

“So, it’s quite a big part that goes missing if it, like, wouldn’t exist”:
English teachers’ thoughts and experiences on technology in language teaching

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Abstract

Technology has become a crucial part of many aspects of our daily life, and a similar effect is seen with technology in teaching. The aim of this study is to find out what English teachers' thoughts and experiences are on technology in teaching English to middle schoolers. This is achieved with a qualitative method: interviewing two recently graduated English teachers and conducting an inductive thematic analysis on the obtained data. The findings are then discussed in the view of the theoretical background and previous research, which include the socio-cultural learning theory, action-based teaching, the Finnish national core curriculum, and various studies related to technology in teaching. The different ways to use technology in teaching, the benefits and challenges of it, and how and why technology should be used are covered in the review of previous research.

The findings indicate that technology is a crucial part of language teaching in Finnish middle schools. Technological tools (e.g., the Internet and laptops) are used by teachers whilst planning the lessons and during them. Much of the teaching material is nowadays in electronic format (e.g., electronic books, videos, and interactive activities), and technology is used in ways that brings authenticity, meaningfulness, and joy to learning English. Especially the activation and motivation of learners is highlighted in the use of technology (e.g., in games and information retrieval exercises). However, the teachers recognise challenges too (e.g., practical aspects and the effects of technology on learners). Even though the learners' exposure to English can have some benefits (e.g., to their vocabulary), the generous use of technology in free time has negative effects too (e.g., challenges related to learning and behaviour). Collegiality is a key part of searching, sharing, and storing ideas and materials, and the teachers have found technology and its different platforms (e.g., Instagram accounts, Facebook groups, and OneDrive) to be helpful in doing so. The teachers have a will to improve their technology use in their teaching and be responsible of that learning.

The findings demonstrate the importance of technology in English teaching today. Technology is viewed as something that adds to the teaching and is a crucial tool in the teacher's job. Teachers understand the benefits and challenges related to the use of technology. In conclusion, the implications of technology are diverse and affect greatly the language teaching and learning experience from the point of view of both the teacher and the learner.

Keywords: EFL, English teaching, technology, learning, teaching, middle school

Tiivistelmä

Teknologiasta on tullut keskeinen osa meidän päivittäistä elämäämme ja samanlainen vaikutus näkyy teknologian opetuskäytössä. Tämän tutkielman tarkoitus on selvittää, millaisia ajatuksia ja kokemuksia englanninopettajilla on liittyen teknologiaan englannin opetuksessa yläkoulussa. Tähän kysymykseen vastataan laadullisen tutkimuksen keinoin: haastatteleamalla kahta hiljattain valmistunutta englanninopettajaa ja suorittamalla induktiivinen temaattinen analyysi kerätylle aineistolle. Tuloksia käsitellään peilaten teoreettiseen taustaan ja aiempiin tutkimuksiin, jotka sisältävät sosiokulttuurisen oppimisteorian, toiminnallisen opettamisen, perusopetuksen opetussuunnitelman sekä useita tutkimuksia liittyen teknologian hyödyntämiseen opetuksessa. Aiempien tutkimusten katsauksessa käydään läpi erilaisia tapoja käyttää teknologiaa opetuksessa, sen hyötyjä ja haasteita sekä miten ja miksi teknologiaa tulisi hyödyntää.

