen is to make the English an official language alongside the primary language of the country. The other way is to make English "a priority in a country's foreign-language teaching, even though (English) has no official status." (Crystal 4). The reason why English has become a global language has a lot to do with historical expansion of the British Empire, with the beginning of the colonization of America in the late 16th century (Crystal 31), which includes settlements in what is today recognized as USA, Canada, and the Caribbean. The language spread eastward toward South Asia with the establishment of the East India Company in 1600 (Crystal 47). English spread further south in the following centuries to Australia, New Zealand, as well as South Africa (Crystal 43-46).

English as a global language is also a result of cultural and political alliances, such as the League of Nations from the 1920s (Crystal 86-87). The necessity for a common language increased with the emerging international alliance, and with the rise of the United Nations in 1945 (Crystal 87), English was further manifested as a global language. When the Internet was made public in 1991 (Liseter, Store Norske Leksikon), it made it easier for people to communicate with one another regardless of location. Seeing as English has already been established as a global language, and the fact that the Internet was developed in the English-speaking world, it is perhaps only natural that the most commonly spoken language online is English (Internet World Stats). The result of a growing population of non-native speakers of English is that different variations emerges and challenges the formal requirements to the standardized variants of English. Lund explains how "out-of-school contexts are rich in non-standardized variants that may be regarded as innovative and functional outside the classroom but may be seen as challenging or even detrimental in a curricular context." (Lund 184). My argument, however, is that the curricular practices with ICT in the English subject should reflect what is relevant for all aspects of society, not just formal education, which means that social media, games, blogs, etc. should not be vetoed simply because they are usually considered difficult to apply in a way that will promote learning.

3. Research Methods and Materials

3.1 Introduction

This chapter presents the research methods used to collect data on the chosen topic of this thesis, as well as justifications of the choices I have made in relation to the research methods. In addition to this, the chapter will address the validity and reliability of my study, as well as ethical considerations. Furthermore, I would like to address the issues and challenges I faced when selecting methods and questions for the participants, as well as the challenges of finding participants. The chapter will also provide a description of the participants.

The purpose of this thesis is to examine to what extent the use of ICT in the English subject is connected to the students' private and informal use of computer technologies (see chapter 2, section 2.8), as well as the students' future in a technology rich society. The examination is carried out through a quantitative student questionnaire and qualitative interviews with teachers. In addition to this, observation as a research method has been applied with the intention of being a third perspective on the classroom situation where ICT is involved. A request for participants were sent to four different schools where only one school replied, which caused some concern as to whether or not I would be able to collect enough comparable data. This will be further discussed later in the chapter.

I will begin this chapter by briefly describing different types of methods and how they function in research. The reason for this is to give a theoretical background for my chosen research method, which is a mixed methods approach, and provide justification for that choice. Following the theoretical background on research methods, the chapter will present the student survey questions along with an explanation for why I chose those particular questions. Subsequently, I will present the interview guide used in the teacher interview, and a justification for the chosen questions. The process of the observations will be described, including the purpose and the duration of the observations. A separate section on validity and reliability follows the presentation of research methods, as well as a section on possible limitations in relation to the questions. Finally, the chapter addresses ethical considerations related to the research methods.

3.2 Research methods – different approaches to research

 Before conducting any kind of research the researcher must make plans for the research itself. One of the first things on the agenda is to specify what sort of information one wishes

to get out of the research. Constructing preliminary questions can help the researcher to narrow down the focal point of the research, which will make it easier to construct the questions for qualitative interviews and/or quantitative questionnaires. Furthermore, the researcher must bear in mind the "philosophical worldview assumptions" (Creswell 5) she carries with her in her research. Philosophical worldview refers to "the nature of research that a researcher holds" (Creswell 6) and implies that every researcher has certain beliefs that affect the way one approaches and experiences research. John W. Creswell offers four different philosophical worldviews and each worldview tends to favor one of the following methods of research, though they are not limited to just one: qualitative methods, quantitative methods, and mixed methods. The four worldviews Creswell offers are:

1. Postpositivism
2. Constructivism
3. Advocacy/Participatory
4. Pragmatism

The postpositivist worldview entails "a need to identify and assess the causes that influence the outcomes" (Creswell 7), meaning the outcome of an experiment is not sufficient to explain the experiment itself. There is a need to find out why the outcome turned out the way it did. A postpositivist also believes that there is no such thing as an absolute truth. Any evidence you may find in research is "imperfect and fallible". Creswell further explains how "the knowledge that develops through a postpositivist lens is based on careful observations and measurements of the objective reality that exists "out there" in the world, and in addition to this he explains how the "laws or theories that govern the world" need to be verified through tests with necessary revisions in order to understand and explain how the world is (Creswell 7). This worldview coincides with the quantitative method due to its numeric measurements in research.

Social constructivism on the other hand leans towards qualitative research method. A social constructivist holds "assumptions that individuals seek understanding of the world in which they live and work". (Creswell 8) The focus is on the individual's subjective meaning in relation to objects or things. Unlike the postpositivist worldview, the social constructivism does not seek to reduce meaning into smaller categories. It seeks out the complexity of the individual's understanding of things and/or situations and relies as much as possible on this in research. Therefore the questions are often quite open or general in order to give the participants room to establish meanings in relation to the subject of the research. The meanings are generally constructed because of conversation or discussions with other people

and other social and historical norms that affect them in their life. Thus the researchers focus on "the processes of interaction among individuals" and "the specific contexts in which people live and work"(Creswell 8). As Creswell explains, the purpose of the research is to discover or interpret how other people understand the world. Social constructivism searches for subjective views of specific things or situations rather than measurable answers as sought in postpositivism.

Another type of worldview is the advocacy/participatory approach, which is most often connected with qualitative research, although it may apply to quantitative research as well (Creswell 9). This worldview is quite different from social constructivism in the way that the researchers who operate within this school of thought believe that social constructivism is not enough to help marginalized individuals or people who are victims to social injustice. Thus the advocacy/participatory worldview holds assumptions that "research inquiry needs to be intertwined with politics and a political agenda". (Creswell 9) The research focuses on what Creswell describes as action agenda for reform, meaning research where the desired result is reforms that may help improve the lives of the participants, both personal life and work life (Creswell 9).

Last but not least we have the pragmatic worldview, which derives from action, consequences and situations. This approach is different from the previous three approaches, as the pragmatic approach does not favor one specific method of research (Creswell 10). This approach focuses on problems and the solution to those problems, and in order to understand the problem the researchers face they will employ all research methods accessible to them. In other words, a research project conducted from a pragmatic point of view will employ both qualitative and quantitative method to collect the necessary data. As Creswell puts it: "Individual researchers have a freedom of choice. In this way, researchers are free to choose the methods, techniques, and procedures of research that best meet their needs and purposes" (Creswell 11). It is important to note that the pragmatist researcher must establish a reason for using mixed methods in their research.

As for my study, the relevant worldview is pragmatism. The reason for this that I want to examine to what extent ICT implementation in the English subject provides students with the digital skills and knowledge that are necessary in order to engage with modern day society. I want to explore how English language learning can incorporate the students' informal non-academic utilization of ICT with the formal teaching that happens in school in a manner that does not change the school's position as an educational institution. The introduction of the students' lifeworld in language learning could give the students the

opportunity to be more active and autonomous in the learning process where the teacher serves as a guiding point or monitor. When I had decided on a topic and what kind of questions I wanted to ask, I realized that one research method would not be sufficient to give me the answers I needed. I decided to use both quantitative and qualitative methods of research in order to gather all the data I felt was necessary to answer my thesis question/statement. As previously mentioned, the ability to utilize all research methods accessible is what characterizes the pragmatic worldview, and therefore I argue for a pragmatic approach in my research. More on the how and why I did this will be addressed in the upcoming sections of this chapter, but first I would like to take a closer look at the three types of research methods I mentioned earlier.

3.3 Qualitative, quantitative, and mixed methods strategies

After the researcher has chosen a method of research, he/she must now decide on which type of study within the three categories of research methods is appropriate for the project. Creswell call it "strategies of inquiry" and describes them as "qualitative, quantitative, and mixed methods designs or models that provide specific direction for procedures in a research design." (Creswell 11) If we take a look at the strategies listed for the quantitative approach, we find that Creswell describes two types of research, namely surveys and experiments. About the survey research Creswell says,

> (It) provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. It includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent of generalizing from a sample to a population (Babbie 1990, quoted in Creswell 12).

The experimental research on the other hand, is explained as a strategy that "seeks to determine if a specific treatment influences an outcome" (Creswell 12). This kind of research is done by separating the participants into two groups where one of the groups receives the treatment, while the second group serves as a control group and will not receive the treatment. Afterwards the researchers will analyze the result to see whether or not the treatment had any affect upon the participants (Creswell 12).

Qualitative research has an extensive list of strategies to choose from, and Creswell provides us with a list of five different strategies within qualitative research. These are

ethnography, grounded theory, case studies, phenomenological research, and narrative research (Creswell 13). The qualitative research approach closest to my own research is ethnography. Ethnography as a qualitative research strategy involves studying a specific cultural group in the natural setting of said group (Creswell 13). Although it is stated that this strategy collects data, which is typically observational and interview data, happens "over a prolonged period of time" (Creswell 13), I argue for this strategy's relevance to my study because it focuses on two specific cultural groups, students and teachers, where both interviews and observation (and survey) have been used as data collecting method. While my study had a limited timespan due to unforeseen complications, the observations could have continued over an extended period of time, which would have provided more comparable data for the discussion in chapter 4.

Lastly, I will describe in short the strategies for mixed method research. Creswell presents us with three types of strategies: sequential mixed methods, concurrent mixed methods, and transformative mixed method. The first strategy involves the researcher's need to elaborate on the results of one method by employing another method in her research. The second strategy, the concurrent mixed methods, involves a merging of quantitative and qualitative method to provide a greater picture of the research problem during the analysis. Both methods are employed at the same time, and the results are analyzed as a whole instead of separately (Creswell 14-15). The third and last strategy refers to procedures "in which the researcher uses a theoretical lens … as an overarching perspective within a design that contains both quantitative and qualitative data". The lens functions as the framework for collecting data and the topics, as well as the outcome of the research. With this type of strategy, the researcher can collect data either by sequential or concurrent approach (Creswell 15). I argue that my approach to research belongs under the category of mixed methods approach due to the fact that I have employed both quantitative and qualitative methods. As shown above there are three kinds of strategies associated with the mixed methods approach, and the one strategy that applies to my research is the concurrent strategy. The term can be narrowed down further to a term called "concurrent triangulation strategy", which is, as Creswell states, the most prevalent strategy among the mixed methods strategies. What the term means is that the quantitative and qualitative data are collected simultaneously. The researcher will then compare the data from both the qualitative and quantitative research to see if there is correspondence between the two databases that will either confirm or disprove the hypothesis or overall theory (Creswell 213).

3.4 Why mixed methods approach?

Deciding on a topic for the research is the first step one has to make; the second is figuring out how the get the answers you want. In the first part of this chapter, I described the four different worldviews and their typical methods of research, followed by the strategies for each of the research methods. The following passages will discuss the choices I made with regards to research methods. I started this project with a theory that Norwegian schools do not employ ICT to its full potential when it comes to teaching EFL, even though the competence aims in the English subject curriculum give a great deal of leeway for the teachers to prepare and apply various digital tools during lessons. *Principles and Methods of Social Research* written by W. D. Crano, M. B. Brewer, and A. Lac describes theory as a concept, which "is formulated based on observations, and consists of a series of tentative premises about ideas and concepts that lay the foundations for empirical research about a phenomenon. It serves as an overarching foundation and worldview for explaining a process" (Crano et al. 5). My theory was constructed during the sixteen weeks long practice at lower and upper secondary school. I started reflecting on how there was not always a definite motivation behind the teachers' utilization of ICT. Most often ICT seemed to be just the tool to execute the tasks or presentations the teacher had prepared. Information and communication technologies are, of course, intended to function as tools to aid one's work whatever that may be.

The reason for my fascination with the subject, however, had less to do with ICT as a tool for learning and more to do with how the knowledge acquired by using ICT could prove to be useful for students after they graduate upper secondary school. Are digital tools merely objects one uses to complete tasks and pass tests, or is it possible to employ digital tools in a manner that will provide the students with skills that are useful to them in the future? This is the question I wanted to answer. I considered my options in terms of collecting data and came to the conclusion that it would be most interesting for my research project if I could collect data from different viewpoints, hence my choosing the mixed methods approach.

In order for me to answer my aforementioned question I would have to examine how both students and teachers use ICT, both in private and at school. I did this by constructing a survey for the students to answer. There a few components I had to consider before the data could be collected. First, as a researcher, one must decide exactly what one wants to achieve with the survey. Next step is to decide who will participate in the survey. I briefly explained what I was going to examine in my research and that the target group for the survey would be students. I did not, however, specify the preferred age or if the students were a part of the

general studies or the vocational education programme. Section 3.5 will describe the participants and how and why they were chosen.

Crano et al. describe a selection of survey types, but the one data collecting method most useful in this case is what they call "convenience sampling" (Crano et al. 234). The sample group of people, or the people chosen to participate in the survey, is quite simply people who are willing to be a part of the survey. They are not representative for a group as a whole, e.g. a meat factory worker is not representative for all factory workers. Despite this the researcher will be able to draw information from the data collected (Crano et al. 234). The same reasoning applies to the participants of my student survey; they are not representative for all students in upper secondary school, but they will provide me with an idea of how ICT is applied in school.

Before I present the survey questionnaire, I will expand on the second research method I used in this study. The next group of participants I needed for my research would be subject to qualitative interviews. As I mentioned earlier, I wanted to look at the subject of useful ICT from different perspectives. The student surveys was one part of the research, the interviews the second. I wished to interview teachers to find out more about their attitudes towards employment of ICT in the English subject. From personal experience as a student in upper secondary school, I encountered teachers with different attitudes towards using ICT in lessons. Some teachers used computers and other technologies regularly during lessons, and they also managed to make those lessons variable by using the digital tools interchangeably. Other teachers did not make use of the digital tools available to us during lessons except to give lectures in a PowerPoint presentation, marking absence, posting information and assignments on Classfronter, which is an online school portal similar to Its Learning. In order to not simply make assumptions about teachers' digital skills based on my experience as a student, I needed to explore how and to what degree teachers in upper secondary school today use ICT in their teaching. In my interview guide, which will be later, I focused on how and for what purposes the teachers' used computer technology in school. The reason why is quite simple; the objective of my thesis required me to examine how ICT is implemented in the English subject, and how ICT in language learning can ease the transition into our technological society, where a large part of business and communicating are done in English. Therefore I had no need to know what the teachers spent their free time on the computers for. It is how they used digital tools in the classroom that was most relevant for the study.

Lastly, I opted for a third point of view for the research. When I made requests for participants to partake in the research I also asked to be allowed to observe the teacher and

class during lessons. The idea was that my observations held the possibility of providing information that I did not get from the interview and/or the survey. The observation gave me an opportunity to examine how digital tools were applied in class versus how the teachers and their students believed they used digital tools. Furthermore, the observation could give insight in how to improve the implementation of ICT during lessons. The main motivation for choosing observation as a third research method was as Crano, Brewer, and Lac maintain, "the primary goal of almost all observational research is to study natural behavior" (Crano et al. 251). I wanted the students and the teachers to show me what they normally did during lessons, as I realized that the results I had gotten from the interviews and survey questionnaires could be a reflection of what the participants' considered ideal application of digital tools. The observation would either confirm what the students and teachers answered in the interviews or it would dispute the answers.

3.5 The participants

As my own education is mainly directed towards teaching in upper secondary school I decided that the survey would have to be answered by students on upper secondary level. I justified this choice by the fact that every student in upper secondary school in the area, in which I did my research, had access to a personal computer. Students in lower secondary school have access to computers as well but they most often have to go to designated computer rooms, and in my experience from practice in lower secondary school, the computers are only used for longer text productions and projects. Therefore, I chose to exclude students in lower secondary school and focused on students aged 16-19. Despite having narrowed down the pool of possible participants I still had to narrow it further. First of all I had to make sure that my participants all had English in their schedule. The easiest target group would be the first year students due to the fact that English is a mandatory subject the first year of upper secondary school. If I wished to invite students in year twelve or thirteen I would have to find students who chose English for specialization. It turned out that finding students to participate in the survey was not altogether easy.

In the end I ended up with three classes from the first year on upper secondary level. This happened due to problems I had with getting in contact with schools. I sent a number of emails to four schools in the district but only one answered my request. This led to an arrangement where I got to do the survey with three different classes seeing as their teachers were the ones to answer my emails. Regardless of the lack of response from other schools I managed to collect answers from sixty-one participants, of which about one fourth of the

participants belonged to the vocational programme *Health, childhood and youth development*. I will, however, state that I will not make a distinction between general studies and vocational programme students in the analysis and discussion of the data. That would take up too much space in this paper and should rather be the subject for a separate research paper. It would also require more students from vocational programmes. The group of sixty-one participants consisted of forty-three girls and nineteen boys. Despite gender being included in the survey, I have decided not to include it in the analysis and discussion in chapter 4. The reason for this is that the students' gender is not relevant for my study, a fact I did not realize until after I had collected the data from the survey.

The participants for the interviews were chosen based on the same reasoning as for the student survey. The teachers who answered were the ones who were chosen to partake in the interview. One of the teachers who responded taught one of the general studies English classes as well as the vocational studies English class. After interviewing the two teachers I realized that it would be beneficial for me, and more importantly the research, if I could find at least one more teacher to interview. The third and last teacher I interviewed was an upper secondary teacher from a different school than the school where I did most of my research. While there are more than likely a difference in how each school in the district focus on ICT, I chose to interpret the results from the interview as the teachers' own opinions on the subject rather than a possible reflection of how the school operated with digital tools. I did not have any predetermined preferences as to the approximate age range for the interviewees, although I recognized the possible benefits of having participants of different ages considering the interview sought to understand each participant's opinion on ICT. However, as the participants were not chosen based on their age, but rather who responded to my request, I will not discuss age as a determining factor in the next chapter.

3.6 The survey questionnaire – ICT at home and school

In the following passage I will present the questions I asked in the student survey. It took some time to design the questionnaire largely due to the fact that when I started on the questionnaire, I did not know the age of the participants. Therefore I had to spend some time constructing questions I believed any youth aged between sixteen and nineteen could answer without problem. The questions I created for the survey questionnaire offers multiple-choice answer to ensure that the participants would be able to give answers that were relevant to the questions asked. The risk of giving open-ended questions to a group of 16 year olds is that they might find it too difficult to answer or that the answers are short, single-worded, or, in

the worst case scenario, irrelevant to what I ask of them. My supervisor and I therefore agreed that a multiple-choice questionnaire was the appropriate style to present the participants with. Another motivation for using multiple-choice is that it makes it easier for the researcher to organize measurable answers in a way that makes it easy to analyze the results, which is what I sought with this survey.

In the next few pages I will present each question and give my justifications for the choices I made when I created the questionnaire. The questionnaire consists of a total of 10 questions. The first question I asked looks like this: "How much time do you spend on computers on average per weekday (Monday through Friday) at home? Computers in this case may refer to pc, tablets/iPad, using smartphones for surfing the web/Facebook chat." (Appendix 1) The alternatives the students were presented with are as follows:

- 0-1 hour

- 1-3 hours

- 3-6 hours

- 6-9 hours

- 9-14 hours

I chose this question because the focal point of the survey was to get an overview of what the students used computers (and other similar technologies) for, both in private and at school. I specified the amount of time spent on computer at home because the participants may or may not distribute time spent on computers differently at home than they do at school. I asked them to calculate the average amount of time spent each weekday because it is more likely they find it easier to calculate the time based on one day instead of five. Furthermore, I did not include the weekend here, as there is the possibility that the participant spend more than the allotted time alternatives on computers during the weekend. In addition to this I chose to specify how to interpret the term "computer", because laptops and stationary computers are no longer the only devices that provide people with Internet access, social media, and similar functions that once were associated with laptops and stationary computers.

The second question from the questionnaire is "How many of these hours are spent on schoolwork? Schoolwork includes homework, studying for tests, etc. (On your computer. If you do not use computers for schoolwork at home, do NOT answer)." (Appendix 1) I did not give the participants multiple-choice answers to this question, as I believed the participants would be able to calculate circa the amount of time spent on schoolwork based on what they answered in previous question. I was present in the classroom when the participants answered

the questionnaire in case the questions needed to be clarified, which is also part of the reason for the lack of alternatives for the participants to choose from. The justification for making a distinction between schoolwork and other uses of computers is that I wanted to get a general idea of how much time the participants spent on computer functions and features unrelated to school. In addition to this I wanted to examine how skilled the participants were with using digital tools for educational purposes instead of just for recreation. The amount of time spent on formal academic use of digital tools could help me better understand how much practice the participant had with formal implementation of ICT.

In question number three the time distribution shifts towards the weekend. The question is as follows: "How much time do you spend on average during the weekend? Computers may refer to pc, tablets/iPad, smartphones for surfing the web/Facebook chat." (Appendix 1) The alternatives I gave for this question are nearly the same as for the first question. The participants could choose from the following list:

- 0-1 hour
- 1-3 hours
- 3-6 hours
- 6-9 hours
- More than 9 hours

I made a slight adjustment to the last option for two reasons. First of all, unlike with question 1, this questions asks the participants to count the weekend as a unit instead of separate days, which in turn means that there are more hours to calculate the average from. Secondly, assuming that some people spend little to no time on computers while other might spend most of their free time on social media, playing computer games, reading blogs, newspapers, etc. As a result, I put less restriction on the choices for question 3.

Question 4 is nearly identical to question 2, except this time the participants are expected to state the amount of time spent on schoolwork during the weekend: "How many of these hours are spent on schoolwork? Schoolwork includes homework, studying for tests, etc." (Appendix 1) Just as with question 2 there are no alternatives for the participants to choose from. The reasoning is the same as for question 2. I was confident the participants would be able to calculate this on their own based on answers given in question 3. The justification as to why I chose to include this question in the survey questionnaire is also more or less the same as with question 2. I wanted a distinction between formal and informal use of computer technology, even on the weekends (see definition of 'formal' and 'informal' in

chapter 2). While it may not be common to give students homework over the weekend, I opened up for the possibility that there might be students who use the weekend to study for upcoming tests, deadlines for essays, group projects, or other similar school related work.

Moving on to the next question we find that the focal point has moved towards computer habits in school. "To what degree do you use computers during English lectures?" (Appendix 1) Question 5 has alternatives for the participants to choose from and these are:

- Every English lecture
- During almost every English lecture
- During a few English lectures
- Never

The answers are slightly less specific than in previous question in the sense that I have not asked them for a timeframe measured in hours or minutes in every single class but rather how often the computer is used based on the amount of lessons they have throughout the school year. The first alternative "every English lecture" is straightforward and relatively easy to understand. It means that the computer/smartphone/tablet/iPad/etc. is actively implemented in every lesson regardless of how long the computer technology is used. The participants choose the second alternative if the computers are in use nearly every lesson, the third alternative if the computers are used only in a few lessons during the school year, or the participants can tick off "never" if they never experience using digital tools during lessons. I would like to point out that the last alternative is not to be interpreted as if digital tools are not used during lessons at all. The question only asks about how often the students operate computer technology during lessons; the teacher is excluded from the question, regardless of whether the teacher employs ICT when she teaches English.