Tulokset osoittavat, että teknologia on keskeinen osa kielenopettamista suomalaisessa yläkoulussa. Opettajat käyttävät teknologisia välineitä (esim. internetiä ja kannettavia) niin oppituntien aikana kuin niitä suunnitellessaan. Suuri osa opetusmateriaalista on nykyään elektronisessa muodossa (esim. sähköiset kirjat, videot ja interaktiiviset aktiviteetit), ja teknologiaa käytetään siten, että se tuo autenttisuutta, merkityksellisyyttä ja iloa englannin oppimiseen. Erityisesti oppijoiden aktivointia ja motivointia korostetaan teknologian hyödyntämisessä (esim. pelit ja tiedonhakutehtävät). Opettajat kuitenkin tunnistavat myös haasteita (esim. käytännön tekijöitä ja teknologian vaikutukset oppijoihin). Vaikka oppijoiden altistuksessa englannille on joitakin hyötyjä (esim. sanavarastoon), teknologian runsas käyttö vapaa-ajalla vaikuttaa myös negatiivisesti (esim. haasteita oppimisessa ja käytöksessä). Yhteisöllisyys on avainasemassa ideoiden ja materiaalien etsimisessä, jakamisessa ja säilömisessä, ja opettajat ovatkin todenneet teknologian ja sen eri alustojen (esim. Instagram-tilit, Facebook-ryhmät ja OneDrive) olevan siinä hyödyksi. Opettajilla löytyy tahtoa ja kiinnostusta kehittyä teknologian hyödyntämisessä opetuksessaan ja olla vastuussa tästä oppimisesta.

Nämä tulokset osoittavat teknologian tärkeyden englannin opetuksessa tänä päivänä. Teknologia koetaan asiana, joka tuo lisää opetukseen ja on välttämätön työkalu opettajan työssä. Opettajat ymmärtävät teknologian käytön hyödyt ja haitat. Tutkimuksen johtopäätöksenä on, että teknologian vaikutukset ovat moninaiset ja ne vaikuttavat suuresti kielen opettamisen ja oppimisen kokemukseen sekä opettajan että oppijan näkökulmasta.

Avainsanat: englanti vieraana kielenä, englanninopetus, teknologia, oppiminen, opettaminen, yläkoulu

Table of contents

1. Introduction.....	5
2. Theoretical background and previous research.....	7
2.1. The socio-cultural learning theory	7
2.2. The Finnish national core curriculum	9
2.3. Technology in teaching	10
3. Data and method	18
3.1. Interviews	18
3.2. Thematic analysis	20
3.3. Ethical aspects	22
4. Findings.....	23
4.1. Technology in daily teaching	24
4.1.1 Digitalisation of materials.....	24
4.1.2 Technological tools replacing traditional tools.....	28
4.2. Pedagogical views on using technology.....	33
4.2.1 Variety of activities	33
4.2.2 Activating and engaging learners.....	36
4.3. The effects of technology on learners	39
4.3.1 Exposure to the language through social media and gaming.....	39
4.3.2 Challenges whilst using technology.....	42
4.4. Keeping up to date with technology and teaching	47
4.4.1 Feeling of responsibility.....	48
4.4.2 Collegiality and sharing materials.....	50
5. Discussion	54
6. Conclusion	57
References.....	59

1. Introduction

The significance of technology continues to increase constantly. This is also seen in the field of language learning and teaching of English as a Second Language (ESL) and English as a Foreign Language (EFL). More and more technology is incorporated into our everyday life; thus, its role in teaching has become more important and notable. The effect can be seen in schools and teaching. Many of the daily duties of a teacher are nowadays done using technology: for instance, communicating with staff members and parents, making markings on Wilma, and, most importantly, teaching. Technology develops continuously and the technology used by teachers and learners follows along. Hence, research on technology in English teaching is a very current and important topic, and it is therefore the topic chosen for this thesis. The aim of this thesis is to find out what English teachers' thoughts and experiences are on technology in teaching English to middle schoolers, focusing on their experiences.

According to the socio-cultural learning theory, learning happens through a process in which the learner is active and interactive with the environment (van Lier, 2004, 2007; Vygotsky, 1978). This together with action-based (AB) teaching create the theoretical background for this thesis as the use of technology can aid the learning process in ways that fit the theories. In addition, the Finnish national core curriculum is an important source because it offers the guidelines for the teachers, and many of the important aspects that come up in the theoretical background and the previous research presented are also present in it. These include aspects such as meaningfulness, authenticity, AB teaching and technology use (Opetushallitus, 2016). The previous research covered in this thesis includes similar topics. It also contains ways to use technology in teaching and what factors influence it as well as how technology affects the teaching and the learners (Barton, Tan & Rivet, 2008; Bielaczyc, 2006; Haines, 2015; Hew & Brush, 2006; Karamifar et al, 2019; Wilson, 2020). In addition, there are studies on how the teachers view the technology and its use (Haines, 2015; Karamifar et al., 2019). These theories and research give a starting point for this study and help in the analysis of the data and the discussion of findings.