Question 6 focuses on the purpose for the utilization of computers during class: "What do you use the computer for during class? (You may cross off more than one alternative)" (Appendix 1). The alternatives to choose from are:

- Social Media (Facebook, Twitter, Instagram, etc.)
- Word-documents (for essays, notes, textbook tasks, etc.)
- Blogs
- Online newspapers
- Games (online and offline)
- Its Learning
- Research

- Other:

The participants are given the opportunity to tick off more than one alternative since one most often uses computers for more than one purpose, especially at school where assignments are posted on Its Learning, research is done on the Internet, and it is unavoidable that some students go off track and get distracted by social media and other similar pages. I left the last alternative open in case the participants had suggestions to other things they typically use the computers for.

The next question refers back to question 6, as it asks the participants to arrange the alternatives from question 6 in accordance with the time spent on each alternative. The question is "Arrange the alternatives you crossed off in the previous question from most frequently used to least used, and approximately how much time you spend on them during class. Use numbers to rate your alternatives followed by approximate time spent on them. (Ex: 1. Word 20 minutes, 2. Games 15 minutes, 3. Its Learning 5 minutes, etc.)" (Appendix 1) The question demands the participants to use the alternatives from the previous question to determine what the participants spend their time on, as well as how much time they spend. The intended purpose of this question was to examine to what degree digital tools affect the students during class. Additionally, the results could potentially give me an idea of how effective the current practice with ICT is.

Question 8 is directed towards informal versus formal use of computers at home. The question is as follows: "Do you use your computer for different purposes at home than what you do at school?" The alternatives the participants could choose from are "yes", "no", "sometimes", and "I don't know/I don't really think about it". In hindsight this question was probably not the one that gave me most information. My intention, however, was to find out if the students made a clear distinction between formal use of ICT and informal use of ICT. I wanted to know if the participants were aware of how they operated computers at school in comparison to what they did at home, and if the location and situation made a difference in how they interacted with computers.

Question 9 is another question where I, in retrospect, realized how insufficient the question was. The question is "Can the alternatives you crossed off in question #6 be related to future employment or society in general?" with the following alternatives: "Yes, they are relevant for society and most jobs", "To a certain degree. They may be relevant for some jobs", "No, the alternatives are not relevant for future employment", and finally "I don't know/I have not thought about it" (Appendix 1).

At the end of the questionnaire I included a tenth question, which simply asked for the gender of the participant. As I stated in section 3.5, I realized the irrelevance of gender after I had collected the data. I am not interested in the computer habits of girls versus boys, I wish to know more about the habits of students in general, and if what they do at home on their computers could be applied in lessons without losing the academic aspect of school. Therefore I have opted to remove question 10 from the chapter discussing the results of the survey.

3.7 Interview with teachers – the interview guide

The second part of my study is the teacher interviews, which consist of 8 questions. The interviews were done face-to-face with the interviewee. I recorded the conversation on my cellphone, and used this recording to transcribe the interviews later. Most of the questions are more openly phrased compared to the questions in the student survey, as I wish for the teachers to reflect and voice their opinions on the topic of ICT in English lessons. As I explained in section 3.4, I chose a mixed methods approach in my study because I wanted to look at the topic of my thesis from different angles. The objective of the interview is to compare the teachers' answers with the results from the student survey to shed light on the usefulness of ICT in the English subject from two different angles.

The opening question of the interview is similar to what I asked the participants in the student survey. The question is "How many hours do you spend on your computer per day (approximately)? Please differentiate between work and recreation." (Appendix 2) The purpose of the question is to get a general overview of much time teachers spend on their computers every day, and how much of that time is strictly work related. Furthermore, the answers might give me a general idea of how much the teachers prioritize computers with reference to work related use. The second question in the interview guide is "What does digital competence mean to you? How would you define it?" (Appendix 2) The question is open for the individual's interpretation of the term "digital competence". It suggests that people have different ideas of what digital competence means.

Question 3 moves on to expectations, particularly the teachers' expectations regarding ICT and teaching English: "Give a short description of what you think could be expected of a teacher of EFL in upper secondary school with regard to ICT." (Appendix 2) The teachers I interviewed were given the opportunity to express what they believed should be expected of a teacher. This could perhaps tell me something about the teachers' personal experience with and attitude towards ICT. Question 4 is a follow-up question, which focuses on the teachers'

opinion on their own digital competence: "Do you believe your digital competence is up to par with what is expected of you in a technology rich classroom?" (Appendix 2) Question 3 touches upon what the teacher believes is expected of them, while question 4 asks them to reflect upon whether or not they live up to these expectations.

Question 5 and 6 are also linked together. Question 5 is "To what degree do you employ computers and the Internet during your lectures?" (Appendix 2) The answers will provide me with an understanding of how digital tools are integrated in English lessons. The follow-up question is as follows: "Do you make an effort to diversify your employment of technologies or do you have a preference in terms of using technologies during lectures?" (Appendix 2) There are numerous ways one can use computers and Internet in English lessons, as new technologies and programmes are continuously developed. The choices are many, and naming them all would take far too much time and space. Nonetheless, there are some teachers who are open to new ways of teaching and new technologies to promote learning and motivation, and some teachers who prefer to teach and instruct with limited help from technological tools. This will be further discussed when I present the results in the next chapter.

Question 7 is related to the usefulness of ICT in teaching: "In your opinion, do you think the competence aims relating to ICT in the Knowledge Promotion is sufficient to prepare students for life after school?" (Appendix 2). The motivation behind the question is more or less the same as for question 9 in the student survey questionnaire. I wanted the teachers to assess the value of the digital skills and knowledge the students develop in relation to the English subject. Depending on the teachers' answers, the question could provide insight into the teachers' attitudes towards ICT, and how they believe communicative technologies such as computers or smartphones influence the lives of young people.

The final question in the interview guide is: "Some scholars suggest that the notion of digital skills and digital competence in the Norwegian curriculum are ideals rather than something we can achieve. Do you agree with this statement? Why or why not?" (Appendix 2) I picked this question in order to find out how important ICT in teaching was to the teachers I interviewed. Do they believe ICT to be a vital part of the students' education, especially in the English subject, or is ICT only tools the teachers are required to use when teaching? I would be able to draw some conclusions from the answers regardless of whether the teachers had personal interest in the topic of ICT or not.

What is the purpose of the utilization of digital tools? Is it to simply have multiple tests confirm that the students have learned what the government has deemed necessary in

order to create a critically thinking, independent, democratic individual? Is it possible to apply digital tools in a manner that will be useful for society at large when the students eventually graduate? I will answer these questions in the following chapter where I discuss the results from the survey and the interviews.

3.8 Third point of view – observation

The third and final research method I used in my study was observation. The objective of the observations was to search for a correlation between the results I had gained from applying the two previous methods and what I observed during lessons. The notes from the observation was intended to be used as additional information to either confirm or disprove the information I got from the other two databases. I observed two of the classes for about 4,5 hours in total. The reason for this is that I had limited time to do so. One of the teachers had to juggle being supervisor to students from the university, partaking in my interview, and open up the schedule to fit both the survey and the observation. Therefore, I only have notes from one session with this particular class. Due to unforeseen events surrounding the second teacher, I did not get to observe the second class as much as I would have liked to either, but I did get to observe two sessions with this class, which gave me a total of 4,5 hours of observation. One lesson at this school lasts for forty-five minutes. However, English lessons in vg1 of the general studies programme are double lessons, and so all three sessions were 2 x 45 minutes, making each session an hour and a half long.

Before class started I informed the students that I would join them during the lessons, and that they did not have to worry about me revealing anything I observed to their teacher after class. I felt it was necessary to do so because I was concerned that the students would be too aware of my presence to not behave like they would normally do during any other lesson. I took a seat at the back of the classroom to get a better view of what happened during the lessons. I took note of what the students did with their computers and if or how the teacher chose to use digital tools during lessons. I collected my notes in a notebook and transferred them to a Word document afterwards. Although I could have used my computer to take notes, I chose not to in order to not disturb the class whenever I typed the notes into a document.

I would have preferred to observe all three classes for an expanded period of time in order to gather more data. However, the observations are not the main database from which I will pull information for the discussion. I will only use the notes in comparison with the data I collected from the interviews and student survey, which I will discuss in the next chapter. Therefore, I do not consider the short timespan as a problem or a limitation to my study.

3.9 Validity and reliability

When conducting research, the researcher must consider the validity and reliability of the study. Validity refers to the credibility of the study, or simply put, if the study measures what it is supposed to measure, while reliability signifies that the research can be repeated and expect the same results. Creswell explains that threats to validity in quantitative research have two forms: internal and external threats (Creswell 162). The internal threats to validity are described as the "experimental procedures, treatments, or experiences of the participants that threaten the researcher's ability to draw correct inferences from the data", while external threats refers to drawing wrong conclusions from the data and transferring those conclusions "to other persons, other settings, and past or future situations." (Creswell 162). An example can be that the researcher makes generalizations about the characteristics of the participants and applies those generalizations onto groups who do not inhabit the same characteristics as the first group (Creswell 165). Therefore, it is important to recognize the possible threats and limitations to the study before drawing conclusions from the database.

Validating qualitative data, on the other hand, is not as simple as with quantitative research, according to Creswell. What qualitative validity means, he say, is "that the researcher checks for the accuracy of the findings by employing certain procedures" (Creswell 190). Qualitative reliability refers to the approach's consistency and dependability "across different researchers and different projects." (Creswell 190) Although it can be difficult to determine the consistency of the research strategy, a triangulation of the data can ensure the dependability of the results (Zohrabi 259), which leads to the mixed methods approach.

If the researcher has chosen a mixed methods approach, he or she needs to consider the validity and reliability for both quantitative and qualitative data. As stated above, triangulation of data can be beneficial to the researcher to ensure dependability. Mohammad Zohrabi states that

> The researcher should use different procedures such as questionnaires, interviews and classroom observations to collect data. Also, this information needs to be obtained through different sources such as learners, students, ex-students, language instructors, subject instructors and program staff. Therefore, collecting varied types of information through different sources can enhance the reliability of the data and the results. In this way the replication of the study can be carried out fairly easily. (Zohrabi 260)

The data in the present study has been carefully examined in order to get an accurate analysis of the results. Triangulation was employed to ensure the reliability of the research, and involved a combination of a student survey questionnaire, teacher interviews and classroom observations to get as much comparable data as possible. It should be noted that the results have been analyzed based on the interpretations of one researcher, which means the conclusions have not been confirmed or denied by other researchers. Regardless of this, the triangulation of the data has hopefully ensured that the present study is both valid and reliable.

3.10 Possible limitations

There is always room for improvement when it comes to research. Sometimes one will discover that the questions one has carefully constructed are too general to provide definite answers, or that the conclusions one draws from the study only applies to the people who participated in that one particular study. After having collected data for the student survey and the teacher interviews, I discovered a few weaknesses in my research. Some of them were related to the questions in the student survey. One of the limitations to the student survey is that I did not ask what the students used their computers for in out-of-school contexts, except for how many hours they dedicated to schoolwork, which would suggest that the remaining hours were spent on computer activities related to entertainment or communication.

Another limitation was how I phrased one of the questions. After some consideration, I came to the conclusion that question 9 was awkwardly phrased, which made it difficult for some of the participants to answer. I intended to examine how the use of ICT could be useful to the participants later in life, and attempted to do so with this question. However, the question could not tell me anything specific about how or in what situations the alternatives from question 6 could prove useful. The question could have been given a follow-up question that specifically asked the students to describe situations where their digital knowledge would be considered useful. Moreover, the fact that all of participants were students in the first year of upper secondary, which put a limit on the conclusions in terms of representation. The sixty-one participants were not representative for all students in upper secondary, a fact I had to consider when I discussed the results.

As for the interview guide, the question that seemed to create confusion was question 7: "In your opinion, do you think the competence aims relating to ICT in the Knowledge Promotion is sufficient to prepare students for life after school?" One of the teachers found it difficult to recall what the Knowledge Promotion (specifically the English subject curriculum)

said about digital skills and digital media. Another limitation to the teacher interviews is that I only interviewed three teachers. Potentially I could have categorized the answer into measurable qualitative data, but seeing as I only managed to get in contact with three teachers, I decided not to present the data this way. The reason for this is I believed it In addition to this, the small number of participants meant that I had to be careful not to draw conclusions from the database that would imply that the data was representative for all teachers.

The last limitation I would like to add is that the observations only happened over a period of three sessions, which lasted a total of four and a half hours. The data collected from the observations would potentially be more reliable if I had the opportunity to observe the classes for an extended period of time. Additionally, only two classes who participated in the survey were observed. Due to unexpected circumstances I did not have the opportunity to observe the third class, and I did not have the time to make a request to observe the third teacher's class as we were at that point fast approaching the exams.

3.11 Ethical considerations

Before I move on to the analysis and discussion of the results, I will state that I checked the home page for the Norwegian Centre for Research Data (NSD 20.01.16) to make sure that the survey did not include sensitive or personal information that could potentially expose the participants' identities. I did the test to make sure I did not need to send a notification form, which I did not. The survey was handed out to the participant on paper, which means there were no IP addresses to trace the respondents. The survey was anonymous with no names, age, or name of region or school. I was not required to get parental approval to do the survey since the students were older than fifteen years old and the survey was anonymous.

As for the teacher interviews I did the same research on how to collect data without exposing sensitive information about the participants, only this time I had contacted NSD to ask if the audio files needed to be stored in their online databases. I had already assured myself that I did not need to file an application to collect the data seeing as no personal information would be revealed in the interviews. However, I was uncertain about what I should do with the audio file after I had finished transcribing the interviews. I had promised the teachers that as soon as the interviews were transcribed I would delete the files to make sure that no one else would get hold of them. I explained this to the NSD, and they agreed that as long as I did as promised and deleted the files afterwards I would not need to store the files online.

The notes from the observations are anonymous as well. No names were written down, and none of the participants were described in a manner that could expose sensitive information about them. The purpose of the notes was to verify or dispute the data from the other two databases. After careful consideration I came to the conclusion that the notes did not have to be submitted to the NSD for storage, as they did not contain sensitive information and taken out of context, they would not be useful to other fields of research.

4. Results and Analysis

4.1 Introduction

This chapter will analyze and discuss the results from the student survey, teacher interviews, and the observation in relation to the theory I presented in chapter 2. The data I collected from the students survey will be discussed first. The second part of the data analysis is the teacher interviews, followed by the presentation and discussion of the notes from the observations.

The questions in the student survey will be analyzed separately. The first four questions from the questionnaire will be given a separate section, as will the subsequent five questions. The reason for this decision is to make a distinction between ICT at home and ICT at school, even though the thesis examines the correlation between computer activities at home and computer activities at school, and their relevance to future needs of digital skills and competence. As for the interviews, the chapter will analyze the answers to the questions separately, but the answers from the teachers will be discussed collectively for each question in order to compare the results. The notes from the observation will be discussed in relation to the results from the two previous databases, and the final part of the chapter will provide a summary of the findings from my mixed methods approach.

4.2 Student survey results – students engaging with computers outside school

As shown in the previous chapter, students in modern day society engage with digital media as a part of their culture. They are screenagers (Krumsvik 240) who have grown up in an era where the world has become smaller due to an increase in Internet activity and communication. Some of the questions I will answer are: How much time do young people actually spend on technology? Do students spend more time on computers during the weekend than they would during schooldays? How much time is dedicated to schoolwork? How much time is dedicated to computers at school, and what do students use it for?

The results in the following sections will provide an understanding of how and to what degree students interact with computers in their private domain. In addition to this the results can offer an indication of how great or small the gap between informal and formal use of computers is, as well as the opportunities for new ways of learning with technology. It is important to keep in mind that when the term 'computer' is used in this chapter, it includes all technology that inhabit the same or almost all the same features as the traditional laptop and stationary computer, such as iPads or smartphones.

As the previous chapter showed, the first question in the student survey asked the students how much time they spend on computers during weekdays (Monday through Friday) at home. The question asked the students to calculate the average time spent on computers per day, due to the possibility that the students have other out-of-school activities they attend during the week, which means that they do not necessarily spend an equal amount of time on computers every day. The answers to question 1 are presented in Table 1 below:

4.1: Duration of computer activities at home during weekdays

General computer activities measured in hours (Monday through Friday)	Respondents	Percentage
0 to 1 h	-	-
1 to 3 h	8	13.11 %
3 to 6 h	21	34.43 %
6 to 9 h	16	26.23 %
9 to 14 h	16	26.23 %

Out of the sixty-one participating students, none of them answered that they spent between zero and one hour on computers on an average weekday, meaning all participants spent at least one hour on computers at home. The second alternative was between one and three hours with eight responding participants. The alternative "3 to 6 h" gained twenty-one respondents, while "6 to 9 h" and "9 to 14 h" gathered 16 respondents each. The results show that a total of fifty-three respondents, or 86.8%, reported that they spent on average more than three hours on computer technology on weekdays. 60.3% of those respondents claimed they dedicated more than six hours per weekday to computer activities, which is a considerable amount of time spent on computers after school. The remaining 39.6% of those respondents spent between three and six hours, suggesting they engaged in other activities that did not include computers. What these activities were, however, were not a part of the survey and not relevant for the thesis. Consequently, those activities will not be discussed in this paper. The most surprising result was that as much as 26.2% of the participants claimed to spend between nine and fourteen hours after school on computers, which shows that these students spend most of or perhaps all of their time after school engaging with computers. Of course, it is important to note that this is simply an average estimation of time management, but the results clearly suggest that more than half of the students spend little time on activities that are unrelated to computer technology.

Question 2 asked the participants to estimate how much time they dedicated to school related work on computers at home. Again, the participants were asked to tick off the average amount of time they invested on schoolwork every day Monday through Friday, not the week as a whole, even though they might not use computers for school related activities every day. The table below shows the answers to question 2:

Table 4.2: Time dedicated to schoolwork on computers at home.

Hours spent on school-work	Category 1: "1-3 h" respondents	Category 2: "3-6 h" respondents	Category 3: "6-9 h" respondents	Category 4: "9-14 h" respondents	Percentage
0 h	1	2	-	1	6.56 %
1 h	4	5	5	2	26.23 %
2 h	3	8	4	4	31.15 %
3 h	-	4	4	3	18.03 %
4 h	-	1	1	1	4.92 %
5 h	-	-	2	1	4.92 %
6 h or more	-	-	-	1	1.64 %

The participants have been separated into categories based on the answers they gave in question 1. The participants in Category 1 have reported that the amount of time dedicated to schoolwork ranges from zero to two hours, with one response to "0 h", four responses to "1 h", and three responses to "2 h". The results show that 87.5% of the respondents do schoolwork on their computers between one and three hours per day. As the categories have time spans of three to four hours, however, it is not as easy to determine if the hours dedicated to school related activities are the same as the total amount of time the respondents spend on computers every day. The only certainty is that the majority of the respondents in Category 1 do spend a minimum of one hour for homework, studying, or other activities related to school. The results for Category 2 show that the respondents spend between zero and four hours on schoolwork. Two of the twenty respondents answered that they did not use computers for schoolwork and five of them spent one hour every day doing homework. The third alternative "2 h" accumulated eight respondents, making it the alternative with most respondents. The fourth alternative gathered four respondents, while the fifth alternative had only one respondent. None of the participants from Category 2 reported to spending five or more hours on schoolwork when they engaged with computers. Category 3 shows that five out of sixteen

respondents answered "1 h", four answered "2 h", and the same amount of respondents chose the option "3 h". One of the twenty respondents answered "4 h", and the remaining two respondents answered "5 h". Category 4 consists of thirteen respondents, and it is the only category where all of the alternatives have been chosen. The alternatives "0 h", "4 h", "5 h", and "6 h or more" have one respondent each. Two out of thirteen reported they spent two hours doing schoolwork, and similarly to Category 3 the "3 h" alternative gathered four respondents. The three remaining respondents reported that they spent four hours every day on school related activities.

Although all sixty-one participants answered question 2, there are only fifty-seven answers in Table 4.2. The reason for this is that four of the participants answered in a manner that did not fit in with the alternatives they could choose from. One of the participants responded that he/she only used computers about one to two hours if he/she needed to, suggesting that implementation of computers in relation to homework or studying was not a weekly occurrence to the participant. The second irregularity presented itself as a misunderstanding or misreading of the question by two of the participants. One participant answered how much time he/she spent on various programs and websites for both formal and informal purposes. Another issue with this is that the participant described what he/she did at school instead of what he/she did at home, which is what the question asked for. The second participant answered according to how many hours he/she dedicated to school related computer activities on a weekly basis instead of giving an estimated time for an average weekday, suggesting that he/she also did not read the question properly, or that the participant did not fully understand the question. The fourth, and possibly the most difficult participant to categorize, answered "not much". The respondent's answer is difficult to place in the table, because on one hand "not much" does not mean "not at all" while on the other the answer does not mean "one hour", "two hours" or even "half an hour". The answer is simply not specific enough to draw any conclusions on time management with reference to computer activities. It does, however, point out a potential weakness in the question.

As shown in chapter 3, the question did not have alternatives the participants could tick off. The respondents had to use the information from question 1 to answer question 2. Although it was assumed that the students would be able to answer this question without problems, it turns out that four participants did not a) understand the question or b) read the question properly. However, the four instances do not account for more than 6.5% of the entire group of participants, and even though the question could have provided alternatives for the participants to choose from, the fact that more than 90% of the entire group managed to

answer the question suggests that the question was not phrased in a way that made it too difficult to understand. The teacher and I were both present during the process, which means the survey participants had the opportunity to ask for clarification in case they did not understand the questions. Most likely, the four instances were the results of not having read the question properly, though this cannot be said for certain.

The next table shows the answers for question 3, which is similar to question 1, except the participants were asked to state the amount of time they spent on computers during the weekend. Unlike question 1, the participants gave an estimated number of hours based on the weekend as a whole, instead of time spent on computers on a daily basis during the weekend. The results are as follows:

Table 4.3: Duration of computer activities at home during the weekend

General computer activities measured in hours (weekend)	Respondents	Percentage[4]
0 to 1 h	-	-
1 to 3 h	6	9.52 %
3 to 6 h	17	26.98 %
6 to 9 h	22	34.92 %
More than 9 h	17	26.98 %

None of the sixty-one respondents have reported to spending one hour or less during the weekend. Comparing the answers from question 1 with these answers demonstrates that all of the sixty-one participants engage with computers to some degree on a weekly basis. There are not many differences in time distribution during the weekend compared to the weekdays. Out of the sixty-one participants, six respondents have reported they spend between one and three hours on computers during the weekend, which is a minor decrease from the first question. The third alternative on the list gathered seventeen responses, which is also a decline in number of respondents. There is an increase of responses to the alternative "6 to 9 h" and "more than 9 h" where "6 to 9 h" gathered the majority of the answers at 34,92 %. The latter alternative went from 26,2%[5] on an average weekday to 26,9% during the weekend. The double-answer was added to the database because it gives an indication of how much time this particular student engages with computers at the weekends, despite the varied time span.