As the focus is on English teachers' thoughts and experiences, the chosen research approach is a qualitative one. Data was collected by interviewing two English teachers that have recently graduated from the University of Oulu. The interviews were semi-structured – allowing the participants to discuss and elaborate on the topic – and conducted via Zoom. The recordings of these interviews were then transcribed and analysed using inductive thematic analysis. This means that the data was gone through several times whilst forming codes and themes about what the participants tell about the topic

of interest (Braun & Clarke, 2006). After this, the analysis is written in a coherent text with extracts from the interviews to support it. This phase also included finalising and perfecting the themes.

The structure of the thesis is the following. First, the theoretical background and previous studies are introduced including sections about the socio-cultural learning theory, the relevant aspects from the Finnish national core curriculum, and studies on technology in teaching. After this the data and method are discussed, and a reasoning behind the decisions related to them are explained and a thorough description of the analysis process is given. Also, the ethical aspects are discussed. Next, the findings are presented in four main sections: (1) Technology in daily teaching, (2) Pedagogical views on using technology, (3) The effects of technology on learners, and (4) Keeping up to date with technology and teaching. The findings are followed with the discussion of the findings with the help of the theoretical background and previous studies. A conclusion in respect of the research question summarises the whole study and discusses further implications and the study as a whole.

2. Theoretical background and previous research

In this section, the theoretical background related to the learning theory that is most relevant for this study is gone through: the socio-cultural learning theory. Its key concepts and how they relate to English teaching and learning, and the use of technology are described. Then the Finnish national core curriculum is discussed from the viewpoint of integrating technology into teaching in general and in teaching English. Lastly, there is a review of previous research on language teaching and the use of technology. This research includes topics such as ways of using technology in language teaching, difficulties in relation to incorporation or use of technology in teaching as well as teachers' needs and wants related to technology-enhanced language teaching.

2.1. The socio-cultural learning theory

The socio-cultural theory by Lev Vygotsky is one of the main learning theories that still comes up in teacher training and is relevant to this thesis. This theory is based on the conception that people interact with the environment and people in it, and this way shape their behaviour, in this case learning (Vygotsky, 1978, p. 73). In addition, thinking and speaking are considered important elements related to learning according to the theory (Lantolf, 2000, p. 7). Even though these elements are seen to be somewhat different, they too are seen to be interrelated (p. 7). The term *zone of proximal development* (ZPD) is a key component in the theory: as Vygotsky (1978) explains, it “defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state” (p. 86). In other words, there are some things that a child already knows, some that they are in the process of learning, and some that are learned later. Lantolf (2000) also discusses that the notion of social interaction is key in the process of learning in the ZPD (p. 17). The things that are in the process of learning are in the ZPD and can be learned with the help of a teacher, for instance, via interaction and collaboration. Technology can be used as a tool in this learning process.

Ideas by van Lier (2004) on the ecological perspective of language learning are presented next. Ecological perception is discussed, and four main characteristics arise: “1) Landscape rather than picture, 2) Direct and indirect perception, 3) Activity and perception, [and] 4) Multisensory perception” (van Lier, 2004, p. 87). The first one means that the learner has an active rather than passive role that explores information from the surroundings (van Lier, 2004, p. 87). Direct and indirect perception refers to the idea that parts of language are perceived in these two ways (van Lier, 2004, p. 88). Direct parts of language are aspects such as words or intonation and indirect parts

gestures and some cultural factors, for example, and we make our interpretations using both aspects (van Lier, 2004, p. 88). The third characteristic is closely linked to Vygotsky's theory as activity and perception are considered to affect greatly the learning process (van Lier, 2004, p. 88). Lastly, different senses are used when learning a language: for example, visual and auditory (van Lier, 2004, p. 89). Technology can be used to activate the learner and can give them opportunities to explore the world and information around them. In addition, technology provides various ways to give multisensory learning experiences: for example, using videos; exploring maps; listening to interviews, podcasts or songs; playing games; VR and so on.

In addition, van Lier (2004) presents the thought of perception being two-way: "perceiving something in the environment at the same time as perceiving oneself" (p. 90). This way as the learner learns something by observing and exploring the environment, they simultaneously learn something about themselves. As technology is very much present in our everyday lives and environment, it cannot be forgotten in the language learning environment as it can give tools to self-reflection as well. The idea of self-perception and self-reflection is also brought up in the Finnish national core curriculum, which will be discussed in the next section. Something brought up by Lantolf (2000) that is related to perception and very relevant in regard of learning is the individual differences:

Even if students in the same class engage in the same task they may not be engaged in the same activity. Students with different motives often have different goals as the object of their actions, despite the intentions of the teacher. (p. 12)

This means that even though, as explained by Lantolf (2000), an activity – in this case learning – includes the motivation, the action, and the conditions, each of the factors may be different for each learner (p. 8). Therefore, to some extent, it is up to the learner what is the outcome of the learning activity at hand even when the teacher would plan whatever type of exercise or project (Lantolf, 2000, p. 13). This is again something to keep in mind when planning the lessons and the different tasks, and how to utilise technology. In addition, it is good to remember this when reflecting on your own teaching.

The term *affordance* comes up in van Lier's (2004) article as well as in the previous research presented later. Affordances means relationships of different factors in the environment that are affecting the learning (van Lier, 2004, p. 90). As explained in the article "[t]he perceived objects (or events) are not independent of the perceiver; indeed, in ecological terms they are seen as *relationships* between particular attributes of the perceiver and particular attributes of the environment" (Gibson, 1979, as cited in van Lier, 2004, p. 90). These affordances have a meaningful role when studying the use of technology in language learning and teaching.

There are direct and indirect affordances. The direct ones are a compilation of such aspects as “prosodic features (rhythm, voice quality, intonation, stress, etc.); gestures, facial expressions, posture, eye gaze, etc.; turn-taking signals, hesitations, repetitions, etc.”, and the indirect ones “are of a social and cognitive nature: remembered practices, familiarity with cultural artifacts, conversational and situational logic, etc.” (van Lier, 2004, p. 90). In other words, the direct affordances are related to the linguistics and conversational aspects on a more surface level, so to say, and the indirect affordances are related to those aspects on a deeper level as well as other affecting factors. These affordances are also affecting simultaneously the learning situation; therefore, they should be considered when planning the use of technology to create some meaningful activities for the learners. The use of technology could influence any of the two types of affordances depending on the way it is used. From the teacher’s point of view, the indirect ones may come to mind more often as each teacher has their own way of teaching and their own understanding of what teaching looks like.

In another piece of work, van Lier (2007) brings up AB teaching, which is a teaching approach that emphasizes the activity and agency of the learner (p. 46) as well as their individuality (p. 47). This teaching approach puts “emphasis on the processes of learning, particularly those that combine social-interactive and cognitive-reflective work in the classroom” (van Lier, 2007, p. 47). AB teaching views the learner as an active agent that has needs, which guide their learning (van Lier, 2007, p. 53). These ideas are also present in van Lier’s (2004) earlier work and in the socio-cultural view of learning. In addition, technology can be used a tool to activate the learners. According to the AB learning view, the role of the teacher is to make “resources available in the environment” and guide “the learner’s perception and action towards arrays of affordances that can further his or her goals” (van Lier, 2007, p. 53). This is where technology could again be used in ways to support the learners individual goals as technology is such a big part of everyone’s everyday lives – even learners’. This teaching approach is very much present in the new Finnish national core curriculum that I will discuss in the next section, and the term action-based comes up in many instances regarding teaching in general but also specifically in English teaching.