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[4] The percentage in Table 3 is based on the total amount of answers, not the number of participants. One participant ticked off two alternatives.

[5] The percentage in Table 1 is calculated based on the number of participants. The amount of participants corresponds with the amount of answers.

It is also an indication that the respondent has other commitments during the weekends that causes the time span to change from "3-6 h" and "6-9 h" to "3-9 h".

The fourth question in the questionnaire is a follow-up to question 3. Similarly to question 2, the participants are required to report how many hours they spend doing school related activities on their computers, only this time the question asks for school related activities during the weekend.

Table 4.4: Time dedicated to schoolwork on computers during the weekend

Computer activities related to school during weekends	Category 1: "1-3 h" respondents	Category 2: "3-6 h" respondents	Category 3: "6-9 h" respondents	Category 4: "More than 9 h" respondents	Percentage
0 h	-	2	2	5	14.75 %
1 h	4	7	7	5	37.70 %
2 h	1	8	4	2	24.59 %
3 h	1	1	6	1	14.75 %
4 h	-	-	2	-	3.28 %
5 h	-	-	1	1	3.28 %
6 h or more	-	-	-	1	1.64 %

Table 4.2, as shown above, shows how much time the participants dedicate to school related activities during the weekend. The majority of the respondents report to spend up to three hours doing homework on computers. One should keep in mind that these numbers represent the average weekend for the participants. Some of the participants reported the amount of time they dedicate to computers for educational purposes depended on whether or not they had tests or oral presentations to study for, in which case the time they spent studying (using computers) would increase. Comparing Table 4.2 and Table 4.4, one will find that the data in Table 4.4 are similar to the data in Table 4.2, although not quite the same. The most notable change is the 11.4% increase of students who spend one hour studying during the weekends.

The results gathered in these four tables show that computers are part of the students' daily lives, and that the majority of students will spend between one and two hours doing schoolwork on their computers. The questionnaire did not ask about what sort of informal computer activities the students engaged with at home (see chapter 3 about formal teaching and informal learning), but considering the amount of time they reported to devote to computers it is a fair assumption to say that these students have basic knowledge of how to

operate computer technologies and communicate online. The challenge is to evaluate the usefulness of that knowledge in a formal educational setting. The purpose of this thesis is to examine to what degree implementation of ICT in the English subject provides students with knowledge that will be useful to them on an individual level (higher education and future employment) as well as being useful to society at large. English is a global language that connects people of different ethnic, cultural, and religious background. Furthermore, the globalization of the English language has been transferred to the emerging online society for which students in upper secondary school need to prepare. The students in my survey report to spend a fair amount of time engaging in computer activities at home, but time alone does not determine the extent of students' digital knowledge and/or skills. One must look at how students engage with computers in an educational setting as well in order to get an understanding of students' technological capabilities and how they can be applied in society.

4.3 Student survey results – computer activities at school

Chapter 2 discussed how the teachers' attitudes towards ICT affected how they implemented digital tools when teaching, which in turn affects how and to what degree students use computers in class. This section will look at the data collected from the survey questions directed towards using ICT at school. The fifth question in the questionnaire asked how frequently the students used computer technology in class, as shown in Table 5 below.

Table 4.5: Computers in English lessons – the frequency of use

Computers used in English class[6]	Respondents	Percentage
Every English lesson[7]	4	6.65 %
Nearly every lesson	35	57.38 %
A few English lesson	21	34.43 %
Never	1	1.64 %

The results show that only four of the sixty-one participants claim to use computers every English lesson. Even though the teacher might use ICT to instruct or impart information (or mark absence, tardy, etc.) to the students, it does not necessarily mean that the students

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[6] The question does not specify whether computers are used from beginning to end of a lesson. The purpose is to find out if how many lessons include implementation of ICT regardless of how much time is dedicated to it per lesson.

[7] The questionnaire uses the word 'lecture', but I have chosen to change the word in the paper to 'lesson'. 'Lecture' tend to be associated with teacher-instructed activities. In this case, however, it signifies all activities during English class. I simply changed the wording the discussion to avoid confusion.

engage with computers every class. However, the fact that only four respondents use computers every lesson implies that those four students use computers even when it is not required of them, or when the teacher has clearly stated that computers will not be used.

Another interesting discovery worth mentioning is the one participant who claimed to never to use computers during lessons. While it might not be unheard of for a student to choose pen and paper over computers, it is particularly interesting because the same student answered question 6, which is a follow-up question. Among the alternatives he/she ticked off were Its Learning, Word, and research. In other words, the student does in fact use computers during lessons, even though he/she claimed otherwise. In addition to this, students are expected to learn how to use digital tools for different purposes, and critically assess the legitimacy of online resources, etc., as clearly stated in the Knowledge Promotion. If the student never does use computers in English lessons, then that would imply that the student does not fulfill the requirements stated in the English curriculum. Seeing as the student answered question 6, one might assume that the student either a) misunderstood the question or b) rarely use computers in class, and decided that "never" was the alternative that best suited him/her.

Moreover, approximately a third of the participants reported to use computers during a few English lessons, indicating that computer related activities are not common occurrences in their language learning. Typically it is the teacher who decides on what tools the students are allowed to use during lessons, and although students have the right to have access to digital tools (The Education Act §3-1) there are limitations to how and what the students are allowed to use those tools for. That is a possible explanation as to why those students chose to answer "a few English lessons". Another explanation could be that they do not think of using text production programs (e.g. Word) as using computers during class, or that the question was understood as how often during a typical lesson did they use computers, in which case it implies that the question was not specified enough. The question was "To what degree do you use computers during English lectures?" (Appendix 1), and could be misunderstood due to the word "during", which signifies "throughout" lessons. Replacing the word "during" with "in" would perhaps make it easier to understand the question, assuming the question was misinterpreted in the first place.

I have previously quoted the Directorate for Education and Training on what digital skills involve, such as using digital tools/media/resources in language acquisition, to critically assess online sources, to read English texts in authentic situations, etc. (LK06/13, Basic Skill for the English subject), and I argue that digital competence is a more complex concept that is

not limited to knowing how to use digital tools and accessing verifiable online resources. It also involves knowing how to apply that knowledge in different settings. For instance, writing an essay calls for formal language and a specified structure, but a blog post, a comment in an online forum, or a comment in a newspaper comment section does not have the same restrictions in terms of grammar and syntax. In addition to this, digital competence also involves aspects of Bildung and intercultural competence (IC). Even online one will find conventions of conducts that dictates what is appropriate behavior and what is not. Digital competence also involves having the skills and to communicate with and have knowledge of other cultures, which are expressed through films, music, beliefs, and so forth. All these things can be found online, which makes it important for students to have the ability to understand and interact with other cultures than their own.

My argument is that in order to ensure that the students are prepared to participate in a society (both physically and online) that, with increasing frequency, communicates in English. As David Nunan explains, English is "the language of business, technology, science, the Internet, popular entertainment, and even sports." (Nunan 605). The English language has become such an integral part of our society that it is necessary to teach students not just how to acquire information through digital media and utilize digital tools, but also how different socio-cultural environments have different requirements in terms of digital skills and knowledge. That is not to say that the aforementioned four students, who claimed to use computers every English lessons, do not have the skills or the competence to apply digital media in different settings. Their answers are interesting, however, as they do incite questions about what students do use computers for during lessons. The same goes for the thirty-five students who reported to use computers nearly every English lesson, suggesting that computer activities play an important role in the learning process.

The next question in the questionnaire is, as previously mentioned, a follow-up to question 5. The participants were asked to choose all the alternatives that best described how they used computers in the English subject. In this case, the use of social media and games are not related to any topic within the English subject and should therefore be considered as entertainment.

Table 4.6: Computers in English lessons – the different digital activities

Computer activities in English lessons	Responses	Percentage

Social Media (Facebook, Twitter, Instagram, etc.)	40	65.57 %
Word-documents (for essays, notes, textbook tasks, etc.)	58	95.08 %
Blogs	11	18.03 %
Online newspapers	20	32.79 %
Games (online and offline)	11	18.03 %
Its Learning	61	100 %
Research	48	78,69 %
Other	18	29,51 %

The table above (Table 4.6) shows how many students responded to each alternative. All of the students who participated in the survey report to use computers to log on to Its Learning, fifty-eight students claim to use Word to take notes from class or produce texts, and forty-eight report that they do research when they engage with computers during English lessons. Research denotes educational research, for instance autobiography of authors for English speaking countries or information on indigenous people. Any kind of research not related to school was to be excluded from this question, which I explained to the students before they answered the survey. As for the other alternatives, twenty students report to read online newspapers during the English lessons whenever they engage with computers, eleven students read blogs, and eleven students use computers to play online and/or offline games. Of the three alternatives that are not used for educational purposes, social media is the most frequently used alternative that gained responses from just over 65% of the participants. The category "other" refers to the programs or websites the students visited during a regular English lesson that are not mentioned in the list of alternatives. Based on the results from the survey, "other" includes shopping/visiting online stores (3), e-mail (1), Netflix (4[8]), YouTube (3), Tumblr (1), Skype (1), 9gag (1), drawing (1), and undefined "other" (4). One participant provided the alternatives Skype and 9gag, which is why the table above only counts seventeen respondents instead of eighteen.

None of the participants chose only one option, and this indicates that when computers are applied in the English subject, the students engage with various programs and webpages

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[8] Netflix was ranked as the most frequent and the most time consuming activity by all seventeen respondents (between 40 and 60 minutes)

throughout the lesson. Some of the students multitask on the computer, using several programs and/or surfing different webpages at the same time, which I will get back to in the next paragraph as we take a look at how the students distribute time during English lessons in relation to the alternatives provided in the table above.

In order to understand the extent of which the alternatives in question 6 affect the students' learning process, I had to examine how much time each of the alternatives consumed during a lesson. Chapter 3 described how the students had to arrange their chosen options according to how frequent the alternatives were applied, from most frequently applied to least applied. The table below shows the average time spent on each alternative during an English lesson, assuming one lesson is a double lesson lasting ninety minutes. It should be noted that the measured time is based on the respondents who a) answered question 7 and b) added the approximate time for each alternative.

Table 4.7: Computers in English lessons – the duration of the activities

Activities	Average time[9]	Measurable[10] responses
Social Media (Facebook, Twitter, Instagram, etc.)	≈ 12 minutes	39
Word-documents (for essays, notes, textbook tasks, etc.)	≈ 32 minutes	43
Blogs	≈ 7 minutes	9
Online newspapers	≈ 8 minutes	15
Games (online and offline)	≈ 8 minutes	9
Its Learning	≈ 13 minutes	46
Research	≈ 16 minutes	32
Other	≈ 21 minutes	15

The results are not representative for the classes as a whole, but the estimated time gives a rough outline of how long the students engage with the programs and websites provided in question 6. The text production program Word was the only alternative that ranked highest by

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[9] The minutes are the average time spent on the activities during a lesson, assuming each lesson is 90 minutes long.

[10] The participants who answered question 7 with an estimation of time. Not everyone who answered question 6 wrote an estimated time for the alternatives. Some left the question blank.

the majority of its respondents, suggesting that when students engage with digital tools, Word is often the go-to program. One possible explanation for this is that teachers typically use computers for text producing purposes or giving instructions (Erstad et al. 643). Chapter 2 discussed how teachers tend to use digital tools as an extension of familiar technology (Erstad 46). Assuming these students' teachers use technology the same way, it is not a surprise that as much as fifty-eight participants reported they use Word in English lessons, and that forty-three of those use the program with great frequency. Its Learning was the only alternative chosen by all of the sixty-one participants in question 6. Quite a few respondents stated on the survey questionnaire that the total amount of time they dedicated to Its Learning was spent sporadically throughout the lesson. Some respondents even reported that they only logged on to Its Learning when the teacher asked them to[11], which typically happened if the teacher was giving assignments.

As for the results for social media, blogs, newspapers, and games, the responses to these alternatives indicate that the students spend little time engaging with programs and webpages that are normally not associated with school and education except, perhaps, for the online newspapers. The competence aims in the English offer learning opportunities in which digital newspapers can be applied, such as:

1. "evaluate different sources and use contents from sources in an independent, critical and verifiable way"
2. "present and discuss current news items from English language sources
3. "discuss and elaborate on culture and social conditions in several English-speaking countries"
(LK06/13, The English subject curriculum)

The questionnaire did not specify which country the newspapers came from, which means that the participants who ticked off "online newspapers" could potentially have read the Daily Mail or BT (Bergens Tidende). However, the main point here is that twenty participants reported to read newspapers during English lessons, and that the average time spent reading was approximately eight minutes based on the fifteen participants who wrote the time for "online newspaper" in question 7. Since about 33% reported to reading newspapers, and the duration of that activity was about eight minutes long, it suggests that reading newspapers

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[11] The participants wrote comments next to their answers in question 7, which is where the information comes from.

was likely an activity unrelated to the topic of the lessons. If reading newspapers was part of an assignment, it is more likely that the alternative would have gained more than twenty responses, as seen with Its Learning and Word, which respectively gained sixty-one and fifty-eight responses. That is not to say that newspaper are not or cannot be used for educational purposes, which illustrated in the competence aims quoted above. Newspapers, or news channels, from English-speaking countries the competence aims quoted above are examples of how students can find and discuss news from the English-speaking part of the world, including those countries where English does not have status as an official language. Newspapers and online news channels are updated regularly and will therefore provide the most recent news from local communities as well as the world at large. Blogs, social media and games can be used for educational purposes as well, but in this survey the three categories are related to informal use of computers.

The category "other" is the second most time-consuming computer activity in the student survey. The seven instances in which Netflix and YouTube were used were reported to cover between twenty and sixty minutes out of the total ninety minutes duration of English lessons at that particular school. The video publication website was launched in 2005, and it is used to publish private videos, promote upcoming movies, music videos, and so on (Store Norske Leksikon). Forbes reports that one of the most prominent areas of YouTube in recent years is related to education (Hua, Forbes.com). It has become increasingly popular to publish and share instructional videos through YouTube channels in educational settings. Consequently it is not a surprise to find that YouTube is extensively applied in lessons.

However, it is difficult to draw any conclusions as to whether students use YouTube for educational purposes without the teacher's encouragement or specific instructions in this case. Only three out of the total sixty-one participants admitted they used YouTube in class, and one might easily interpret those answers as though the students use YouTube for recreational purposes rather than educational. A counterargument is the possibility that the students' have not included every computer program or webpage they visit during the average English lesson. When asked to state the time spent on each alternative, a number of students claimed to not know how much time they interact with the different programs/webpages. Some of the participants even expressed this issue during the process of collecting the survey data. Additionally, it could be that the educational use of the website is largely performed by the teacher as a means to present information or provide examples for specific topics, e.g. videos of the Maori Haka dance to showcase the indigenous culture of New Zealand. In relation to this, one must consider the possibility that if the students do use YouTube for

educational purposes, the activity might have been considered a way to find information for assignments and therefore categorized as "research" in the sixth question in the survey.

The eighth question asked the participants if they recognized differences in the way they engaged in computer activities at home versus at school. The responses were as follows:

Table 4.8: The use of computers at school vs. home according to students

Alternatives	Respondents	Percentage
Yes	37	60.66 %
No	3	4-92 %
Sometimes	17	27.87 %
I don't know/I don't really think about it	4	6.56 %

The majority of the participants responded that they use computers for different purposes at home than they do at school. The response is quite interesting due to the fact that more than 50% professed they devoted between one and two hours on school related activities, such as preparing for tests and doing homework. The same result emerged in the fourth question, which referred to school related activities during weekends. Additionally, the majority of students reported that computers were employed in most English lessons, although the results from question 6 showed that the most frequently applied programs and Internet activities were Word, Its Learning and research. There is a discrepancy between the results from question 1-6 and the data provided in the table above. When the thirty-seven participants answered "yes" to the question (question 8, Appendix 1), they explicitly said that the computer activities at school were different from the activities they engaged in at home, but the data from the previous questions indicate that this is not the case. The data suggests the students' computer activities at home versus school are more or less the same. My argument is that the potential difference between computer activities at school and at home is how often or how long those activities last in both contexts. Several participants had previously expressed the lack of awareness of time distribution in relation to computer activities, which affected the data in question 7.

The responses to the option "no" is equally interesting, even though the alternative only gained three responses. 'No' in this context signifies that the students engage in exactly the same activities at school, as they would do at home. On one hand, the data from the first four questions showed how nearly all of the participants did engage in both school related and

recreational activities in an out-of-school context[12], though what recreational purposes[13] referred to were not specified. Similarly, question 7 (Appendix 1) showed the distribution of computer activities in class, and the data indicated that recreational types of programs and webpages were regular occurrences in lessons, although the students tended to employ formal learning tools and resources more often than with the recreational (informal) tools (with the exception of "other"). On the other hand, the term 'duration' is significant in this context. The main point is that even though students claim to experience the implementation of ICT in English lessons the same way they experience ICT in an out-of-school context, there is a difference between the contexts in terms of how much time the students dedicate to each activity. Comparing the data from Table 6 with the data from Table 4.2 and 4.3, one will notice that the formal learning tools and activities dominate in English lessons, while recreational activities are the dominating purposes of engaging with computers at home.

According to the data presented, and the analysis of the previous two alternatives, the students who answered 'sometimes' to the question 8 appears to be a more realistic representation of computer activities home versus school when the data is compared to the results of the first four questions in the questionnaire. Approximately 10% of the students claimed they only used computers for school related purposes if they had homework to do or if they had a test coming up. The term 'schoolwork' in question 2 and 4 referred to homework, studying for tests, etc., but the added comments from these students implied that they were not assigned homework every day, or even every week. However, looking at the data in the aforementioned questions, it is evident that the majority are assigned homework on a regular basis due to the fact that only three people report to not do homework Monday through Friday, while nine students claim they do not do homework during the weekend. Keep in mind that the data only describes homework in relation to computers. Homework that does not involve implementing computers is not included in the study, and therefore not the discussion. The "only when needed/if we have a test" comments also insinuate that these students do not necessarily prioritize schoolwork when engaging with computers unless there is a test or a deadline for handing in an essay or similar coming up, which in turn suggests that they engage with computers for the sake of entertainment, communication, or similar objectives. 'Sometimes' would then suggest school related activities "only when needed". However, as I stated in the previous paragraphs, the most notable difference between computer activities in school and home is the duration of those activities. It is unlikely that

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[12] Out-of-school context refers to 'home' in this case.

[13] What sort of computer programs and online the students interacted with.

students spends the same amount of time on each activity every English lesson throughout the year. As some of the students expressed, what they do in class, and for how long they do it, depends on what it on the agenda each lesson. The same argument applies to computer activities at home. If the students have tests or more homework to do than usual, it is natural to assume that the school related computer activities increase. Taking this into consideration, it is more likely that the computer activities at school and at home changes depending on the amount of schoolwork, which would suggest that 'sometimes' is the more realistic answer of the three alternatives presented, without putting too much focus on how many chose this particular alternative.

The last alternative gained responses from four participants. In order to not repeat myself too much, I will simply emphasize the argument from earlier about not being aware of how much time computer activities consume during lessons. In this case, it is about not being conscious about the implementation of computers in different contexts and for different purposes. The alternative "I don't know/I don't really think about it" implies that when the students interact with computers it is not necessarily a conscious action. The present study has not contemplated the implications of awareness among students in relation to using ICT, but it might be interesting to examine this further in a separate study.

The ninth and final question in the questionnaire asks whether they believe the programs and webpages they ticked off in question 6 could be relevant for future employment and society at large. The responses this question received was the following:

Table 4.9: Students' thought on the relevance of computer activities for the future

Alternatives	Respondents	Percentage
Yes, they are relevant for society and most jobs.	6	9,84 %
To a certain degree. They may be relevant for some jobs.	31	50,82 %
No, the alternatives are not relevant for future employment.	4	6,56 %
I don't know/I have not thought about it	20	32,79 %

As the table above illustrates, the majority of the respondents claimed that the alternatives they had previously chosen could, to a certain degree, be relevant in the future. The second largest group of respondents stated that they did not know or had not reflected upon it. The second to last group consisted of six respondents who claimed the alternatives they had chosen were relevant for future jobs and for society in general, while the last group of four respondents answered that the alternatives from question 6 was not relevant. Those who answered 'to a certain degree' were typically students who had chosen Word, Its Learning, and research in question 6. Most of them had also ticked off social media, but that alternative was moderately used in lessons based on the answers in question 7. The students who did not know about the activities' level of relevance to society were generally those who had ranked Word as the most frequently used digital tool, but had social media, blogs, Netflix, or YouTube as the second most frequently used tool/webpage. As for the students who had answered 'yes' to the question had ticked off all three alternatives that are associated with traditional teaching/learning tools, with the exception of one student, who had previously listed Netflix and social media as the most frequently used computer activities. This student had also stated that he/she used computers for the same purposes at home as he/she did in class. The students who answered 'no', on the other hand, were the ones who spent the majority of the English lessons on Netflix and social media, which could explain the reasoning behind their answer to question 9.

4.4 Observing the students' interaction with computers in the classroom

The following paragraphs will examine the notes from my observations and apply those to the findings from the student survey. Considering the fact that the observations happened in the classroom, the notes will not be able to expand on the data from question 1-4 in the student survey, since those findings are related to computer activities in an out-of-school context. Keep in mind that the notes are limited to only three sessions, and are not representative for all English lessons or students in vg1.

When it comes to computer related activities in the English subject, the findings from the student survey showed that the majority of the respondents reported to use computers in nearly every English lesson. The teacher from the first round of observation had explained prior to the lesson that this particular English lesson might not apply ICT to the same extent as it usually would (Appendix 7). The first instance where ICT appears is in the beginning of class. The students were reading Roald Dahl's tale of 'The Ant-Eater' in pairs. The teacher turned on the projector to illustrate one of the main topics of the lesson, which was the two

variations of spoken and written English that are most commonly used: American English and British English. The teacher used the Cambridge Dictionaries and used some examples from the text the students had read (Appendix 7, nr. 8). The Cambridge Dictionaries showed the difference in spelling of the examples from the text. Additionally one could press a speaker-icon next to the words to hear how the words were pronounced with the two variations of English.

The second instance of ICT application was related to using text production program (Word) to write a summary of 'The Ant-Eater' (Appendix 7, nr. 12). One student opened Facebook almost immediately after retrieving the computer from the backpack. The student browsed the newsfeed for a few minutes, before the Internet browser was shut down. Another student opened Spotify and put on a headset. The most remarkable discovery I made was that seven out of twenty eight student wrote the summary on paper. Either the students did not have the computer with them or they simply chose to use the good old pen and paper. Either way it was a surprise to find students who did not do the task on a computer, which of my understanding is one of the most common ways computers are utilized in English lessons. It is also surprising because the results of the students survey claimed that fifty-eight students used Word in English lessons. However, few respondents to the survey claimed to use computers in every English lesson, which suggests this lesson could have been one of the lessons where these seven students did not use computers. The notes cannot say for certain why the students did not use computers during that lesson, due to the fact that I collected the notes a silent observer rather than a participatory observer (Crano et al. 259). Some students finished their summary early and spent the rest of the writing session on Facebook and 9gag (Appendix 7, nr. 15). The writing session is the only instance where students interact personally with computers. The teacher was responsible for all other computer related activities during that lesson.

The second round of observation were similar to the first one in relation to student interaction with computers. The intended purpose for the present lesson was to write an essay on a topic of their preference (Appendix 8, nr 13). Most of the time students interacted with computers involved using Word to complete the task assigned to them. However, there were a few instances that were not related to the subject. I observed one student who used a digital drawing board to create drawings directly on the computer (Appendix 8, nr. 3). Another student spent almost the entire lesson watching a TV-show on Netflix (Appendix 8, nr. 19), while a third student watched YouTube videos (nr. 20). Some of the students had logged on Its Learning and retrieved the PowerPoint presentation the teacher had used earlier in class to

show the students how to write essays and articles (Appendix 8, nr. 18). So far my observation seemed to validate the data from question 6 with regards to what students do when they use computers in class. Additionally the observations support the findings in question 7, in which Word was rated as the most frequently used at approximately thirty-two minutes per lesson.

The third and final session started out much like the previous one. The teacher made sure the students continued on the essay they had started on the previous lesson, and spent the first ten minutes to walk around the classroom and answer questions. The teacher left soon after, for reasons I will not divulge, and the school had not provided a substitute teacher for this lesson, which meant that I was alone with the students (Appendix 9, nr. 4). The number of students engaging with extracurricular computer activities increased throughout the lesson. Two students the majority of the class drawing, one of which was the same student who had used the digital drawing board in the previous lesson (nr. 7). Likewise, the student who spent most of the last lesson watching TV-shows spent more or less the entire lesson on Netflix (Appendix 9, nr. 8). I also observed that although some students kept writing the essay there were more instances of social media this time (nr. 12). Students who had finished their essay either started talking with other students, or they would check their social media sites and similar webpages (nr. 10). Without the presence of a teacher, the students were free to use their computers however they wanted, as long as the assignment was finished before the next lesson (nr. 4). The findings from this session are more difficult to compare to the data in the student survey because the situations I observed were exceptions to regular lessons. Under normal circumstances the teacher would be present, or have a substitute teacher take his or her place to make sure the students did what was asked of them. The second session showed that students in some cases would engage in activities that are irrelevant to the lesson regardless of the presence of a teacher.

However, the observations I made in the last session indicated that the absence of a teacher could cause an increase of non-educational computer activities, seeing as no one was there to guide the students, who engaged with such activities, back to the task at hand. It suggests that teachers of the English subject need to focus on teaching the students to assess the context in which they are learning and apply digital tools accordingly. That is not to say that social media, YouTube, blogs, etc. cannot be useful in language acquisition. The main idea of teaching English is for the students to be able to communicate fluently and efficiently in English, and as I established in chapter 2 English is the most spoken language on the Internet. It is increasingly becoming the most applied language in international, business and

politics. Social media and discussion forums are just examples of online contexts where communication in English can happen. However, in an educational setting even communication through social media and online forums require a modicum of structured language, which relates to the competence aims for written communication in the subject curriculum (LK06/13, the English subject curriculum). The students need to learn how different contexts demand different ways of applying ICT, and that online communication and interaction do not absolve them from behaving according to social norms (see chapter 2 on digital Bildung). It is the teacher's job to ensure that the students are equipped with the knowledge and skills necessary to participate in and continue the development of society.

4.5 Teacher Interviews – thoughts on the role of ICT in relation to the English subject

The next part of the chapter will present the findings from the three teacher interviews. The findings will be discussed in light of theory from chapter 2, as well as the observations. The findings will be analyzed and discussed in the order of which the questions were asked, similar to the structure of the analysis of the student survey data. Because of the anonymous nature of the interviews, I have opted to refer to the teachers as Teacher A, B, and C to distinguish between the three participants. It should be noted that Teacher C is the teacher who was not affiliated with the school where I ran the student survey and observations. Two of the interviews were conducted in English, while the third interview was done in Norwegian. The teacher asked if the interview should be done in Norwegian or in English, for which I answered that it was possible for the teacher to answer in Norwegian if it was preferable. The teacher opted to answer the questions in Norwegian, which means that I have translated the answers from Teacher A for the discussion. The interview in its original form will be provided in the list of appendices along with the other two interviews.

The first question in the interview guide was "How many hours do you spend on your computer per day (approximately)?", and the teachers were asked to distinguish between work and recreational use of computers. Teacher A's answer was the following:

> **Teacher A:** Uh, no … if we just… before work I probably use it [computers/tablets/smartphones] for half an hour … in the morning and on the bus. And that would be … private [use of computers]. And then it's uh … before I … during the work hours I probably use [of computers] for private purposes perhaps … between a quarter of an hour and half an hour? So we are close to one hour.

The teacher continues to explain how much time is spent on computers for private purposes after work hours:

> **Teacher A:** In the afternoon… No, it is probably on and off for … uh … maybe an hour, maybe … yes … maybe something like that?

As for work related use of computers, the teacher said:

> **Teacher A:** And then there's uh, work. It is different from day to day, but on average … maybe … uh … two … two hours?
> **Interviewer:** Yes?
> **Teacher A:** But do you count [computer activities] in the classroom as well like just now?
> **Interviewer:** Yes, well, it means all … uh … preparations and similar work related …
> **Teacher A:** Yes, then it is more than two hours. Say three hours … And I will say I work half an hour on average in the afternoons. So uh … maybe three, four hours in addition to what I just said. Now I do not remember what I said.
> **Interviewer:** Uh … Yes, half an hour after work.
> **Teacher A:** Yes. For work related [use].
> (Appendix 3)

Teacher B, on the other hand, seemed to spend less time interacting with computers. When asked about the estimated time spent on computers, both for work related purposes and for recreation, the teacher said:

> **Teacher B:** One, one hour. Approximately.
> **Interviewer:** That's for work and recreation? Or just work, or recreation?
> **Teacher B:** Ok, let's make it two hours.
> **Interviewer:** Two hours?
> **Teacher B:** Two hours. Yeah. Your computer is always on of course, but I don't use it.
> (Appendix 4)

Teacher C's answer was similar to the answer from Teacher A. Both spent more time on work related activities recreational activities, as shown below:

> **Teacher C:** Yes. Uh, I think that for work purposes … maybe … at least six hours? I would guess, yes, because I use it mostly to prepare lessons and also during lessons, so even though I'm not on it [computer] all the time in my lessons I use it anyway.
>
> **Interviewer:** Yeah?
>
> **Teacher C:** Yeah. Kind of yeah, so about six hours I would guess. Not … not weekends!
>
> **…**
>
> **Interviewer:** Uh, how about recreationally, not just related to work?
>
> **Teacher C:** Probably two hours maybe? If I use my lap … uh … if we use my iPad to watch series, but uh, yeah. One to two hours, I think.
>
> (Appendix 5)

The answers show that Teacher A and C spent more time on computers than Teacher B, including activities related to work and recreation. Teacher B claimed to spend an average of two hours per day for both purposes, indicating that computers were not used often in English lessons[14]. Teacher A, on the other hand, spent up to approximately five hours per day on computers for work (three to four hours) and for recreation (one hour), while Teacher C could spend up to eight hours in total. Most of those hours were dedicated to work. These numbers suggest the teachers spend a large part of their day at work interacting with computer technology, assuming a day's work is between 08.00-16.00). Compared to the students, the teachers spent less time on computers at home[15]. They spent even less time on recreational use than the average student based on the hours students dedicate to schoolwork at home (Table 2) and the fact that students have reported to use typically recreational programs and websites in class (Table 6).

Question 2 in the interview guide asked: "What does digital competence mean to you? How would you define it?" Although the Knowledge Promotion speaks of 'digital skills' rather than 'digital competence', it would be interesting to know how teachers understand the concept that even the Norwegian Ministry of Education found difficult to specify (Erstad 23).

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[14] Students are not included in this case.

[15] 8,5 hours on average based on the numbers from Table 1.

Teacher A: Mhm. It is about having access to and to have … to be able to use digital aids.

Interviewer: Mhm. So that's how you def … define it? To access and to use?

Teacher A: Yes. Digital competence? Yes.

…

Teacher A: Perhaps it's more focus on using, but … yeah.

Interviewer: As in to understand …

Teacher A: Yes, understand.

Interviewer: … the technology.

Teacher A: Yes, but more about using [technology] … to use it rather than understand it.

(Appendix 3)

The second teacher, Teacher B, had a slightly different understanding of what 'digital competence' meant:

Teacher B: Digital competence. Technical skill? Meaning you know how things work. That you are able to control "C" and control "V" and you use it to do different things. That's one sort of [digital] competence. The other one is how to use the Internet, how to find information, how to be able to use sources and all other things. That's a very important part of digital competence.

…

Interviewer: So essentially, what you think of digital competence is the technical part, but also how to differentiate between sources and make distinctions [between different ways of using digital tools]?

Teacher B: Well, the most important thing is to use it [technology] in a productive way, meaning that you should know how to find information, how to use that information, how to gather information, et cetera, et cetera.

…

Teacher B: And in other words my students are very clever when it comes to technical competence and using YouTube or whatever. But to solve technical tasks in English and history … they are not that good, 'cause they do not know how to find information and where to find information. To use the correct search words.

(Appendix 4)

Teacher C's definition of 'digital competence' was even more different in the way that the teacher seemed to describe digital competence as a distinction between schoolwork and entertainment.

> **Teacher C:** Ah, difficult one. Uh … well … uhm … I think it's important for the students to … uhm … you know they're … they love using their computers and their phones but mostly for Snapchat, Facebook and so on and I think it's … uhm … that having digital competence is something different. It's about being able to use your computer to study, uhm… for instance to make texts, uhm… and also to use various different digital tools, for instance Google Documents, uhm… uh, it's a difficult one (laughs). Yeah, but to be digital[ly] competent is not the same as being able to use Facebook and Snapchat… that's….
>
> **Interviewer:** So it's more about knowing when to use the different digital means?
>
> **Teacher C:** Yes, when to use the different means and also to use them to… of course you could say that a part of the digital competence is being able to log on Facebook and Snapchat but in a school setting it's more important to be… know how to put on… uhm, set the language in Word to English if you are writing English, or to Spanish.
>
> **…**
>
> **Teacher C:** So, those kinds of things are more relevant in a school setting, yeah. And, yeah, knowing how to save your documents and make folders and have a system so that you can find things and taking backup of your computer and taking care of your computer and yeah.
>
> (Appendix 5)

The first teacher seemed to have an understanding of the term 'digital competence' as knowing how to use digital tools, which corresponds with the first part of the description of digital skills in the English subject that says "digital skills in English means being able to use a varied selection of digital tools, media and resources to assist in language learning" (LK06/13, the English subject curriculum). The teacher also agreed that digital competence involves being able to understand the technology used, although using technology was emphasized as the most important part of digital competence. However, according to the theory presented in chapter 2, being able to use technology is not sufficient to be digitally

competent. It require more than just the technical skills, it is about a person's ability to apply digital tools and understanding how different contexts demand different digital tools and resources.

Teacher B's definition of digital competence incorporate the knowledge of how digital tools work, to use those tools to gather information (and more), and "to be able to use sources". However, the teacher also states that the students have "technical competence", which according to the teacher refers to utilizing YouTube "or whatever" (assuming "whatever" refers to social media or other typically non-educational websites). This suggests that the teacher views informal learning (see chapter 2, section 2.5) as only a small part of the concept of digital competence. The teacher claims that wihle the students have technical competence they do not possess the ability to find information, which implies the need to teach students how to apply ICT to the process of learning.

Teacher C also makes the distinction between formal and informal use in relation to digital competence. Although the teacher admits the students are capable of using computers for purposes like Facebook and Snapchat it does not mean the students are digitally competent. The formal purposes of ICT are pointed out as the essence of digital competence, such as using various digital tools, producing texts, and other technical aspects of ICT. The teacher does claim that knowing when to use the different tools is a part of digital competence, but it is not emphasized as a major aspect, which seems to be the case with all three of them. The main focus is on technical skills as in being able to use the tools. However, knowing how different contexts necessitate different kinds of digital skills is an essential part of digital competence. It is also essential for students to learn how to recognize these differences, as they will have to face a society in which ICT is profoundly integrated. Being able to adapt implementation of ICT to different contexts is as skill the students will need in the future if they wish to be a part of the physical and the virtual society.

The next question in the interview guide asked the teachers to describe in short what they believed was expected of a teacher of EFL in upper secondary school in relation to ICT. The answer from Teacher A is as follows:

> **Teacher A:** One has to be able to use Word and … that is pretty much basic … use Word and, yeah … perhaps first and foremost Word and those programs, but one has to be able to use Its Learning and the school's programs. One must also know how to use search engines and know how to use the Internet with different webpages such as

dictionaries, YouTube … uhm … search for articles. Uhm … one must … it could be beneficial to use [programs] like Kahoot for example.

…

Teacher A: Uhm … yeah, help the students to seek and find sources that are … accurate, good sources. That sort of thing. And being able to do this yourself, of course.

(Appendix 3)

Teacher B answered:

Teacher B: Well, different teachers have different approaches to their teaching. And for me, ICT is not very important.

…

Teacher B: I think it is more important for our younger students and for younger teachers, so I use it mainly to find information, to present information. But solving tasks, tests and all these other things, I prefer to do it on paper.

Interviewer: Yeah?

Teacher B: Because I think it is much better.

…

Teacher B: And my experience shows that it is better. So you must as a teacher you must be able to use ICT, uh, computers to find information, to present information, to use it as a tool for handing in papers, uhm, giving messages, receiving messages, email, etc. But as an integrated part of the teaching I think it is less important than many others do.

(Appendix 4)

Finally, Teacher C's reflections on the expectations teachers' digital skills and knowledge:

Teacher C: Well … most of us use Its Learning so I think everyone should be able to give information to their students somehow on Its Learning but… because I know some teachers still just write down their homework on the blackboard and so they don't really use that channel. I think everyone should use the channel you are given. Also, of course, uhm … I think also teachers should be able to correct essays digitally [be]cause if you do it on paper and you hand back, uh, paper to the students they will

lose it and then it's like work you never did [be]cause if you are going to show them if they are sitting exams later that year and... it's difficult to recap everything. So I think that should be expected, but I know that's probably a long way for many. I like to correct my essays on iPad because then I have them digitally as well.

…

Teacher C: Uhm, but, yeah … E-mail, Its Learning, you know when giving information, and of course basic … uhm, basic skills that … if you can call it that; Word, Power Point, know how to present/make a presentation…

Interviewer: How to connect the projector...

Teacher C: Yes, how to put on a film and you know, even though I see myself as a digitally competent teacher, often it doesn't work. It's just a curse [laughs] for us teachers, but uhm … those things are important, but uhm … And of course I think everyone should try to develop in the digital field and try new things and maybe also ask the students if they have suggestions because then you can learn something from them.

(Appendix 5)

One thing all of the teachers had in common is that they believed teacher should be able to use ICT to find and present information, to collect student essays or similar assignments, and to give messages to the students, which is usually done on Its Learning. Teacher A emphasized using word for text productions, and finding information online, as well as showing students how and where to look for information. He also emphasized the importance of finding good sources, which is a part of the competence aims for language learning (LK06/13, the English subject curriculum). Teacher B did not prioritize ICT as much as the other teachers, and mainly used computers to find and convey information. Otherwise, the teacher preferred paper to computers. Teacher C adds digital assessment to the list of things teachers are expected to be able to do, which is a digital skill that teacher A and B did not mention. Teacher C also appears to be more open to using ICT in ways that perhaps breaks with tradition. The teacher argues that teachers should continue to develop their digital skills, and perhaps even listen to the students' suggestions in terms of how to use technology in class.

Moreover, the attitude Teacher B expresses towards ICT suggests that the teacher has not thoroughly considered how the implementation of ICT in the English subject can potentially provide students the digital skills needed for the future. The teacher acknowledges

that ICT is important to the younger generations, but states that ICT is not a priority in lessons. Students need to be instructed on how to appropriately apply ICT to specified contexts, but learning that skill becomes problematic if the teacher rarely uses technology except to present information in a PowerPoint presentation. Teacher A's attitude towards ICT were far more optimistic than Teacher B, but implementation of ICT in lessons seemed to be limited to traditional teaching tools like Word, Its Learning, search engines, and online dictionaries. Kahoot is mentioned as a tool that could possibly be beneficial to teaching English.

Teacher C, on the other hand, reflects an attitude towards ICT in line with the theory on teacher attitudes in chapter 2, that teachers who are confident in the way they use ICT are usually positive towards using ICT when teaching (Erstad et al. 643). This teacher believed that teachers are expected to know the basic functions of ICT, such as Word, Its Learning, sending e-mails, and giving information. Additionally, the teacher believed that digital assessment would make it easier for students and teachers to keep track of previous assignments and their feedback in case the students needed the old essays for revisions. The benefit of digitally assessed papers is that they are not at risk of getting lost among other paperwork or get tossed in the paper trash. Teacher C appeared confident in the way she used ICT when teaching, and thus her attitude towards ICT and finding new ways of implementing ICT in teaching was more positive than that of Teacher B. While Teacher A was not against using ICT when teaching English, he did not express an interest in experimenting with different digital tools and resources either. This might indicate that the teacher did not feel as confident in his own digital skills when it comes to using digital media that are not considered traditional in an educational context.

Question 5 in the teacher interview asked if the teachers believed that their digital competence were sufficient in accordance with what was expected of teachers in technology rich classrooms. In this question, digital competence must be defined based on the teachers' understanding of the concept (in question 2), seeing as that was what the teachers based their answers on when they answered question 5:

> **Teacher A:** Yes, mostly. I think so, but one thing I don't know all that well, which I am beginning with now … one must know this, to know how to assess … to use digital tools to for assessment, and for that reason I have gotten a … an iPad that … and there programs which makes assessment easier.
> **Interviewer:** Oh yeah?

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Teacher A: And that … I have signed up for a seminar, so I am going to learn that. And then it's about learning new things. So maybe … because assessment is time-consuming, and there are new tools that can do this.

…

Teacher A: … I think I'm doing okay, and I have … I am not afraid of using new technology in class.

(Appendix 3)

Teacher A claimed that his digital competence lived up to the expectations for the most part, but acknowledged that there were aspects of ICT he was not as skilled with. Teacher B's answer below, however, is entirely different. When asked if he believed he lived up to the expectations in relation to ICT, he answered:

Teacher B: Not really. Not really. But that is, well on the other hand, I do not give a damn.

…

Teacher B: I do not care what is expected of me and when it comes to ICT, when I cover the basic skills and basic needs. I'll give you an example: there is a thing called "Kahoot".

Interviewer: Yeah.

Teacher B: Which is very popular today and I use it sometimes, but I never make them, I never create them. When I have tests like that I do it in other ways, more physical ways because I think it is more a game than a method of learning. I mean, people do not necessary learn a thing. So, I should and might have acquired more knowledge, skills, about how to use the world of ICT in a more advanced and fun way, but actually I don't care.

(Appendix 4)

In contrast to Teacher B, Teacher C claims to have sufficient digital competence based on what is expected of her:

Teacher C: Yes. I often experience that I need to … uhm … teach my students basic skills because they are not known with the various tools and I have to tell them it's a good idea to make folders so you know … one for Norwegian, one for English … and

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… [laughs]. It's a good idea to call your document something else than task 1, you can call it topic or studying, and so forth. And also, I have introduced Google Classroom to some of my classes and then we've got a classroom where I … uhm … give the tasks and they answer and I can, in real time, see when they are writing and comment on what they are doing so we can… and if we're in different rooms then we can have a chat and they can also work in groups for instance.

…

Teacher C: … sometimes they like to try out Prezi presentations as well, because then you can zoom out and zoom in, and that's fun. Yeah, I've tried various and some work well and others don't. We've made films, and then I just ask them to use their phones to do the recording.

(Appendix 5)

Teacher A claimed to be digitally competent and to be open to use new technologies to teach. His statements from the earlier questions, however, reveal that ICT are used mostly for writing texts in Word, finding information by using search engines, and online dictionaries, which supports the argument that teachers usually employ digital tools and resources as extensions of the technologies they are familiar with (Erstad 46). The teacher acknowledges that he has room for improvement when it comes to using new tools, such as using iPads for digital assessment. This suggests that in spite of the emphasis on using Word, Its Learning, and searching for information, the teacher is open to implement new technologies in ways that break with tradition.

Teacher B expressed a lack of interest for ICT and plainly stated that he did not care that he did not live up to the expectations, as long as the basics were covered. Based on the previous answers, the 'basics' included knowing how to use technology, knowing where to find information online and how to use that information. Earlier, the teacher described this process as a "productive" way of using technology, but if the implementation of ICT is not directed towards future needs for digital skills, then how can it be considered productive? 'Productive' implies that the user of digital tools, for instance, gains something from the experience with the tool or media. My argument is that the implementation of ICT should not just be productive, it need to be meaningful as well. What the students gain from using ICT in the English subject should be knowledge and skills that are applicable in politics, in a future job, at home, at college, or online. English language learning should not just be about passing

the exams, it needs to focus on developing students on a personal level (Bildung), as well as a professional one (knowledge).

As for Teacher C, the answer indicates that she is confident in the way she applies ICT in lessons, and that her knowledge of different digital resources and how to use them are quite extensive. When the teacher was asked about evaluation of online sources, a follow-up question not listed in the interview guide, she answered:

> **Teacher C:** Yeah… uhm, we talk a lot about it [laughs], and, for instance … it kind of depends on the students as well, but some are really … you know, they read newspapers on a daily basis and they say like to, for instance, read several newspapers to check if the story is correct or if there is any discrepancy, uhm … but, so I think we are able to a certain extent to show them that these are most of the time reliable sources, and if you are going to use, uhm, that you need to list you sources, you should have several sources for a topic, and some people say "I know this stuff from before", and I always say that it is never your knowledge [laughs], it's someone else's … (Appendix 5)

In addition to this, the teacher explained that some of the top students sometimes wondered why they were not given top marks. The teacher would then have to explain to the students that they did not refer to sources in the text where references were required. Most often the students would only list the sources at the bottom of the paper without referring to them in the text. The teacher's answers show that not only does she use a diverse selection of digital resources, she also gives high priority to source criticism and how to reference sources within the text. Furthermore, the description of some of the digital tools and activities suggests that the teacher sometimes implement tools that the students find interesting.