2.2. The Finnish national core curriculum

The Finnish national core curriculum for basic education includes many guidelines related to the use of technology. These cover aspects related to sustainability, interaction, working methods, learning environment, and information and communication technology. In scope of sustainability, the importance of the future of humans and the nature is to be considered in the development and usage of technology (Opetushallitus, 2016, p. 16). These values should be present in the teaching.

Looking at the interaction and working methods, especially the diversity of the AB activity is highlighted throughout the whole curriculum. In addition, giving room for different age periods and the learners' characteristic AB activities, creative working, moving, play and experiences is important (Opetushallitus, 2016, p. 27). Technology can be used as a tool to realise these in language teaching. According to the curriculum (Opetushallitus, 2016), technology should be used to aid interaction and improve the working methods' multisensory experience (p. 27), and the involvement and personal learning strategies of the learners (p. 29). Even distance teaching – which is a very current topic as the past two years have been strongly influenced by the pandemic that led to full distance teaching at times – is mentioned (p. 39). Again, technology can be used as a tool to achieve some of the objectives described in the curriculum.

There is a whole section about information and communication technology competence, and how technology can be used to deepen the learners' skills and make them utilise what they have learned in another surrounding (Opetushallitus, 2016, p. 284). There are four areas that should be included in teaching: (1) practical skills and creating, (2) responsible and safe activity, (3) data management and investigative and creative working, and (4) interaction and networking (Opetushallitus, 2016, p. 284). This shows that different uses and aspects of technology should be covered.

When it comes to teaching English, technology is also brought up. For example, the notion of authenticity of situations can be enhanced with the help of technology (Opetushallitus, 2016, p. 348). There are also many possibilities for using technology even though it may not be explicitly mentioned in all parts of the text. As languages are used for interaction as well as whilst using technology, there is a possibility for combining the two in English teaching. Also, information retrieval about different topics related to the language, such as its culture or geography, can include technology as a tool. The aspect of free time and students using English in increasing amounts during it is brought up, and the same phenomenon can be seen with technology (Opetushallitus, 2016, p. 348). This is something to take into account in English teaching.

2.3. Technology in teaching

Wilson (2020) studied which issues prevent from integrating technology into teaching and to what extent students are active participators and learn through technology by reviewing research on the field (p. 123). For the use of technology to be meaningful, the teacher should put thought in the planning and execution of teaching (Wilson, 2020, p. 124). Three ways to integrate technology in teaching have been identified: replacement, amplification, and transformation (Hew & Brush, 2006,

p. 227). Replacement refers to an instance where technology is used but nothing else is altered, such as in the case of showing something by projecting the text from the textbook on the board. Amplification in the other hand means using technology to make a task more efficient: for example, using technology for making copies instead of writing them by hand. What makes transformation differ from the two previous ways of using technology is that it refers to using technology in a way that “would otherwise be impossible or unrealistic in an analog context”, as Wilson (2020, p. 124) explains. This could be realised in a task such as creating a blog post for a real blog, which creates the feeling of meaningfulness and allows active participation of the learner.

Wilson (2020) points out that “technical and social supports to develop, maintain, and adjust their instructional methods and strategies as learning technologies continually evolve” (p. 124) is needed. Also, the teachers’ own beliefs impact on the use of technology, and those who have a constructivist or student-centred approach to teaching seem to use technology in a transformative way (Wilson, 2020, p. 125). However, this kind of technology integration is not always easy to put into practice if teachers do not get enough support and training, or if they do not have enough knowledge (Wilson, 2020, p. 125). In addition, Wilson (2020) points out that the constantly evolving technology creates challenges as well (p. 125). Institutional factors, including factors related to time-management and habits, are also named as setting challenges (Bielaczyc, 2006; Hew & Brush, 2006). For example, Hew and Brush (2006) mention that planning and training set challenges as the incorporation of technology may take more time and require additional training (p. 244). Factors mentioned by Bielaczyc (2006) include, for instance, structures and norms present in the teaching (p. 303). These types of aspects are reflected in how the teacher sees their role as a teacher and what their possibilities are for planning the lessons and teaching.