The fifth question in the interview guide asked the teacher to state to what degree they employed ICT (computers and the Internet) during English lessons. The teachers answered:

> **Teacher A:** I use it a lot. I use it to plan [the lessons], and I have everything … the lessons are … planned in advance and so I find links, which I add to the work sheet, meaning the Word document. I use it a lot, especially YouTube … show them, and I use [computers] for PowerPoint presentations for instance, for pictures, to listen [to audio files]. Usually one will find audiobooks online. Not in English, but in other subjects you will [find them].

(Appendix 3)

Teacher B: As an average, a period is forty-five minutes and normally, maybe, ten minutes of it is based on ICT. Sometimes more, sometimes not at all. I often go to class without a computer.

…

Teacher B: Sometimes I use it half the lesson or even more. So it varies, but as an average, ten minutes.

(Appendix 4)

Teacher C: Uhm, almost all the time? I think I begin my lesson always [with the computer] because we need to see who's there, so, and then instead of writing it on paper first and then logging it on SkoleArena, which is the system where we have to do it, I just do it directly on SkoleArena. And then usually I go on to show them the lesson plan for today, which is on Its Learning, and if they… then it depends. Sometimes it depends really on what type of class I have, because if I've got students who are paying attention, sometimes I use the blackboard simply, because I know we've got more time and I can turn my back around without them doing all sorts of things (laughs). But if I've got students who aren't paying attention then I often use Power Point because then I can walk around and see what they are doing. Yeah, so, sometimes Power Point, and also, yes, we use a lot of Google Classroom as I mentioned.

(Appendix 5)

Both Teacher A and Teacher C appear to employ ICT often in English lessons. The activities might be different, but both teachers claimed to use a number of tools/resources during lessons, which indicates that ICT is employed one way or another for an extended period of time. Teacher C said that the duration in which ICT is employed and how depends on what is on the agenda and how focused the students are. Teacher B on the other hand, stated that he used the computer for about ten minutes (average) on a regular basis, and that occasionally he would teach English without bringing the computer with him to class. Considering the attitude Teacher B expressed in his reluctance to use ICT more than was absolutely necessary, it was not a surprise to discover that last piece of information. The teachers' answers provide an understanding of how much priority is given to the implementation of ICT when teaching

English. I will stress that using computers in this case refers only to the teachers' application of computers and/or Internet in English lessons. This means that even though Teacher B does not apply ICT as frequently as the other teachers, his students might use computers during lessons where the teacher's interaction with computers is limited or non-existent.

The next question is a follow-up to question 5: "Do you make an effort to diversify your employment of technologies or do you have a preference in terms of using technology during lectures?" All three teachers responded that they tried to use different digital media and resources to give the lessons variations. Teacher A stated that even though he tried to diversify the lessons with different kinds of digital tools, he often ended up switching between a few digital tools and media.

> **Teacher A:** Uhm ... I try to vary [the tools/media used in teaching], but of course it is often the same [options used]. It is a lot of YouTube, NRK Skole, video clips, and… I use Kahoot a lot. I could probably … plenty of other things I could have used more often.
>
> **Interviewer:** Yes, but do you usually plan to use … if you use webpages, you use the textbook homepage for example, or do you find other places where the [the students] can get information from?
>
> **Teacher A:** Yes, I do use the homepage for the textbook. Not so much in English, because that webpage is so updated anymore. It is not exactly new, but I do use NDLA. I use … when they have to search for … find information about stuff, and that's when the students often use Wikipedia. Uhm … otherwise, it's Store Norske Leksikon or other … yeah, those kinds of things. I also use newspapers, news articles, for instance. I have used BBC's homepage. They have this really nice Learning English page that I have sometimes used. I haven't used it as much this past year, but I used it a lot before. Yes, I try to diversify. There are many good sources.
>
> (Appendix 3)

Similarly, Teacher B reported that he tried to use different digital media and resources where it was appropriate, although he had some trouble understanding the question:

> **Teacher B:** No, no. I mean, what is meant by that question? Can you explain it?
>
> **Interviewer:** What I mean by diversify is: do you make an effort to do something different with technology? Different technologies each lecture or to specific tasks …

or do you have a preference in the way you employ technology? For example using it as a way of presenting information, for example.

Teacher B: Well I use it, presenting information is one thing of course, power points or whatever. But I also use YouTube and other media cites to show film, music, play songs, as you do in English, of course. It is more interesting to watch a band or group, Bruce Springsteen of course singing "Born in the USA" on the screen than to listening to the music

…

Teacher B: So I try to diversify, use what I think is appropriate when I use it.

(Appendix 4)

In the passage below, Teacher C stated that she tried to use different kinds of digital tools and media, but it all depended in the situation and how far out in the school year they [the class] were.

Teacher C: No, I try to (laughs). I try out different things, uhm… of course it depends… you know, now we are closing up to exams, so now we are just trying to recap what we have done. Uh, but in the beginning of the school year, I try to use various things, so I don't have really have a preference. I am not really a fan of Power Point, but it's useful sometimes, but, I like to do various things, and try out, you know, sometimes there's webpages with grammar exercises, and you know, if you've only got 10 minutes left of a lesson and you want them to do something then that can be useful.

…

Interviewer: Have you ever tried Kahoot or …

Teacher C: Yes! Kahoot … Absolutely, as well. They love that, and that's nice when it works.

…

Teacher C: Yes, and also YouTube, of course. We find lots of clips on YouTube. Sometimes, and that's also a good way of starting a lesson. Or if finishing a lesson with a YouTube-clip, because, yeah, it makes everyone happy [laughs].

Interviewer: Yeah, an aesthetic means is often useful to get their attention…

> **Teacher C:** Yes, absolutely. Many are very visual learners so they like pictures and yeah. I've also sometimes I've also found memes[16]. I'm not sure how to prom … pronounce it…
> (Appendix 5)

All three teachers claimed to make a conscious effort to diversify how they implemented ICT in English lessons. Teacher A often used videos and Kahoot, but also typical educational webpages such as NDLA and BBC Learning English. He did not often use the homepage for the textbook, since it had not been updated for some time, suggesting that the teacher did not think the content was as relevant now as it once was. The teacher also mentions Wikipedia saying that the students often chose Wikipedia when they search for information, a fact that is supported by Blikstad-Balas and Hvistendahl (Blikstad-Balas and Hvistendahl 14). The reason for this that people often chose "easily available sources and tend to make the least possible effort in verifying them." (Blikstad-Balas and Hvistendahl 14) Teacher A has several times stressed the importance of knowing how and where to find good sources, and Wikipedia is typically not associated with reliability since anyone can edit the articles, even people who have no academic background.

Teacher B stated that he did use different digital tools, but only where he felt it was appropriate or where a task demanded it. In relation to this, he said:

> **Teacher B:** But, I'm not very focused on that. I use it when I feel it is both necessary and it fits in. I mean, I absolutely do not feel a pressure of implementing more and better ICT use in my class. Actually I think I'm a better teacher than most of students or the teachers who use a lot of the ICT.
> (Appendix 4)

In the passage above he reverted back to his previous position and stated that he felt no need to spend too much time on using ICT in different ways. According to him, he might have been a better teacher than those who often implement ICT in teach, which is a bold statement when one considers how the Knowledge Promotion prioritizes digital skills as one of five basic skills (LK06/13, Framework for basic skills).

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[16] Memes are common feautures on 9gag.com. In this case a meme refers to "an amusing or interesting picture, video, etc., that is spread widely through the Internet". The definition has been taken from merriam-webster.com.

In contrast to this, Teacher C provided a diverse selection of digital tools and media implemented in English lessons. She admitted to not be a fan of using PowerPoint when teaching, which is usually among the commonly used digital resources among teachers. Sometimes the teacher would use YouTube-videos to begin or end a lesson because "it makes everyone happy", suggesting that the teacher does try to include the students' interests when teaching. However, Teacher C is similar to the other two teachers in the way that neither teacher does claims to use any kind of social media, blogs, online computer games, or discussion forums when teaching. Chapter two explained how such digital resources have the potential to develop the students' communicative skills, as well as the digital skills it requires to use informal digital media to promote language learning (see section 2.8 about formal education and informal learning). The results show that even though the answers from Teacher A and C indicate that their EFL lessons are rich with digital tools and media, it seems as though the current practices with ICT in the English subject are still very traditional. None of the teachers I interviews implied that Facebook, Instagram, blogs, et cetera, were viable options for promoting digital skills in the English subject.

The seventh question in the interview guide was as follows. "In your opinion, do you think the competence aims relating to ICT in the Knowledge Promotion are sufficient to prepare students for life after school?" Teacher A could not remember the competence aims related to ICT, but after clarifying what the competence aims (directly) related to ICT involved, the teacher commented that the curricular practices of ICT did not focus on having knowledge, but rather knowing how to find it, and knowing that information/knowledge is good (Appendix 3). Teacher A and C were in agreement that among the most important aspects of digital competence (and skills) in the English subject curriculum was the ability to find information and critically assess the sources, as shown below:

> **Teacher A:** ...[The importance is] To find knowledge, to use knowledge, knowing what you have found is good, and we spend a lot of time on that. It is very important [to know] if a source is good or bad. We talk about that. Otherwise, I'm all for the students having access to the Internet. A lot of people shut down the Internet or Facebook ... in a way, if one wants to do that, it is not a good solution because they will have access to those things later in life. They should rather learn to put it aside or use it in a good way.
> (Appendix 3)

Teacher C: They should … of course I think digital resources … it's also about, ehm, your sources on the internet so they should be able to think critically about what they read online. So not only in work life, but also in life in general. Yeah, because …there's many … crazy articles on the Internet and … which people share on Facebook.

…

Teacher C: About all sorts of things, so I think, you know, uh … how to find knowledge, you know, or … knowledge, that's not the correct word, but to learn new things; find sources that are reliable if you want to learn something new and just not read the first and best, and believe it, so … kind of to-to think particularly about what they read and also to find… have several sources when they are going to find information about something.

(Appendix 5)

As illustrated in the teachers' answers, one of the main objectives, according to the teachers, is to find reliable sources and reliable information and use it in language learning. The curricular practices of ICT are, in their opinion, not about possessing the skills and knowledge of ICT. ICT in the English subject is about finding and adapting information, and critically evaluate the reliability of that information, which is, of course, an important aspect of the subject curriculum

Teacher B, on the other hand, had a different opinion on the topic:

Teacher B: My experience is that the digital competence is something that students learn elsewhere. They don't learn it at school.

Interviewer: Oh, ok.

Teacher B: So, when it comes to future occupation, job, work. Their basic competence they need are from other sources than school. But when it comes to English, there is no big difference when it comes to English than other subjects. As I said, I have a son who works with ICT, he is a consultant in a ICT firm. When he went to videregående he never learned anything at all about how to prepare himself for future life. His knowledge came from his own interest.

(Appendix 4)

Teacher B claimed that students learn the digital skills they need for future education employment, civic debates, et cetera, in other places than at school. Those digital skills were, according to him, developed in private, which coincides with the main argument of this thesis. Students develop digital skills at home that are relatable to the society they will face after graduation, but my argument is also that those digital skills must be honed at school. Students are not able to apply ICT appropriately according to the context without the guidance of a teacher, as indicated in the observation of the students' interaction with ICT (section 4.4).

However, despite arguing that student learn the digital skills they need at home, the teacher was adamant that those skills were not necessary in the curricular practices of ICT in English, and that the digital skills needed in the future must come from other sources than school

Teacher B: I always ask them to ask questions.

...

Teacher B: To be critical. Is this correct? Can you find other sources that confirm or contrast your findings in the first. So it is like many other parts of life, you learn things because it is a part of everything. It is not just a part of school, the computers. I mean sometimes it's more central than basic in the lives of people outside school. In their private lives. So, in fact I think school should try to keep the use of computers at a minimum, not the maximum. So when it comes to preparation for life, in the use of ICT they have other sources to turn to than school.

(Appendix 4)

In other words, the teacher recognizes the value that informal practices of ICT represents for the students, but those practices are not considered valuable in formal education. Teacher A commented that the students needed to learn to put away Facebook in lessons or learn how to use such media in a "good way", suggesting that "good way" implies promotion of language learning. The teacher did not, however, give any indication of implementing informal digital resources (like Facebook) himself, which suggest that the teacher recognizes the possibilities, but does not actively work on employing those kinds of media when teaching English. Teacher C did not say anything about informal digital resources that would suggest that she employed those resources in the English subject. Neither did she acknowledge any possibilities for promoting language learning and digital skills using informal digital media.

The eighth and final question in the interview guide was: "Some scholars suggest that the notion of digital skills and digital competence in the Norwegian curriculum are ideals rather than something we can achieve. Do you agree with this statement? Why or why not?" Yet again, Teacher A commented that he was uncertain of what was stated in the competence aims where ICT was concerned, saying he was not "as confident" in that area (Appendix 3), which was a surprise considering this was not a teacher who had recently gotten his degree. It was even more surprising considering he had in the previous questions expanded on how he employed ICT in English lessons, and that he always attempted to diversify the way he used ICT when teaching. Furthermore, the subject curriculum is the basis for how every teacher teaches his/her subject, and yet, this teacher claimed to not be so familiar with the competence aims related to ICT. However, after some explanations on my part, the teacher managed to answer the question:

> **Teacher A:** Well, it must be one of those things... well, things they already know. Like when I went to school, we were taught how to use Word.
> **...**
> **Teacher A:** I believe that students today already know a lot of those programs. I think it is more about finding information, and finding the right [reliable] information, because there is so much information out there.
> **...**
> **Teacher A:** ...I don't believe that digital competence and digital skills involve the ability to handle programs, computer program. It is about having the ability to find information and being able to use it.
> **...**
> **Teacher A:** [after the definition of digital skills in the English subject has been read to him] Mhm. That last part about copyright is something we do not talk about much (...) but to gather [find] texts and knowing about the text ...
> **...**
> **Interviewer:** But doesn't it... isn't related to [copyright] when you talk about plagiarism, because the copyright belongs to... if not the author, then the publisher...
> **Teacher A:** Yes, and that is something we talk about. Referencing sources appropriately, and we spend a lot of time on... or the students do not have the competence for that when they come to us [begin upper secondary school]. A lot of them ... they don't really get it.

The teacher concludes that ICT in education, particularly in EFL, is not just a heavily debated ideal. Implementation of ICT is a frequently used approach to the English subject with particular focus on source evaluation, which is a central aspect of language learning in the English subject curriculum (chapter 2, section 2.4).

Similarly to the previous questions, Teacher B's answer showed how the teacher did not view implementation ICT in the English subject, or any subject for that matter, as a priority:

> **Teacher B:** Yeah, well. I have experienced a lot of politicians and officials, leaders within the educational system stressing all the time how important it is to know and use ICT in the school and it should be more important and I have also experienced a lot of experiments in school and what is common for all these experiments in school is that they have all failed. I don't know whether you know a school called "Nordahl Grieg"? [Continues to explained the failed project of a fully digitized school at Nordahl Grieg]
>
> **...**
>
> **Teacher B:** So I think, yeah, they are ideals, but in my view the ideals are wrong. I mean politicians are not gods and experts are not necessarily experts. I think common sense is more important than what many of these so-called experts and politician do.
>
> **...**
>
> **Teacher B:** I have begun to be quite confident that my view is quite sensible.
>
> **Interviewer:** Yeah. If you have taught for a long time do you get a sense of what works and doesn't?
>
> **Teacher B:** Of course when you grow up you are told all the time that you have to use the computer, you have to use the computer. Maybe you feel it's, it's necessary and that's what works, but believe me it's not.

It is quite clear from this teacher's answers that do not consider informal learning opportunities in relation to ICT as possibilities for the students' promotion of digital skills needed in a globalized (network) society. As previously mentioned, the teacher acknowledges that students cultivate digital skills on their free time, but he does not consider these skills to be useful for learning English, even though they are useful for future jobs, and so forth. This shows how the teacher contradicts himself. On the one hand, the digital skills the students develop at home are useful for life after graduation and for society at large. On the other hand,

those skills are not relevant to learning English. The whole concept of the Knowledge Promotion is to provide students the necessary knowledge and skills in order for them to be able to participate and contribute in society. The primary objective of the English subject is to provide students with the knowledge and the skills required to think and act independently (Bildung, see chapter 2, section 2.3), to communicate efficiently and an fluently with others, and to be able to discuss and understand aspects of foreign cultures and language variations. This teacher is evidently not interested in implementing ICT more than what is absolutely necessary.

Teacher C, on the other hand, answered that while some schools might be more reluctant to using ICT and incorporating new technologies when teaching, most teachers were (from what she had experienced) more open to using digital tools if it made their job easier:

> **Teacher C:** I think of course some places, it's probably not all talk, and some schools might feel … uh … it depends on the culture in your school, and some might feel that "now our county is saying that you need to focus on digital tools" and they are thinking that we are fine as we are, we don't want to … (laughs) start all these new things, but … uh … in my experience, most teachers, when they've tried something new, and if it's … fairly easy to use and if they see that they can save time, then they're more than happy to just try to learn more about it. I think most teachers and schools are open to trying out new digital tools, I think.

Both teacher A and C had generally a positive attitude towards using ICT when teaching. Based on the answers from the interviews, these two teachers were more likely to attempt to use informal digital media to promote learning than Teacher B would. Teacher B only utilized ICT in the English subject when it was absolutely necessary or when he believed it was appropriate. However, none of the three teachers appeared to incorporate the students' informal digital skills into the ICT practices at school, which supports the main argument that the curricular practices with ICT is not directed towards the students' development of digital skills that are useful in a global network society.

4.6 Observing the teachers – comparing the results with the student database
The following section will compare the notes from the observation up against the results from the teacher interviews. Additionally, the conclusions drawn from the teacher interviews will be compared to the student survey results to examine if the databases confirm or dispute the

primary research question of the present study. It should be noted that these observations will not be able to confirm or dispute Teacher C' answers, due to the fact that her English lessons were not observed, as explained in chapter 3, section 3.10.

As illustrated in the section discussing the observations in relation to the students, the teacher (Teacher A) from session 1 of the observations had initially explained that ICT would probably not be used as frequently this lesson as they normally would. The reason for this was that the teacher had planned a test for the students, for which he needed to prepare them. However, the observations showed the opposite. The teacher used the computer to illustrate different spelling and pronunciation of English variations (American and British English) using the online Cambridge Dictionaries (Appendix 7, nr. 8), using the big screen to illustrate an example of a summary (nr. 16), playing an audio file (audio book) from the textbook's homepage (nr. 10), and showing YouTube videos of how to pronounce American English words versus British English, or RP English (nr. 22 & 23).[17] The observations support the conclusions drawn from the interview with Teacher A. While it is evident that ICT are frequently used throughout the lessons, the implementation of ICT is mainly focused on what was described as formal education in chapter 2 (section 2.8. Jenkins et al.). This as also true for the students, who reported that the majority of the class would use computers for Word, Its Learning, and research (Table 4.6, page 57-8), with Word being the most time-consuming activity (Table 4.7, page 59). The instances of Facebook, 9gag (Appendix 7, nr. 12), and similar websites were not many in this class, but the fact that they did happen, suggests that Lund's argument that people constantly move between contexts (chapter 2, 2.8) is in fact true. The students had reported in the survey that even though they did not always use computers in English lessons (Table 4.5, page 55), the majority of the students would use computers in English lessons to check their social media pages with an average of twelve minutes per English period[18] (Table 4.7, page 59). However, the teacher had made no implications that social media, blogs or computer games (Table 4.6, page 57-8) were employed for educational purposes, which indicates that these activities were only for the students' entertainment.

The second session of observations supported Teacher B's claims that he did not prioritize using ICT when teaching English, except in cases where it was necessary, according to the teacher. The teacher mainly used ICT to instruct the students on how to write essays and articles (Appendix 8, nr. 7), and presenting facts about Roald Dahl (nr. 4). The students were only instructed to use their computers to produce an essay on a topic of their choice (nr.

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[17] RP English – Received Pronunciation
[18] Double periods – meaning twelve out of ninety minutes

13). However, the instances of non-curricular practices (or informal practices) were more frequent in this class than in the previous one, which was illustrated in section 4.4. Whether this has a connection between the teachers lack of variety in terms of implementing ICT in the English lessons, is not easy to say.

What observing this class told me was that the students had what the teacher called "technical skills" that allowed them to effortlessly navigate between webpages and computer programs that are normally not recognized as resources for learning. Having the technical skills suggested that the students had hours of experience with the programs/website, which was proven in section 4.2 (page 49) where the majority of all the participating students reported to spend between three and six hours on the average weekday, and six to nine hours during the weekend, of which between one and two hours were dedicated to school related computer activities. This suggests that the remaining hours are spent on entertainment or communication, or perhaps a combination between the two. The results from question 6 and 7 in the survey suggested that students often multitasked at school, since some students reported they engaged with the different activities sporadically throughout the lessons. It is highly likely that students multitask when they engage with computer at home as well.

However, neither Teacher A nor Teacher B attempted to utilize the students' informal digital skills to promote language learning. The answers and the observations proved that regardless of the fact that Teacher A had a positive attitude towards using ICT in teaching, the implementation of ICT in the English were restricted to ICT practices that are associated with formal education. Teacher B did not prioritize using ICT when teaching, which is in contradiction with the priority ICT and digital skills have been given in Norwegian education (Chapter 2, section 2.6). The teachers seem to not fully understand how important it is for the students to develop digital skills that involve more than finding and evaluating reliability of information. While source criticism is an exercise in critical and independent thinking, which is an aspect of Bildung (Chapter 2, section 2.3), it is not the only aspect of digital skills the student will need when they interact with a globalized networked society. Communication across contexts and genres must be emphasized, as well as knowing how to interact and communicate with people of different backgrounds than oneself, which is common in contemporary society where we discuss international and foreign politics, world economy, pop culture, et cetera, over the Internet through a common language (English) that continues to develop new variants (Lund, section 2.9).

4.7 Summary of results

The findings in the present study have examined the results from the three research methods used to collect the necessary data. The results illustrate the main argument that current curricular practices need to change in order to prepare students for the global networked society that awaits the students after graduation. The results from the student survey illustrated that interacting with ICT is a common occurrence for the students, both at school and at home. The results also indicated that the students' ICT practices in the English subject were not very different from the ICT practices in out-of-school contexts based on what the majority of the participants answered. In other words, the students have the technical skills, the "know-how", to navigate computer programs and websites. What they need to learn is how different contexts demands different kinds of skill sets, which is why it is important for teachers to build on the students' informal experiences with ICT, as well as the formal ones. However, the teacher interviews indicated that the curricular practices with ICT are generally conservative in the way that the technology applied when teaching EFL, are mostly concerned with text production (as seen in the student survey as well), searching for information, assessing the information, and being able to use that information in English language learning. The results from the teacher interviews indicated that while the subject curriculum offers teachers the opportunity to incorporate informal practices with ICT into their teaching, the potential for learning and developing digital skills is not fully explored by the teachers, which means that students are left to their own devices when it comes to learning how to communicate, interact and behave in a network society.

5. Conclusion

5.1 Introduction

This final chapter will look back on the primary research question of the thesis, as well as the theoretical background for the study. This chapter will also summarize the research methods used in the study, along with a conclusion to the results of the research. The next section will include a review of limitations to the research, and finally, the implications of this study will be addressed in section 5.4

5.2 Conclusions

The focus in this thesis has been to examine to what extent the digital world of the English subject curriculum corresponds with the digital world of our society, and how informal use of ICT promotes the digital skills the students need in a globalized network society. The topic of the present thesis was motivated due to the fact that society is in constant change and new technologies are constantly in development. Despite this increase in technology, experiences from the English classroom has showed me that the curricular practices with ICT in the English subject seem to not be directed towards the informal ICT practices the students will encounter when they eventually graduate upper secondary school. On the contrary, the ICT practices in the English subject seemed to only focus on formal educational practices with ICT, such as using Word to write some kind of text (essay, article, letter to the editor, etc.), conveying information with Its Learning, PowerPoint, or similar computer programs, using dictionaries, and the list goes on. The focus point of the study was therefore how informal practices with ICT could be merged with the already existing formal practices in a way that would promote the students' digital skills according to the needs of the global society.

Chapter 2 presented the related theories on ICT in education, both in general and in relation to the English subject. The chapter discussed theories on national, as well as international level in order to fully understand the position of ICT in education. These theories included definitions of concepts like digital skills (in the English subject) as defined by the Department for Education and Training, digital competence (as defined by OECD and Rune Krumsvik), as well as digital literacy, as defined by Buckingham. In relation to the concept of digital competence, the chapter provided a definition for (digital) Bildung based on Klafki's understanding of the concept. Other theories discussed how attitudes affected the way teachers view the importance of ICT, and how students are overgeneralized as digitally competent because of the fact that students today have grown up with modern technology

such as computers, the Internet, and computers. However, the most central theories discussed the differences between formal education and informal learning, where Andreas Lund (among others) argued that the Norwegian schools need to consider the fact that people constantly move between contexts. Furthermore, the chapter argued that the students' informal out-of-school experiences with ICT and the formal application of ICT in the English subject should be combined in order to promote digital skills that will prove useful for students in a global society.

Chapter 3 presented the research methods employed in the study. As the chapter discussed, research method was a mixed methods approach, which combined both qualitative and qualitative data in order to answer the research questions. Furthermore, the chapter established that the study employed a mixed methods strategy called concurrent triangulation strategy, which involved using observational data to compare the data from the student survey (quantitative) and the teacher interviews (qualitative). Using a mixed methods approach to the research will hopefully have provided enough data to give an in-depth understanding of the curricular practices with ICT in the English subject.

Chapter 4 presented and analyzed the results from the mixed methods approach presented in the previous chapter. The research have shown that although the subject curriculum offers the potential for employing informal digital resources and media in language teaching/learning, the curricular practices with ICT are still directed towards conservative formal education, as explained in chapter 2. The research also indicated that the students' practices with ICT in out-of-school contexts were quite similar to how they engaged with ICT at school, which confirms Lund's claim that people, especially young people, continuously move between different contexts. The results, however, showed that the challenges of what Lund called 'polycontextuality' is that the students could not separate the entertainment aspect from the potential learning aspect presented in the informal practices, such as Facebook, Instagram, blogs, computer games, et cetera. In order for the informal practices to be beneficial for promoting digital skills, the teacher needs to act as a monitor that helps the students' navigate the potential learning platforms in an educational context.

To conclude, the students have the technical skills and experience required to employ informal practices of ICT in a way that will promote the development of digital skills needed in the future. However, the teacher must teach them how to distinguish between contexts and what those contexts demand of the students in relation to skills and knowledge. In order to do so, the teachers must change their practices with ICT and be more open to using digital

resources and media that they might not have as much experience with, but that offer the potential of developing skills directed towards future civic life in a digitized global society.

5.3 Limitations

It is a limitation to my research that the out-of-school practices with ICT were not examined in more detail. It would have provided a better understanding of the students' ICT practices and the potential for incorporating these practices into the already existing curricular practices with ICT. Another limitation is that the observations provided limited information due to the limited time. Ideally, the observations would be done over an extended period of time.

Furthermore, the limited number of participants in the teacher interviews ensured that the results would not be representative for teachers of EFL as a whole. The results did not take into account how many years of experience as a teacher the teachers had, nor was the teachers' age discussed as a potential factor.

Since all the participants in the student survey were students in Vg1, it means that the results are not a representation of all students in upper secondary. The results only show a generalization of students aged around sixteen.

5.4 Further research

As the previous section mentioned, the present study did not focus on the age and experiences of the teachers who participated in the study. It would be interesting to go into further detail on this matter, and explore how experiences and age can affect the way teachers view ICT in the English subject. Also, it would be interesting to investigate in detail the potential development of language learning and digital skills, which informal practices with ICT present. The objective of this thesis was to present new research within the field of English didactics, with particular focus on ICT, and hopefully, the present study have been able to inspire other researchers to continue the research on ICT in the English subject.

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Student survey – ICT in and out of school

1. **How much time do you spend on computers on average per weekday (Monday through Friday) at home? Computers in this case may refer to pc, tablets/iPads, using smartphones for surfing the web/Facebook chat.**
   o 0-1 hour
   o 1-3 hours
   o 3-6 hours
   o 6-9 hours
   o 9-14 hours

2. **How many of these hours are spent on schoolwork? Schoolwork includes homework, studying for tests, etc. (On your computer. If you do not use computers for schoolwork at home, do NOT answer).**

3. **How much time do you spend on computers on average during the weekend? Computers may refer to pc, tablets/iPads, smartphones for surfing the web/Facebook chat etc.**
   o 0-1 hour
   o 1-3 hours
   o 3-6 hours
   o 6-9 hours
   o More than 9 hours

4. **How many of these hours are spent on schoolwork? Schoolwork includes homework, studying for tests, etc.**

5. **To what degree do you use computers during English lectures?**
   o Every English lecture
   o During almost every English lecture
   o During a few English lectures
   o Never

6. **What do you use the computer for during class? (You may cross off more than one alternative)**
   o Social Media (Facebook, Twitter, Instagram, etc.)
   o Word-documents (for essays, notes, textbook tasks, etc.)
   o Blogs

- o   Online newspapers
- o   Games (online and offline)
- o   Its Learning
- o   Research
- o   Other:

7. **Arrange the alternatives you crossed off in the previous question from most frequently used to least used, and approximately how much time you spend on them during class. Use numbers to rate your alternatives followed by approximate time spent on them. (Ex: 1. Word 20 minutes, 2. Games 15 minutes, 3. Its Learning 5 minutes, etc.)**

8. **Do you use your computer for different purposes at home than what you do at school?**
   - o   Yes
   - o   No
   - o   Sometimes
   - o   I don't know/I don't really think about it

9. **Can the alternatives you crossed off in question #6 be related to future employment or society in general?**
   - o   Yes, they are relevant for society and most jobs
   - o   To a certain degree. They may be relevant for some jobs
   - o   No, the alternatives are not relevant for future employment
   - o   I don't know/I have not thought about it

10. **Gender**
    - o   Male
    - o   Female

Thank you for your participation!

Interview guide – Teacher Interview

1. **How many hours do you spend on your computer per day (approximately)? Please differentiate between work and recreation.**
2. **What does digital competence mean to you? How would you define it?**
3. **Give a short description of what you think could be expected of a teacher of EFL in upper secondary school with regard to ICT.**
4. **Do you believe your digital competence is up to par with what is expected of you in a technology rich classroom?**
5. **To what degree do you employ computers and the Internet during your lectures?**
6. **Do you make an effort to diversify your employment of technologies or do you have a preference in terms of using technology during lectures?**
7. **In your opinion, do you think the competence aims relating to ICT in the Knowledge Promotion are sufficient to prepare students for life after school?**
8. **Some scholars suggest that the notion of digital skills and digital competence in the Norwegian curriculum are ideals rather than something we can achieve. Do you agree with this statement? Why or why not?**

Appendix 3: Interview Teacher A

I: Eh, nå er spørsmåla på engelsk da, så jeg leser dem der.

T: Ja. Vil du jeg skal svare på engelsk, eller skal jeg ta det på norsk?

I: Du kan ta det på norsk hvis du vil, så kan jeg heller … ja, jeg kommer … da svarer jeg bare på norsk i oppgaven eller så oversetter jeg fra det etterpå.

T: Ja.

I: Så … første spørsmål er … how many hours do you spend on your computer per day approximately? Please differentiate between work and recreation.

T: hmmm … ja … og da er det med … med alle sånne tablets og alt mulig?

I: Ja, det trenger ikke nødvendigvis bare være pc (…)

T: Ja. [while I explain]

I: … det kan godt også … hvis du har en tablet og bruker den, eller hvis du leser nyhetsaviser for eksempel på telefonen.

T: Mm. Da er det veldig masse.

I: [chuckles] Ja

T: Eh, nei … hvis vi bare … før jobb, så er jo jeg sikkert innpå en halvtime (…)

I: Ja.

T: (…) på morningen og på bussen. Og da er det jo … privat. Og så er det jo gjerne eh … før jeg … så i løpet av arbeidsdagen min så er jeg sikkert på privat bruk til sammen kanskje … mellom et kvarter og en halvtime? Så da er vi oppe i nesten en time.

I: Mm.

T: Hvis du tar det private først da … for hvis det var sånn du ville ha det. På ettermiddagen … nei, det blir sikkert til sammen sånn av og på så … eh … kanskje en time, kanskje … ja … kanskje noe sånt?

I: Mm.

T: Også er det jo eh, jobb. Da er det jo veldig forskjell i fra dag til dag, men sånn i snitt … kanskje … eh … to … to timer?

I: Ja?

T: Men teller du for eksempel i klasserommet sånn som nå?

I: Ja, altså det gjelder alt … eh … forarbeid og sånne jobbrelaterte (…)

T: Ja, da er det mer enn to timer. Ta tre timer.

I: Ja.

T: Også sier jeg i snitt jobber en halvtime om ettermiddagene. Så eh … kanskje tre, fire timer på jobb i tillegg til det som jeg sa. Nå husker jeg ikke hva jeg sa.

I: Eh … ja, en halvtime da eventuelt etter jobb.

T: Ja. På jobbrelatert.

I: Ja, ehm … spørsmål nummer to er what does digital competence mean to you? How would you define it? … Digital kompetanse.

T: Mhm. Det handler jo om å ha tilgang til og ha … å kunne bruke digitale hjelpemidler.

I: Mhm. Så det er sånn du def … definerer det. At å ha tilgang til og å bruke.

T: Ja. Digital kompetanse? Ja.

I: Den er grei. Ehm (…)

T: Det er vel kanskje mer vekt på det å kunne bruke, men … ja.

I: Altså som i å forstå (…)

T: Ja, forstå.

I: (…) teknologien da.

T: Ja, men mer det å bruke den … å kunne bruke den enn å forstå den egentlig.

I: Ja … ehm … Give a short description of what you think could be expected from … eh … a teacher at EFL … or of EFL at upper secondary school with regard to ICT. Altså … English as foreign language. Hva mener du, eller gi en … en kort forklaring på hva du mener kan være … eller er forventet av en lærer i engelsk.

T: I engelsk og bruk av eh (…)

I: Ja.

T: (…) Man må jo kunne bruke, altså Word og … det er jo det grunnleggende … bruke Word og … ja, kanskje først og fremst Word og de programmene, men man må jo kunne finne frem på Its Learning og skolen sine program. Også må man jo kunne bruke søkeverktøy og vite hvordan man bruker internett da med forskjellige sider som ordbøker, som youtube … ehm … søke opp artikler. Ehm … man må … det kan være en fordel å kunne bruke sånn som Kahoot for eksempel.

I: Ja.

T: Ehm … ja, kunne hjelpe elevene med å søke og finne kilder som er … riktige, gode kilder. Det med den type ting. Og også kunne gjøre det på egenhånd da selvfølgelig. Ja, det er vel kanskje det.

I: Det høres greit ut det. Ehm … neste spørsmål er da do you believe you digital competence is up to par with what is expected of you in a technology rich classroom?

T: Ja, stort sett. Det synes jeg, men det som jeg ikke kan så mye om, som jeg skal begynne med nå, det er jo det å kunne rette på … det må man jo kunne, å kunne vite hvordan man skal rette … å bruke digitale hjelpemidler når man skal rette, og det skal jeg ha fått meg en sånn … iPad som … og der finnes det også sånn program som skal gjøre retting enklere.

I: Å ja?

T: Og det … jeg har også meldt meg opp på kurs, så det skal jeg lære meg. Så det er jo det å lære seg en del nye sånne ting da. Så kanskje … for det med retting er veldig tidkrevende, og det finnes nye hjelpemidler som kan gjøre det.

I: Retting og vurdering er jo et av problemene med digitale verktøy, at det ikke er noen egne retningslinjer for det som er godt innarbeidet.

T: Det er jo opp til hver enkelt, og sånn som jeg bruker fargekoder når jeg retter, slik at jeg har noen farger til noen typer feil, eller andre farger til andre typer feil. Det er jo en digital kompetanse. Det er jo en måte å bruke, altså … og det er jo viktig å kunne gjøre det på en god måte sånn at det blir oversiktlig for elevene. Så kanskje det kan gjøres fortere og bedre med ny teknologi som er på vei, men eller så synes jeg at jeg kan det grunnleggende. Jeg tror jeg greier meg ganske bra, og jeg har vel … jeg er ikke redd for å bruke ny teknologi i klasserommet.

I: Nei, det er veldig bra det med tanke på hvor fort samfunnet utvikler seg teknologisk.

T: Ja, men det kommer helt an på … det er helst sikker lærere som er mye flinkere enn meg, som kan mye mer enn meg og det … men, ja.

I: Ja. Hmm … To what degree do you employ computers and the Internet during your lectures?

T: Jeg bruker det masse. Jeg bruker jo det til å planlegge, også har jeg jo alt … timene har jeg på … planlagt på forhånd og da finner jeg fram linker som jeg legger i arbeidsarket, altså i Word-dokumentet. Jeg bruker det veldig mye, spesielt ganske masse Youtube … vise de, også bruker jeg for eksempel hvis det er Powerpoint-presentasjoner, hvis det er bilder, lytte til ting. Nå ligger jo lydbøker ofte på nett. Ikke i engelsk da, men i andre fag gjør de det. Det var det som er spørsmålet? Hvordan jeg bruker det?

I: Ja, eller … ja, i hvor stor grad man (…)

T: I stor grad. Hele tiden.

I: Ja? Ehm … Spørsmål nummer seks. Do you make an effort to diversify your employment of technologies or do you have a preference in terms o fusing technology during lectures?

T: Ehm … Jeg prøver jo å variere, men klart det blir jo en del av det samme. Det blir jo en del Youtube, NRK Skole, videoklipp, også blir det … Kahoot bruker jeg ganske masse. Jeg kunne helt sikkert … masse annet jeg kunne ha brukt også i større grad.

I: Ja, men legger du ofte opp til at du skal bruke … hvis du bruker nettsider, at du bruker for eksempel lærebøkenes nettsider, eller finner du andre steder der de kan få informasjon fra?

T: Ja, jeg bruker jo lærebøkene sine nettsider. Ikke så veldig mye i engelsk, for den nettsiden er ikke så oppdatert lenger. Den er ikke helt ny, men jeg bruker for eksempel NDLA. Jeg bruker … at de skal søke opp… finne informasjon om ting, og da er jo det veldig ofte Wikipedia elevene bruker. Ehm … Ellers er det Store Norske Leksikon, eller andre … ja, sånne type ting. Så bruker jo for eksempel aviser, avisartikler. Jeg har brukt BBC sine hjemmesider. De har en ganske sånn fin Learning English [side] som jeg har brukt litt. Nå har jeg ikke brukt det det siste året, men jeg har gjort det mer før. Ja, jeg prøver å variere. Det er mange gode kilder.

I: Ja, da er det spørsmål nummer syv da. In your opinion, do you think the competence aims

relating to ICT in the Knowledge Promotion are sufficient to prepare students for life after school?

T: Hmm … Nå husker jeg ikke hvordan de kompetansemålene er da.

I: Nå kan jeg jo kanskje forklare litt mer hva jeg mener. At … ikke om livet generelt, men det teknologiske livet de møter i fremtiden. Ofte får man kanskje litt inntrykk av at det teknologiske [arbeidet] på skolen, det stemmer ikke helt overens med den teknologien du møter i arbeidslivet, eller at kanskje det er for lite fokus på det å betale regninger og liknende. Og de målene i skolen er å bruke ulike digitale verktøy til å undersøke kulturer, skrive tekster, slike ting. Det er i hovedsak det kompetansemålene [om digitale verktøy] omhandler.

T: Er det i engelsk du først og fremst tenker på?

I: Ja, i all hovedsak. Føler du at de kompetansemålene er nok til å forberede elevene for det utviklende teknologiske samfunnet?

T: Altså, fokuset er vel ikke på nødvendigvis å sitte med kunnskapen, men å kunne finne kunnskap. Å kunne hente kunnskap, å kunne bruke kunnskap, å kunne vite at det du har funnet er bra, og vi bruker en del tid på det. Det er jo kjempeviktig om det er en god kilde eller en dårlig kilde. Det snakker vi om. Ellers er jeg veldig for at elevene skal ha tilgang til internett. Det er jo en del som sperrer internettet eller Facebook … på en måte, hvis man skal gjøre det, så er ikke det noen god ordning fordi at i senere liv så har de tilgang til de tingene. Da må de heller lære seg å kunne legge det vekk, eller bruke det på en god måte.

I: Ja, at de skaper skille mellom privat og skole?

T: Ja, for det er jo en kompetanse i seg selv, men de lærer jo ikke noe om, sånn som du snakket om regninger … det er relativt enkelt, så det tror jeg de kommer til å ta [skjønne], for disse programmene er jo så enkle. I samfunnsfag bruker vi for eksempel sånn valuta … nei, sånn lånekalkulator og er på sånne … sjekker priser på mobilselskap og sånne dagligdagse ting.

I: Ja? Så det du tenker er egentlig det at det vi ellers gjør som ikke er direkte relatert til

skolen, det er ting som elevene lærer seg litt på egenhånd og ikke noe de nødvendigvis lærer på skolen. Du lærer det andre steder, etter hvert som du kommer over de ulike tingene [teknologisk utstyr, programmer].

T: Ja, og så tror jeg de lærer forskjellige ting i forskjellige fag, sånn som i samfunnsfag. Det er nok kanskje det faget der de lærer mest om sånt. I engelsk er det jo det å finne kilder; det er jo nyttig, også lærer de kanskje noe i engelsk og noe i historie og noe i matematikk, altså det … jeg tenker at til sammen i alle fagene så lærer de nok veldig mange av de tingene de har bruk for. Jeg tror også at veldig mange av de tingene de har bruk for er … kommer litt av seg selv kanskje. Jeg tror også det er forskjell på lærerne, hvor mye vekt de legger på det der med … altså den gamle måten at du skal huske, du skal pugge, du skal kunne mest mulig, i forhold til at du skal heller finne informasjon eller lære å finne informasjon, slik som internett. Lærerne sa det at … jeg husker fra videregående at de sa at "du skal regne i hodet på prøver av og til". "Ja, hvorfor det?" "Nei, for du kommer ikke til ha med deg en kalkulator i lommen resten av livet."

I: Riktig, også får vi en telefon som er datamaskin så å si.

T: Ja, i dag har vi det! Det utsagnet stemmer ikke, for det har vi. Man har jo med seg informasjon overalt hele tiden, så hvorfor ikke bruke det? Lære seg å bruke det på en god måte. Det er jo kjempeviktig.

I: Det er sant.

T: Og det at de har da tilgang til, at de har mobiltelefonene i klasserommet selv om de ikke skal bruke dem. De må lære seg å legge de vekk. Det er jo en digital kompetanse.

I: Siste spørsmål. Spørsmål åtte: Some researchers suggest that the notion of digital skills and digital competence in the Norwegian curriculum are ideals rather than something we can achieve. Do you agree with this statement? Why/why not?

T: Jeg vet ikke om jeg kan svare, for jeg husker ikke kompetansemålene som har med det å gjøre. Jeg er ikke så trygg på det.

I: Si for eksempel … du har jo de fem Basic Skills, og den ene omhandler digitale ferdigheter. Det forklares utdypende at digitale ferdigheter … de sier ikke eksplisitt at det er noe de skal lære. De skal kunne bruke diverse verktøy, de skal kunne forstå det og bruke de i ulike sammenheng.

T: Mhm.

I: Og det ligner jo på… det har jo en sammenheng med digital kompetanse, selv om det er en forskjell der. Tenker du at… er det snakk om mer et ideal at det er noe de skal oppnå senere, eller er det noe de skal kunne fra før? Hva er det det siktes til?

T: Hehe. Det var faktisk et veldig vanskelig spørsmål. Eh… Jeg vet ikke helt altså. Det der er vanskelig.

I: Mye av politikken går ut på at det er fint og flott med IKT, og digitale verktøy, men med tanke på hvor hurtig den… teknologien utvikler seg da, så kanskje vi henger litt etter, eller at skolepolitikken henger litt etter. Altså, skal vi lære elevene å bruke si for eksempel Smart Board som begynner å bli mer og mer brukt i norske skoler. Er det noe vi skal lære dem om eller skal vi gå ut i fra at de kan det selv fra før for de er… de er noe som blir kalt for screenagers…

T: Ja?

I: …Skal vi bare gå ut i fra at de kan ting fra før? Er det det som er meningen med…

T: Det blir vel en del av de tingene… er vel ting som de kan fra før. Sånn som når jeg gikk på skolen så lærte vi å bruke Word. Jeg tror ikke elevene i dag lærer å bruke Word.

I: Jeg husker at vi lærte det vi og, men det var på barneskolen en gang.

T: Ja, vi lærte det jo på videregående…hehe… Vi hadde jo ikke sånt på barneskolen. Så… men jeg tror at i dag så kan elevene veldig mange av de programmene. Jeg tror det handler i mye større grad om å finne informasjon og å finne rett informasjon, fordi det er så ekstremt mye informasjon tilgjengelig. Og det er mer den kompetansen vi må lære de opp i enn å bruke

programmene. For å bruke blant annet… hvis jeg har brukt en digital fortelling, eh… det har jeg gjort… det har jeg ikke gjort i engelsk, men jeg har gjort det i samfunnsfag, men du kan like gjerne gjøre det i engelsk! Og da er det vel et program som jeg aldri har brukt som jeg ikke kan bruke, som jeg bare sier til elevene: "dere skal bruke det programmet", og de finner jo ut av det. Fordi det er så naturlig for dem. Jeg trenger egentlig ikke lære de noe som helst om det å bruke program. Det er vel heller å finne informasjon, finne riktig informasjon.