Teachers often have difficulties in finding ways to cope with problems that arise when technology is used. In a study by Anthony and Clark (2011) it was found out that technology is often used mostly “as a tool to motivate student engagement, rather than to serve a primary learning objective” (cited in Wilson, 2020, p. 128). This is due to not having enough time during the lesson, which can lead to the integration of technology not being meaningful or frequent (Anthony & Clark, as cited in Wilson, 2020, p. 128). However, there are other aspects related to the meaningfulness that need to be discussed as well.

One of these aspects is the relevancy of the topic and task at question (Wilson, 2020, p. 130). This means that the task in which technology is used should be meaningful and offer the possibility for participation (Wilson, 2020, p. 131). In other words, the task should be of that kind that the background and individual interests are considered, and the students have a possibility to express

themselves. As Barton, Tan and Rivet (2008) found also, if students are given more freedom to perform a task or project, and, for instance, be creative in an execution of a task and use their personal strengths, it can positively impact the students' responsibility and engagement while learning (p. 83, 93). This can be applied to using technology to aid learning by, for example, giving the chance to listen to music while doing exercises or use a technological tool. In their longitudinal case study research, Barton, Tan and Rivet (2008) studied girls' science practices looking at their engagement and ways they support their own engagement (p. 70). The results show that hybrid spaces are meaningful (Barton, Tan & Rivet, 2008, p. 98). In other words, the use of different resources available and forming the knowledge into something meaningful using the resources, such as identity or what is taught in class, supports participation (Barton, Tan & Rivet, 2008, p. 99). As mentioned, technology can be used as a resource and tool to help in creating this hybrid space where there is interaction between the learners and the different resources. Hence, the use of technology needs to be considered when the teacher is planning the topics and tasks for the lessons.

Another research that is closely related to this thesis – and acted as inspiration – is by Karamifar et al. (2019) on needs and beliefs related to technology-enhanced language teaching, and the perception of the ideal ESL or EFL teacher. They conducted an online questionnaire with 32 questions to find out how ESL or EFL teachers view the use of technology in language teaching, what kinds of needs are related to it, and how technology has affected the idea of the ideal language teacher (Karamifar et al., 2019, p. 63).

Karamifar et al. (2019) discuss that

[a]s digital tools and applications develop at an ever-increasing pace and learner expectations change, limiting digital skills development to preservice, institution-based teacher training, as is frequently the case in formal language educator training programs, is no longer sufficient. Instead, continuing professional development (CPD) has gained importance for (language) teaching professionals to enable them to keep abreast of the multiple changes occurring in all areas of communication. (p. 56)

This means that being aware of the developments and changes in the society and understanding language learning and teaching is crucial. The assessment and reflection of the usage of different technology and of educational tools and resources are highlighted (Karamifar et al., 2019, p. 58). Related to this, the term affordance – which was introduced earlier in the theoretical background through van Lier's (2004) article – is brought up in Haines (2015) article as well. Haines (2015) discusses affordances from the angle of how technology is viewed to aid learning (p. 166). Three main findings are presented: (1) thoughts on affordances evolve with time and experience, (2)

thoughts on affordances vary with each teacher and their experience and goals, and (3) affordances are seen in the teacher's own learning and professional growth via technology (Haines, 2015, p. 173). Hence, affordances are a part of the assessment and reflection of the use of technology in teaching. It is important to understand and consider how technology can support language teaching and, therefore, the learning process.