I: Så for eksempel det som står under digitale ferdigheter, det er ikke nødvendigvis noe du er nødt til å lære dem? De kan lære det selv eller så har de lært det før de begynner på videregående for eksempel? Det er da altså oppnåelig… altså, etter dine meninger?

T: Ja, jeg tror at det som sagt den digitale kompetansen og de digitale ferdighetene handler ikke om å beherske program, et dataprogram. Det handler om å beherske det å finne informasjon og bruke informasjon.

I: Å vite hvor du skal søke, hvilke søkeord du putter inn… hvilke verktøy da?

T: Ja, og når du ser for deg en kilde, så skal du se om det her er en god kilde? Er det riktig kilde? Er det noen som prøver å selge noe, eller noen som har en politisk agenda? Eller er det… er det informasjon som man kan stole på? Så hvis de søker om månelandingen, så kan de få informasjon om det her er bare tull, sant, at det ikke skjedde, også tror de at det er sant. Altså… hvis du skjønner hva jeg mener? Sånn her… ja, for eksempel sånn med ellevte september, og at folk tror at det var liksom amerikanerne selv som gjorde det. Altså, det er så mange sånne… og det er jo de mest ekstreme tilfellene, men det kan… sånn er det jo over alt.

I: Mhm. Ja. Nå har jeg funnet frem hva digitale ferdigheter betyr innenfor engelskfaget. Det står at digital skills in English means being able to use a varied selection of digital tools, media, and resources to assist in language learning, to communicate in English and to acquire relevant knowledge in the subject of English. The use of digital resources provide opportunities to experience English texts in authentic situations, meaning natural and unadapted situations. The development of digital skills involves gathering and processing information to create different kinds of text. Ehh… Digital skills involve developing knowledge about copyright protection… and protection of personal privacy through verifiable references to sources.

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T: Mhm. Det siste med copyright er noe som vi ikke snakker så mye om. Det er jo lite… men det der å samle tekst og vite om teksten… at det er riktig og at det er bra informasjon man får tak i. Det er jo noe man bruker tid på.

I: Så det er ikke bare snakk, det er noe som aktivt arbeides med da.

T: Ja, det vil jeg si.

I: Men sånn som med copyright, det handler jo om opphavsrett. Altså rettigheter til ting…

T: Det er nok… ja, jeg er ikke så flink til det. Å snakke om det.

I: Tenker man ikke at… går ikke det litt under når man snakker om plagiat, for det er jo… opphavsretten tilhører jo… om det ikke tilhører forfatter, så tilhører det jo publisher.

T: Ja, og det er jo noe vi snakker om. Det å referere riktig til kilder, og vi bruker ganske mye tid på… eller det har ikke elevene kompetanse til når de kommer til oss. Veldig mange av de… de skjønner ikke helt det. Det er noe jeg vet både norsklærere og engelsklærere bruker masse tid på det å referere til kilder på en ordentlig måte.

I: Jeg kan huske at vi lære nesten… jeg kan ikke huske å ha lært noe særlig om kildekritikk på ungdomsskolen.

T: Nei, det tror jeg ikke vi lærte før jeg kom på universitetet.

I: Vi lærte noe på videregående, men det er først nå på universitetet at jeg virkelig har satt meg inn idet.

T: Jeg tror elevene i dag har mer… de får mer opplæring om det, men det er jo på grunn av at det… informasjonen er så tilgjengelig.

I: Mhm.

T: Man må jo gjøre det. Også tror jeg at vi lærerne får mye mer kursing nå enn sikkert før… kan jeg tenke meg. Nå har ikke jeg vært lærer så fryktelig lenge da. Jeg har vært lærer i… syv år, og det er masse muligheter til å holde kurs og vi har jo… vi har jo sånn her… personer her på skolen… lærere som har en ressurs til å drive med digital opplæring. Sånn som det kurset som jeg skal på nå er jo en kollega som har… som har en prosentandel til å jobbe med prosjekt, og hun har da valgt det.

I: Å ja?

T: Og det er jo ganske masse sånne… og hvordan du kan bruke Its Learning på en god måte. Eh.. ja, så var det en ting til jeg tenkte… Jo! Elevene har jo også noe som heter… nå husker jeg ikke hva det heter… men det er noe elevene kan melde seg til å bli… jeg kommer ikke på hva det heter… i hvert fall… de er på sånne… de får en slags opplæring i å bruke Its Learning og en del andre ting, også skal de gi opplæring til medelevene sine i klassens time.

I: Ja vel?

T: Og det er jo en ordning på det, og da kan de liksom få… får de pizza da når de har disse kursen. De kan også få det på CV-en, at de har vært sånn…

I: Da blir det liksom opplevelsen av å lære seg teknologi, det blir peer-learning da.

T: Ja, det er det det blir. Og det er… og det tror jeg fungerer ganske bra. Ja… Jeg vet ikke om jeg har svart på spørsmålet?

I: Det var jo det at om snakket om digital kompetanse og digitale ferdigheter, om det er et ideal eller om det er faktisk oppnåelig. Altså, er det noe… er det gjennomførbart?

T: Ja, jeg må jo si det. Jeg syns at det er noe vi jobber mot i hvert fall, og det er jo klart at det er så masse… det utvikler seg jo så fort at det kanskje er umulig å henge med på alt mulig.

I: Det er sant.

T: Men jeg tenker at det viktigste er ikke at de skal lære seg programmene. Det viktigste er jo at de lærer seg å finne informasjon, riktig informasjon og å bruke det på en god måte. Og det er oppnåelig.

I: Ja, det er jeg enig i. Vel, eh… det var det jeg hadde.

Appendix 4: Interview Teacher B

I: Ja, så første spørsmålet er: How many hours do you spend on the computer everyday approximately? Please differentiate between work and recreation.

T: Every day as an average?

I: Yeah.

T: One, one hour. Approximately.

I: That's for work and recreation? Or just work, or recreation?

T: Ok, let's make it two hours.

I: Two hours?

T: Two hours. Yeah. Your computer is always on of course, but I don't use it.

I: Yeah, ok, yeah. That's a difference. Ehm, Question two: what does digital competence mean to you? How would you define it?

T: Digital competence. Technical skills? Meaning you know how things work. That you are able to control "C" and control "V" and you can use it to do different things. That's one sort of [digital] competence. The other one is how to use the Internet, how to find information, how to be able to use sources and all those other things. That's [a] very important part of digital competence.

I: Mhm.

T: Partially technical thing.

I: Yeah.

T: That's how I look on, but a definition? I don't know.

I: Yeah, ok.

T: That's a definition.

I: So essentially, what you think of digital competence is the technical part, but also how to differentiate between sources and make distinctions [between different ways of using digital tools]?

T: Well, the most important thing is to use it in a productive way, meaning that you should know how to find information, how to use that information, how to gather information, etc., etc.

I: Yeah.

T: And in other words my students are very clever when it comes to technical competence and using YouTube or whatever. But to solve technical tasks in English and history … they are not that good, 'cause they do not know how to find information and where to find information. To use the correct search words.

I: Yeah.

T: It was a massage.

I: Yeah, I just had to close it. Ehm, question three then: Give a short description of what you think can be expected from a teacher of English as a foreign language in upper secondary school with regard to ICT?

T: What could be expected? Or should be expected?

I: Yeah.

T: Well, different teachers have different approaches to their teaching. And for me, ICT is not very important.

I: Mhm.

T: I think it is more important for our younger students and for younger teachers, so I use it mainly to find information, to present information. But solving tasks, tests and all these other things, I prefer to do it on paper.

I: Yeah?

T: Because I think it is much better.

I: Yeah. Hehe.

T: And my experience shows that it is better. So you must as a teacher you must be able to use ICT, uh, computers to find information, to present information, to use it as a tool for handing in papers … uhm … giving messages, receiving messages, email, etc. But as an integrated part of the teaching I think it is less important than many others do.

I: Yeah. Question four: Do you believe your digital competence is up to par with what is expected of you in a technology rich classroom?

T: Not really. Not really. But that is, well on the other hand, I do not give a damn.

I: Hehe

T: I do not care what is expected of me and when it comes to ICT, when I cover the basic skills and basic needs. I'll give you an example: there is a thing called "Kahoot".

I: Yeah.

T: Which is very popular today and I use it sometimes, but I never make them, I never create them. When I have tests like that I do it in other ways, more physical ways because I think it

is more a game than a method of learning. I mean, people do not necessary learn a thing. So, I should and might have acquired more knowledge, skills, about how to use the world of ICT in a more advanced and fun way, but actually I don't care.

I: Yeah. That's ok too. Yeah, you kind of have answered a bit of this question but the fifth question is: to what degree do you employ computers and the Internet during your lectures?

T: As an average, a period is forty-five minutes and normally, maybe, ten minutes of it is based on ICT. Sometimes more, sometimes not at all. I often go to class without a computer.

I: Yeah, ok.

T: Sometimes I use it half the lesson or even more. So it varies, but as an average, ten minutes.

I: Yeah.

T: Maybe.

I: Yeah. Sounds good. Yes. Question six: Do you make an effort to diversify your employment of technologies or do you have a preference in terms of using technology during lectures?

T: No, no. I mean, what is meant by that question? Can you explain it?

I: What I mean by diversify is: do you make an effort to do something different with technology? Different technologies each lecture or to specific tasks … or do you have a preference in the way you employ technology? For example using it as a way of presenting information, for example.

T: Well I use it, presenting information is one thing of course, power points or whatever. But I also use YouTube and other media cites to show film, music, play songs, as you do in English, of course. It is more interesting to watch a band or group, Bruce Springsteen of course singing "Born in the USA" on the screen than to listening to the music.

I: Of course.

T: So I try to diversify, use what I think is appropriate when I use it.

I: Yeah.

T: But, I'm not very focused on that. I use it when I feel it is both necessary and it fits in. I mean, I absolutely do not feel a pressure of implementing more and better ICT use in my class. Actually I think I'm a better teacher than most of students or the teachers who use a lot of the ICT.

I: Yeah. So, the seventh question is: in your opinion do you think the competence aims relating to ICT in the knowledge promotion are sufficient to prepare students for life after school, with specific focus on doing these competence aims? There are not that many of them though in English.

T: My experience is that the digital competence is something that students learn elsewhere. They don't learn it at school.

I: Oh, ok.

T: So, when it comes to future occupation, job, work. Their basic competence they need are from other sources than school. But when it comes to English, there is no big difference when it comes to English than other subjects. As I said, I have a son who works with ICT, he is a consultant in a ICT firm. When he went to videregående he never learned anything at all about how to prepare himself for future life. His knowledge came from his own interest.

I: So..

T: I don't know whether I answered your question.

I: Yeah, no, it's fine. But would you suggest then that school expects students to know this or learn this somewhere else?

T: I expect my students, my pupils, who have been, today, born with the use of ICT, they get to know it when they are small children and they learn how to use it through their childhood and as they grow up.

I: Yeah.

T: And they have technical skills that are much better than mine. But what they should learn at school is how to use that technical skills in finding information, using information, a critical approach to what they find on the Internet and of course they do not learn that necessarily by themselves. So that is what I do whenever I show them things on, from the Internet. Articles about this and that. I always ask them to ask questions.

I: Yeah.

T: To be critical. Is this correct? Can you find other sources that confirm or contrast your findings in the first. So it is like many other parts of life, you learn things because it is a part of everything. It is not just a part of school, the computers. I mean sometimes it's more central than basic in the lives of people outside school. In their private lives. So, in fact I think school should try to keep the use of computers at a minimum, not the maximum. So when it comes to preparation for life, in the use of ICT they have other sources to turn to than school.

I: Yeah.

T: Unless of course they want an education within this specific area to study ICT at the University, of course.

I: But then you have the IT program or..

T: Yeah..

I: ..Chosen subjects for that. Ok, so the eighth and last question is: Some researchers suggest that the notion of digital skills and digital competence in Norwegian curriculum are ideals rather than something we can achieve. Do you agree with this statement? Why or why not?

T: That they are ideals?

I: Yeah.

T: And that it is impossible to achieve them?

I: It is more that there is a lot of political talk about how great ICT is and how important it is that students become competent in every aspect of it, not just have the skills to do it but also the knowledge to combine..

T: Yeah, well. I have experienced a lot of politicians and officials, leaders within the educational system stressing all the time how important it is to know and use ICT in the school and it should be more important and I have also experienced a lot of experiments in school and what is common for all these experiments in school is that they have all failed. I don't know whether you know a school called "Nordahl Grieg"?

I: Yeah.

T: Yeah, when they started a few years ago, four-five years ago, their aim was to have a 100% ICT based school, no books, no nothing and they managed to do that for one year and then books started coming in and today they have a fully book - school. So they have books in all subjects. It is impossible to run a school and a subject based solely on the ICT or the computer, PC. That is their experience and that is my experience. There was a period five, six or seven years ago when everything should be digital, which is no longer an option in school. The idea of having books in all subjects is now re-established.

I: Yeah. So..

T: So I think, yeah, they are ideals, but in my view the ideals are wrong. I mean politicians are not gods and experts are not necessarily experts. I think common sense is more important than what many of these so-called experts and politician do.

I: Yeah. That's good.

T: I have begun to be quite confident that my view is quite sensible.

I: Yeah. If you have taught for a long time do you get a sense of what works and doesn't?

T: Of course when you grow up you are told all the time that you have to use the computer, you have to use the computer. Maybe you feel it's, it's necessary and that's what works, but believe me it's not.

I: Yeah, there are still parts in study where you don't use computers even if you are taught to do so, you conduct your examinations here on computers and you don't do that at university level. You write it with pen and paper.

T: Yeah, exactly. So there are, well it is a continuing, ongoing discussion.

I: It probably will continue for a long time as well.

T: Yes.

I: Ok, but that was all the questions.

T: Good, da svarte vi på engelsk og da. det gikk jo kanskje greit så slipper du...

Appendix 5: Interview Teacher C

I: Ja

T: Ja

I: Kan jo da starte med første spørsmål og det er: How many hours do you spend on your computer every day approximately? Please differentiate between work and recreation.

T: Uh … well … Uhm …

I: I might like to add that here computer may also refer to tablets

T: Yes. Uh, I think that for work purposes … maybe … at least six hours? I would guess, yes, because I use it mostly to prepare lessons and also during lessons so even though I am not on it all the time in my lessons I use it anyway.

I: Yeah?

T: Yeah. Kind of yeah, so about six hours I would guess. Not … not weekends! (laughs). No.

I: Yeah. Okay.

T: Yeah. So …

I: Uh, and how about recreationally, not just related to work?

T: Probably two hours, maybe? If I use my lap … uh … if we use my ipad to watch series, but uh, yeah. One to two hours, I think.

I: Do you use your phone?

T: Sometimes, but mostly it's just work and then it's dinner and yeah and then it's work again and then there's maybe some surfing, but yeah.

I: Understandable.

T: And studying and writing as well so…

I: Yeah, busy life. Uh … question number two is what does digital competence mean to you? How would you define it?

T: Ah, difficult one. Uh … well … uhm … I think it's important for the students to … uhm … you know they're … they love using their computers and their phones but mostly for snapchat, Facebook and so on and I think it's … uhm … that having digital competence is something different. It's about being able to use your computer to study, uhm… for instance to make texts, uhm… and also to use various different digital tools, for instance Google Documents, uhm… uh, it's a difficult one (laughs). Yeah, but to be digital[ly] competent is not the same as being able to use Facebook and Snapchat… that's….

I: So it's more about knowing when to use the different digital means?

T: Yes, when to use the different means and also to use them to… of course you could say that a part of the digital competence is being able to log on Facebook and Snapchat but in a school setting it's more important to be… know how to put on… uhm, set the language in Word to English if you are writing English, or to Spanish.

I: Yeah.

T: So, those kinds of things are more relevant in a school setting, yeah. And, yeah, knowing how to save your documents and make folders and have a system so that you can find things and taking backup of your computer and taking care of your computer and yeah.

I: Yeah. So the practical … uhm, stuff about computers?

T: Mhm …

I: More basic stuff about how to use it or to apply it in class?

T: Yes.

I: In school and to school related work?

T: Yes, absolutely.

I: Question number three. Give a short description of what you think could be expected from a teacher of EFL at upper secondary school with regard to ICT?

T: Well … most of us use Its Learning so I think everyone should be able to give information to their students somehow on Its Learning but… because I know some teachers still just write down their homework on the blackboard and so they don't really use that channel. I think everyone should use the channel you are given. Also, of course, uhm … I think also teachers should be able to correct essays digitally [be]cause if you do it on paper and you hand back, uh, paper to the students they will lose it and then it's like work you never did [be]cause if you are going to show them if they are sitting exams later that year and… it's difficult to recap everything. So I think that should be expected, but I know that's probably a long way for many. I like to correct my essays on iPad because then I have them digitally as well.

I: Yeah.

T: Uhm, but, yeah … E-mail, Its Learning, you know when giving information, and of course basic … uhm, basic skills that … if you can call it that; Word, Power Point, know how to present/make a presentation …

I: How to connect the projector ...

T: Yes, how to put on a film and you know, even though I see myself as a digitally competent teacher, often it doesn't work. It's just a curse [laughs] for us teachers, but uhm … those things are important, but uhm … And of course I think everyone should try to develop in the

digital field and try new things and maybe also ask the students if they have suggestions because then you can learn something from them.

I: Yeah, sometimes they will know more about different tools.

T: Absolutely.

I: Uhm, yeah. Question number four: Do you believe your digital competence is up to par with what is expected of you in a technologically rich classroom?

T: Yes. I often experience that I need to … uhm … teach my students basic skills because they are not known with the various tools and I have to tell them it's a good idea to make folders so you know … one for Norwegian, one for English … and … [laughs]. It's a good idea to call your document something else than task 1, you can call it topic or studying, and so forth. And also, I have introduced Google Classroom to some of my classes and then we've got a classroom where I … uhm … give the tasks and they answer and I can, in real time, see when they are writing and comment on what they are doing so we can… and if we're in different rooms then we can have a chat and they can also work in groups for instance. If they are working on a project, they can work on the same Power Point so that they don't have to send it to each other all the time, you know in first version, second version… so that's easier for them as well. So I introduced this earlier this year, and some of them were like "no, I don't want to! Oh it's so difficult! It's so complicated! But now I think everyone uses it and not only in my lessons, but I know they use it in other lessons as well, because it's useful. So that's one thing we use, and yeah, sometimes they like to try out Prezi-presentations as well, because then you can zoom out and zoom in, and that's fun. Yeah, and I've tried various tools and some work well and others don't. We've made films, and then I just ask them to use their phones to do the recording, and they have to upload it. Uhm, yeah. So that's … yeah.

I: This is not a question, but more a follow up, uhm, what about source criticism online?

T: Uhm…. ¨

I: Do you spend time on it? Do you feel like… because it is not explicitly explained in the curriculum how to do it, but it is kind of expected of students and teachers to know which sources are good and not so good. Do you feel like you are able to teach your students this in a proper manner?

T: Yeah… uhm, we talk a lot about it (laughs), and, for instance… it kind of depends on the students as well, but some are really... you know, they read newspapers on a daily basis and they say they like to, for instance, read several newspapers to check if the story is correct or if there is any discrepancy, uhm… but, so I think we are able to a certain extent to show them that these are most of the time reliable sources, and if you are going to use, uhm, that you

need to list your sources, you should have several sources for a topic, and some people say "I know this stuff from before", and I always say that it is never your knowledge (laughs), it's someone else's, so you need to… and because it may be especially the … stronger students, no, or ….

I: The more knowledgeable students?

T: Yes! More knowledgeable, yes. No, with the higher marks. They are asking "why couldn't I get the top mark and then I will say "well you haven't … uhm … made a literature list, so you need to show where you got all this information, and you also need to incorporate your sources into your text", [be]cause sometimes they cite their sources at the end, but, uhm, in my opinion, if you are going to get the best mark, you also need to show, incorporate them in your text, especially if you are talking about numbers, and 60 % of the population, then I want to know where … who said that this was sixty percent.

I: Yeah.

T: So, and some students get it, and others just continue to not use sources. But I also think it's about being mature and some are more mature and developed, maybe. Yeah.

I: Yeah. Okay, uhm … Question number 5: To what degree do you employ computers and the Internet during your lectures?

T: Uhm, almost all the time? I think I begin my lesson always [with the computer] because we need to see who's there, so, and then instead of writing it on paper first and then logging it on SkoleArena, which is the system where we have to do it, I just do it directly on SkoleArena. And then usually I go on to show them the lesson plan for today, which is on Its Learning, and if they… then it depends. Sometimes it depends really on what type of class I have, because if I've got students who are paying attention, sometimes I use the blackboard simply, because I know we've got more time and I can turn my back around without them doing all sorts of things (laughs). But if I've got students who aren't paying attention then I often use Power Point because then I can walk around and see what they are doing. Yeah, so, sometimes Power Point, and also, yes, we use a lot of Google Classroom as I mentioned. Then I can also… It is kind of, they think it is kind of scary because I can see that they haven't started yet, there is nothing in your document (laughs), but it is scary as well because they know that I know that they are working…

I: They know that you are paying attention?

T: Yes, I can see…

I: You can control whether or not they are doing something?

T: Yes.

I: I suppose the students also use their computers to solve tasks? And not on paper?

T: Yes, some of them prefer paper and I say that's okay, but I think most of them work more efficiently with their computers because it takes longer to write by hand. And also, of course, if they are going to find information about something, they use the Internet, and yeah.

I: Uhm, question number six: Do you make an effort to diversify your employment of technology, or do you have a preference in terms of using technology during lectures?

T: No, I try to (laughs). I try out different things, uhm… of course it depends… you know, now we are closing up to exams, so now we are just trying to recap what we have done. Uh, but in the beginning of the school year, I try to use various things, so I don't have really have a preference. I am not really a fan of Power Point, but it's useful sometimes, but, I like to do various things, and try out, you know, sometimes there's webpages with grammar exercises, and you know, if you've only got 10 minutes left of a lesson and you want them to do something then that can be useful. Even though it is kind of… you know, it depends on the group, of course. But… because I am not, I don't think you should be doing these exercises for two lessons, but for smaller periods of time. Uhm, yes, and you know, making films I've done with one ... some groups, and they've enjoyed that a lot, and then they have to edit the film afterwards. Uhm, yeah, what more?

I: Have you ever tried Kahoot or …

T: Yes! Kahoot … Absolutely, as well. They love that, and that's nice when it works. Sometimes it doesn't, and people get the wrong answer and they broke the right [?]. Yes… Kahoot… can't really think of any … there's this Glockster …is a page as well. Well, it's kind of like you make a poster and, but, so you have a blank paper and you can just write… yeah, it is kind of like a poster, only online. So we've tried that, and then often we just, they make it and present it to the rest of the class afterwards and yeah, talk about various things they've written. Uh …

I: So you like to, uhm, employ both, or, employ Power Point non-exclusively, but also videos…

T: Yes, and also YouTube, of course. We find lots of clips on YouTube. Sometimes, and that's also a good way of starting a lesson. Or if finishing a lesson with a YouTube-clip, because, yeah, it makes everyone happy [laughs].

I: Yeah, an aesthetic means is often useful to get their attention …

T: Yes, absolutely. Many are very visual learners so they like pictures and yeah. I've also sometimes I've also found memes. I'm not sure how to prom … pronounce it..

I: Memes.

T: Yeah.

I: 9GAG. Memes.

T: Yes, yes, yes. So … of teachers and yeah. Just to have a laugh.

I: I think that that's fun for students. I did that in my practice as well when we had Canadian stereotypes, I found memes and they thought it was hilarious. Because nearly every student spent some time every day at … on 9GAG. So we really hit the spot with that one.

T: Yeah.

I: Uhm, yeah. Then it's question number 7: In your opinion, do you think competence aims related to ICT in the Knowledge Promotion are sufficient to prepare students for life after school?

T: Uhm …

I: There aren't that many. I've read the curriculum and there aren't that many that are directly linked to digital tools or competence…

T: No, not really, no.

I: But there are more aims that could incorporate...

T: Yes.

I: Or be fulfilled through…

T: Yes, I think some … of course … uhm, they are talking about written communication, you know, when you structure your text, it's so much easier to do in… you know, on your laptop than if you are writing by hand. Because if you have an idea and you want to move it up, it's easier to do so. Also, of course spelling mistakes and concord… your laptop… Word can fix many of those (laughs) mistakes. So I think… you know … uhm. I can only think of one which is directly connected that you … that they should be able to … make … uhm, no, no. Or maybe this is the exam, but you could make it… uhm… I can't think about what it's called in English, but… A text with, no maybe it's not…

I: Yeah, I have it here: produce different types of texts adapted to digital …

T: Yeah, that one or … (laughs)

I: Uhm …

T: Yeah, because we are, now, for instance, we are trying to make them write an article and then they should include a picture and you know … trying to make it look like a newspaper article or a, you know, a … various fonts and try to catch the reader's attention, and I usually tell them about the time I went here at the university and I took history and we had to hand in a task for an essay, and I used a picture on my first page … and I thought we'd been told that we had to comment on two other's tasks as well, so I thought two other people were going to

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read my task, but it was open for everyone. And I was like "oh no", but my, since I had a picture you could see the first page on all the tasks and I think mine was opened like, it said read, but probably just opened, but ninety times or something, while the others were, like, two or three times. So … pictures help (laughs). Like wow, "what she's done? She's crazy!". But because you don't really use pictures in the university, I think, but…

I: No. [It is] Not that common. But I see another in here, uhm … under language learning. It's says to evaluate different digital resources and other … uhm … tools critically and independently, and to use them in language learning.

T: Yes, that's one as well. Uhm, we talk a lot about how … that they should be able to use their dictionaries, you know, and look up and read the information, and you know, choose the correct words because, you know, that's a digital tool and I try to tell them it's so much easier than having a book, because … but, eh, even so I think for some, some students still prefer having a dictionary book version, because then you see everything, because in the digital dictionary you have to click on a plus sign and you get the rest. Some … or many pupils forget doing this and then yeah …

I: Perhaps the book version feels more like an authority?

T: Yes.

I: And that's kind of the thing with the tasks, or the book tasks … the books you use in classes, they have authority. Not just for teachers, but also for the students. Perhaps the digital dictionaries feel less safe to students?

T: Mhm …

I: Even though it is much easier to just type in the word you need…

T: Yup!

I: To search for the word you need and then finding it on the Internet probably than …

T: Yep!

I: Than looking through the book, but those two digital aims … in what way could they be useful for, say, future work for students?

T: They should … of course I think digital resources … it's also about, ehm, your sources on the internet so they should be able to think critically about what they read online. So not only in work life, but also in life in general. Yeah, because …there's many … crazy articles on the internet and … which people share on Facebook.

I: Yeah.

T: About all sorts of things, so I think, you know, uh … how to find knowledge, you know, or … knowledge, that's not the correct word, but to learn new things; find sources that are

reliable if you want to learn something new and just not read the first and best, and believe it, so … kind of to-to think particularly about what they read and also to find… have several sources when they are going to find information about something. And I think of course it depends on where they are going to work, but, yeah, I think in most professions you need to be able to find your sources. And also in the society, I think, you know, you need to… some work places you need to write down how many hours you've worked in a system so you need some kind of knowledge … or … digital competence anyway, and I know my husband says that sometimes he have [has] to show people how to write… to open a Word document, almost. It's kind of … you need it anyway, no matter what you're working with, I think. Yeah.

I: That's kind of perhaps also the … uhm … the … the intent … the intention with the other digital aim about structuring different digital texts?

T: Mhm….

I: Because it's not just about writing a Word document, but also perhaps writing online curriculum vitae, or CV, an e-mail … there are different structures that students have to learn. It's not just writing a … say Word document as an online newspaper article.

T: Absolutely, and I think also it's … it's … if you learn to … to … it's kind of how we get so much information through digital … you know …our iPads and phones. So it's one way of processing information, so you should learn how to … yeah (laughs) … choose from all the information we've got out there. Yeah.

I: Okay, the last question. Question number eight is perhaps a bit vague, but some researchers or scholars suggest that the notions of digital skills and digital competence in the Norwegian curriculum are ideals rather than something we can achieve. Do you agree with this statement? Why/why not? I read this in a scholarly text, I can't recall the name of it, but the text claims that there's a lot of talk about digital tools and digital competence within Norwegian schools and how we should focus on making things more [applicable in out-of-school contexts] … but some scholars claim that this is simply talk. It's not… uhm… that much applied in reality or in…

T: I would disagree, but (laughs)…

I: That's okay…

T: I think of course some places, it's probably not all talk, and some schools might feel … uh … it depends on the culture in your school, and some might feel that "now our county is saying that you need to focus on digital tools" and they are thinking that we are fine as we are, we don't want to … (laughs) start all these new things, but … uh … in my experience, most

teachers, when they've tried something new, and if it's … fairly easy to use and if they see that they can save time, then they're more than happy to just try to learn more about it. I think most teachers and schools are open to trying out new digital tools, I think. And also the students, uh … but there's maybe … you know, we're trying to, at the beginning of the school year to have some courses with the students to see that they've got some knowledge. And I think maybe this is something that should be … uh … given from the government, maybe… that it should be mandatory for every school or every upper secondary school. We should maybe have a list because we've made one and maybe other schools have made a list, and have a plan of what they need to do when they start, but I think everyone should do it as it's … it varies a lot, what the students know from before and we for instance see we've got … uh … foreign language students … what can I call it … oh, students who haven't lived here for a very long time … one or two years. They often start on scratch, you know, and they don't know anything about computers and then they should kind of get an extra course. Just, you know, how… just because they're answering tasks … there's just a lot of texts and they are not familiar with paragraphs and headings [be]cause they have never used a computer before, so you kind of need to …

I: And one of the basic skills here is digital skills and the basic skills only say that the students need to be able to do, but the question then is it something they should learn at school and what schools do to achieve this or do schools just assume that students have those basic digital skills from…

T: Yes, because I think it should be more incorporated in the whole school system. Because I think it varies, because for instance, I am very interested in these things so I try to… I spend some of my English lessons sometimes trying to teach them about some digital tools or for instance we spent a lesson, 45 minutes, on getting everyone into Google Classroom and showing them the documents … so we had to spend 45 minutes, but I think we'll save … in the future … in the end, we've saved a lot of time doing this because … uh … they can work together efficiently …

I: And it's a good skill to have … to use Google Classroom, because that [knowledge] they can take with them when they go to the University or college or …

T: Absolutely.

I: For work there …

T: Absolutely, and we have also … uh, I think I've told you about it … that we've got this kind of elevesuperbruker. I don't know how we can say that in English?

I: That's okay, I'll figure it out later.

T: Yeah, so we've got… every class has two persons, you know, who are competent, or digitally competent, and we've … we have meetings and we say that for next time you need to go back to your class and you are going to talk to them about … Dropbox and back-up, and you should try to help those who haven't got a Dropbox to get one … And … or Google Classroom, or Google Drive … or, you know… Shortcuts … because, you know, yeah. So that's kind of one system, but I think, you know, eh, in general, for … for Norway? (laughs) I think it should be more system … be put into system, you know, and maybe as a subject, and if not it should be incorporated into … you know, more precisely maybe … in the curriculum. That you should …

I: Yeah. So the answer to the question is that you don't agree with … this ideal, it is applicable or doable, but it needs to be more incorporated and explicitly …

T: …Yeah …

I: Expressed in …

T: Yeah, more explicitly …

I: (inaudible) because this is first year in upper secondary, but there were only two competence aims that actually mention medias or digital skills. So perhaps, more aims can be better linked to digital skills and actually how to use it…

T: Yes.

I: Not just to write text …

T: Yes. Absolutely, because if you're a teacher and you don't like to use digital tools, then you can just make your students write one text with one picture and you say "I've done it" and you haven't really worked a lot with various digital tools. So, uh … yeah, that should definitely … uh … be more incorporated.

I: Yeah.

T: Yeah.

I: Well, okay. Thank you.

Appendix 6

Table 4.1 Duration of computer activities at home during weekdays

General computer activities measured in hours (Monday through Friday)	Respondents	Percentage
0 to 1 h	-	-
1 to 3 h	8	13.11 %
3 to 6 h	21	34.43 %
6 to 9 h	16	26.23 %
9 to 14 h	16	26.23 %

Total: 61 participants.

Table 4.2 Time dedicated to schoolwork on computers at home

Hours spent on school work	Category 1: 1-3 h respondents	Category 2: 3-6 h respondents	Category 3: 6-9 h respondents	Category 4: 9-14 h respondents	Percentage
0 h	1	2	-	1	6.56 %
1 h	4	5	5	2	26.23 %
2 h	3	8	4	4	31.15 %
3 h	-	4	4	3	18.03 %
4 h	-	1	1	1	4.92 %
5 h	-	-	2	1	4.92 %
6 h or more	-	-	-	1	1.64 %

Total: 61 participants. Four answers did not fit in with the alternatives.

Table 4.3 Duration of computer activities at home during the weekend

General computer activities measured in hours (weekend)	Respondents	Percentage[19]
0 to 1 h	-	-
1 to 3 h	6	9.52 %
3 to 6 h	17	26.98 %
6 to 9 h	22	34.92 %
More than 9 h	17	26.98 %

Total: 61 participants, one crossed off on both 3 to 6 hours and 6 to 9 hours.

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[19] The percentage in Table 3 is based on the total amount of answers, not the number of participants. One participant ticked off two alternatives.

Table 4.4 Time dedicated to schoolwork on computers during the weekend

School related computer activities measured in hours (weekend)	Category 1: 1-3 h	Category 2: 3-6 h	Category 3: 6-9 h	Category 4: More than 9 h	Percentage
0 h	-	2	2	5	14.75 %
1 h	4	7	7	5	37.70 %
2 h	1	8	4	2	24.59 %
3 h	1	1	6	1	14.75 %
4 h	-	-	2	-	3.28 %
5 h	-	-	-	1	3.28 %
6 h or more	-	-	-	1	1.64 %

Total: 61 participants, one answer is listed in both category 2 and 3 because the participant crossed off both categories in the previous question.

Table 4.5 Computers in English lessons – the frequency of use

Computers used in English class	Respondents	Percentage
Every English lecture	4	6.65 %
Nearly every lecture	35	57.38 %
A few English lectures	21	34.43 %
Never	1	1.64 %

Total: 61 participants.
NB: the participant who answered "never" also answered question 6.

Table 4.6 Computers in English lessons – the different digital activities

Computer activities in English lessons	Responses	Percentage
Social Media (Facebook, Twitter, Instagram, etc.)	40	65.57 %
Word-documents (for essays, notes, textbook tasks, etc.)	58	95.08 %
Blogs	11	18.03 %
Online newspapers	20	32.79 %
Games (online and offline)	11	18.03 %
Its Learning	61	100 %
Research	48	78.69 %
Other	17	27.87 %

NB! Other: were defined by the participants as shopping/visiting online stores, e-mail, Netflix, YouTube, Skype, 9gag, and drawing.

Table 4.7 Computers in English lessons – the duration of the activities

Computer activities in English lessons	Average time[20]	Measurable[21] responses
Social Media (Facebook, Twitter, Instagram, etc.)	≈ 12 minutes	39
Word-documents (for essays, notes, textbook tasks, etc.)	≈ 32 minutes	43
Blogs	≈ 7 minutes	9
Online newspapers	≈ 8 minutes	15
Games (online and offline)	≈ 8 minutes	9
Its Learning	≈ 13 minutes	46
Research	≈ 16 minutes	32
Other	≈ 21 minutes	15

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[20] The minutes are the average time spend on the activities during a lesson, assuming each lesson is 90 minutes long (see the description of the observations in chapter 3).

[21] The participants who answered question 7 properly (added time)

Table 4.8 The use of computers at school vs. home according to students

Alternatives	Respondents	Percentage
Yes	37	60.66 %
No	3	4.92 %
Sometimes	17	27.87 %
I don't know/I don't really think about it	4	6.56 %

Total: 61 participants

Table 4.9 Students' thought on the relevance of computer activities for the future

Alternatives	Respondents	Percentage
Yes, they are relevant for society and most jobs.	6	9.84 %
To a certain degree. They may be relevant for some jobs.	31	50.82 %
No, the alternatives are not relevant for future employment.	4	6.56 %
I don't know/I have not thought about it	20	32.79 %

Total: 61 participants

Appendix 7: Observasjon: økt 1

Læreren har i forkant sagt at det sannsynligvis ikke kommer til å bli brukt så mye digitale verktøy denne dobbeltimen sammenliknet med andre timer.

Kl 12.30

1. 28 av totalt 31 elever har møtt opp (12 er gutter).
2. Lærer gir eleven beskjed om å gjøre "akkurat som dere pleier" selv om en ukjent (meg) er til stedet. Jeg bekrefte dette.
3. PCene er lukket eller lagt vekk ved begynnelsen av timen.
4. Introduksjon til tema → høytlesning fra bok, ingen digitale hjelpemidler i bruk.
5. Flere elever har smarttelefoner liggende oppå pulten.
6. Høytlesning i par – arbeidsinnsats/arbeidsviljen er kanskje ikke helt optimal de siste timene av skoledagen → lite "trykk"
7. Etter høytlesningen slår læreren på projektoren → Its Learning kommer opp på lerretet.
8. Oppfølging av gloser som elevene har kikket på i par i forbindelse med høytlesningen → bruker cambridge dictionaries til å vise språklige forskjeller mellom amerikanske og britiske ord. Hensikten er for at elevene skal kunne skille mellom amerikansk engelsk og britisk engelsk, og å velge en av variantene når de skriver på engelsk.
9. Læreren har en skrivefeil når han skal søke opp noe via Google, og elevene korrigerer
10. Lærer setter på "The Ant-Eater" som eleven lytter til mens de følger med på teksten i læreboka.
11. Det har gått ca 20 minutter av timen, og elevene har så langt ikke tatt opp PCene eller brukt mobiltelefonen
12. Lydsporet stopper og elevene får beskjed om å ta frem PCene sine, for de skal nå skrive et sammendrag av diktet. En elev åpner umiddelbart Facebook og browser nyhetsfeeden (hovedsiden) kjapt før Word åpnes for å starte på oppgaven.
13. En annen elev åpner Spotify → stenge ute støy?
14. 7 av 28 elever skriver sammendraget med penn og papir. Ingen pc på pultene deres.
15. Noen minutter senere åpner et par elever Facebook og 9gag. Det ser ut til at de er ferdig med oppgaven → slår i hjel tid før lærer gir neste beskjed?
16. Ca 5 minutter senere avslutter læreren skriveprosessen, og viser sitt eget sammendrag over projektor.

17. Videoklipp av Roald Dahls "The Ant-Eater" vises via YouTube. Før dette får elevene beskjed om å lukke PCene sine og fokusere på lerretet. Noen lukker PCen bare halvveis.

18. Læreren stiller spørsmål til elevene om diktet – elevene svarer med en blanding av norsk og engelsk

19. Etter spørsmålene skal elevene diskutere i par:
    a. Theme
    b. Moral
    c. Happy ending?

20. Emnene tas opp i fellesskap etter 5-10 minutter, etterfulgt av en gjennomgang av sjangerkjennetegn på short stories → forberedelse til eksamen og tentamen

21. Etter gjennomgangen av sjangerkjennetegn, går læreren tilbake til språklige variasjoner mellom am. engelsk og brit. engelsk → YouTube vises på storskjerm og elevenes PCer blir lukket eller lagt vekk. Første video viser uttale av ord på amerikansk og britisk engelsk.

22. En ny video følger etter den første – accent challenge (american english vs. British english). Denne videoen medfører litt latter. Videoen er laget av to unge jenter, sannsynligvis yngre en elevene i denne klasssen. Jentene i videoen klarer knapt nok å uttale ordene selv → planlegge bedre på forhånd hvilke videoer som skal brukes? Eller vise det som et eksempel på feil uttalelse av ord i forhold til de standardiserte variantene?

23. 13.50: Elevene slippes ut 10 minutter før tiden

Appendix 8: Observasjon: økt 2

Kl. 08.30

1. Lærer oppsummerer forrige ukes tema med klassen (Ant-Eater – Roald Dahl)

2. Kun en av elevene har PCen åpen på pulten – lyset er dempet, så det er ikke mulig å se hva eleven holder på med.

3. Oppdager at eleven sitter med et elektronisk tegnebrett for Mac-systemer. PCen lukkes så snart læreren starter opp projektoren.

4. Læreren presenterer litt fakta om Roald Dahl på lerretet i en PowerPoint-presentasjon

5. Det ligger mobiltelefoner fremme på pultene til noen elever, men så langt har ingen strukket seg etter dem.

6. 08.50: Læreren avslutter presentasjonen av Roald Dahl og begynner med å undervise elevene om hvordan man skriver tekster (blant annet i form av essay og artikkel). Årsaken er en heldagsprøve som er rett rundt hjørnet.

7. Informasjon om hvordan man skriver en god tekst presenterer i PowerPoint. Informasjonen presenteres med både bilder/figurer og tekst.

8. En elev sitter med headset på (kun plugget i det ene øret) → lytter til musikk?.

9. To elever kommer for sent til timen.

10. Et lite stykke ut i PP-presentasjonen faller noen elever av. Eleven med PCen på pulten har tatt frem en bok som h*n leser i mens presentasjonen foregår. Kikker av og til opp på lerretet.

11. Et par elever tegner på ark.

12. 09.10: presentasjonen avsluttes. Læreren tar en oppsummering på tavlen (hva en artikkel inneholder).

13. Elevene får beskjed om å velge et emne de skal skrive et essay om, deretter skal de lage en outline.

14. PCer tas frem.

15. De fleste går direkte inn på Word, andre på Its Learning.

16. Lærer tar frem sin egen pc. Lerretert blir slått av.

17. En elev ser på en tv-serie på Netflix.

18. De aller fleste elevene nå er enten inne i Word eller på Its Learning. Noen har åpnet presentasjonen til læreren som ble gjort tilgjengelig for dem via Its Learning.

19. Eleven som ser på Netflix åpner også Facebook i ca fem minutter før h*n logger inn på Its Learning.

20. Eleven som sitter ved siden av ser på YouTube-videoer.

21. Læreren går av og til rundt for kontrollere at elevene gjør det de får beskjed om og for å svare på spørsmål → elevene som ser på serier og videoer på YouTube åpner Word med en gang læreren nærmer seg pultene deres.

22. Eleven med tegnebrettet har tatt dette frem igjen og tegner .

23. 22 av totalt 28 elver har møtt opp (7 er gutter)

24. 09.50: læreren tar en ny runde rundt i klasserommet. Eleven som fortsatt ser på Netflix gjenåpner Word, det samme gjør eleven som så på YouTube-videoer.

25. Timen asluttes 10.

Appendix 9: Observasjon: økt 3

Kl. 10.15

1. Lærer ber elevene om å skrive ferdig essayet de begynte på forrige engelsktime.
2. Lærer snakker litt med elevene mens de holder på med oppgaven og besvarer spørsmål.
3. En elev er opptatt med mobilen og har ikke begynt på oppgaven ut i fra det jeg kan se av Word-dokumentet.
4. Lærer gir en siste beskjed om oppgave. Den skal ikke leveres inn, men det vil bli tatt stikkprøver når lærer er tilbake på jobb. Noen elever må lese opp sitt essay i neste time.
5. Det er overraskende rolig i klasserommet til tross for at læreren har dratt og at elevene ikke har vikar → usikkerhet om hvorvidt jeg kommer til å rapportere hendelser til læreren senere?
6. Jeg kan ikke se alle skjermene, men det er for lite lyd av taster som blir trykket på til at alle jobber med oppgaven som de fikk beskjed om. Flere elever sitter nå med telefonen, usikkert til hvilket formål. To elever skravler med hverandre.
7. To elever har begynt å tegne, en av dem er den samme eleven som hadde tegnebrett.
8. Eleven som så på tv-serier på Netflix i forrige engelsktime, ser på Netflix denne timen også.
9. Den første eleven som satt med mobilen i begynnelsen av timen har fortsatt ikke skrevet noe. Its Learning er åpen på PCen, men eleven bruker den ikke aktivt.
10. 11.00: De elevene som har jobbet med oppgaven denne timen ser nå ut til å være ferdig → Facebook åpnes, og det blir mer skravling i klasserommet.
11. 2 av elevene som ikke var i timen forrige gang skriver enda på oppgaven.
12. PCer blir brukt mye denne timen, men det meste går i sosiale medier, YouTube og Netflix.
13. En god del elever har headset plugget inn, både til å lytte til musikk og for å kunne ha lyd til videoer.
14. En lærer kommer inn og informerer om MOT-møte som skal finne sted etter lunsj.
15. 11.25: ingen av elevene jobber med oppgaven. Majoriteten har tatt frem matpakker. De har tatt en tidlig lunsj i dag.

Appendix 10: Requesting students and teachers to participate in the study

The following section shows the email that was sent to four different schools in the district:

Hei. Mitt navn er Emilie Vårheim Gundersen og jeg er lektorstudent ved Universitetet i Bergen. Jeg holder for tiden på med masteroppgaven der jeg skriver om IKT i engelskfaget. I den forbindelse skal jeg samle inn data til oppgaven i form av lærer- og elevundersøkelser. Mitt spørsmål til dere er om en eller flere klasser og engelsklærere kunne tenke seg å delta på i slik undersøkelse? Spørsmålene vil være anonymiserte, så ingen personopplysninger eller andre kjennemerker vil komme frem i oppgaven.

Jeg kunne også tenkt meg å få observert et par klasser for å selv se hvordan IKT blir brukt blant elever og lærere i effektiv undervisning, og for å sammenligne mine observasjoner med svarene jeg mottar i undersøkelsene, men dette kan selvfølgelig droppes om det skulle vise seg å være problematisk å få til.

Håper jeg hører fra dere.

Mvh. Emilie V. Gundersen