The training of teachers is also discussed. Technology training is often forgotten, not appropriate or not up to date in language teacher training (Kessler, 2018, pp. 206, 216). Karamifar and colleagues (2019) elaborate that this leads to teachers having difficulties "in choosing the appropriate technology for their purpose" (p. 60). In a study by Hew and Brush (2006), there were found barriers that affect the usage of technology in teaching: "(a) resources, (b) knowledge and skills, (c) institution, (d) attitudes and beliefs, (e) assessment, and (f) subject culture" (p. 226). These affect how the teachers incorporate digital tools and technology in their teaching. The aforementioned aspects related to teachers' training are reflected in these barriers and can be later seen also in the analysis of the questionnaire by the researchers.

Lastly, Karamifar and colleagues (2019) included examples of what some of the ideal language teacher's qualities are. As the notion of the ideal teacher is not my focus point, I will keep this section brief. These qualities included, for instance, professionalism, systematicity, being organised, reliability, confidence, activeness, and intelligence, as found by Chen and Lin (2009, p. 239). An interesting point is that these or some other qualities mentioned did not include the use of technology.

Then onto the questionnaire and the findings. The questionnaire contained both qualitative and quantitative aspects. A variety of participants with different career backgrounds took part: language teachers, teacher-trainers, administrators, and education-related professions (Karamifar et al., 2019, p. 64). Summative content analysis was used to analyse the data which, for the qualitative parts of data, means creating themes by looking at and counting the contents and words, and search for patterns in them (Karamifar et al., 2019, p. 65). A software called Statistical Package for Social Sciences (SPSS) was used to analyse the quantitative data (Karamifar et al., 2019, p. 65). These were then combined in the discussion.

The results showed that the language that the teachers taught did not significantly affect the teachers' needs. The ones that came up the most often were "'learning task design" skills (...), "course management platforms" (...), "pedagogy enhanced by technology" (...), and "blended/online courses" skills" (Karamifar et al., 2019, p. 65). In addition, more training that is "hands-on practice, increased duration, intensity, and depth" is needed (Karamifar et al., 2019, p. 67). These are the main aspects mentioned about the needs regarding training.

Nearly half of the teachers did think the use of technology is linked with excellence in teaching (Karamifar et al., 2019, p. 70). Participants recognised technology as a tool for motivating and engaging learners, for example, but not as something compulsory to excel in teaching (Karamifar et al., 2019, p. 70). However, some participants showed worry about the barriers, which were mentioned in the literary review of the research article. These worries included aspects such as technology failing, technology adding workload, and other technical issues (Karamifar et al., 2019, p. 70). These are somewhat similar to issues brought up in Wilson's (2020) study. The "language teachers' awareness of the fast-changing nature of digital teaching resources and the need to be able to effectively manage this overwhelming range of tools" was brought up by Karamifar and colleagues (2019, p. 73). In other words, training should follow along and accommodate with the changes and provide teachers with competence that is useful and current.

As mentioned before, the use of technology is considered as a factor of excelling in teaching; however, not many descriptions of the ideal teacher did include technology as a factor (Karamifar et al., 2019, p. 75). According to Karamifar et al. (2019), "[t]his may indicate that even if the awareness of a rapidly changing society pushes teachers toward adopting technology in their courses, it has not yet become an internal belief or a philosophy of language teaching in the 21st century" (p. 75). This shows that there is an understanding of what teaching could and should be like, but the skills and beliefs may not be at the same level.

Bielaczyc (2006) discusses in their article some of the difficulties in the creation of learning environments with technology. The article covers different variables based on previous research that should be considered when bringing technology into the teaching and emphasises the importance of why and how something should be done in a certain way (Bielaczyc, 2006, p. 302). Bielaczyc (2006) has created the Social Infrastructure Framework, which "includes a variety of critical design elements, including beliefs about learning and knowledge, learning activities and their associated participant structures, and configurations of both physical space and cyberspace" (p. 302). These are some of the aspects that need to be considered when teachers plan their teaching and the incorporation of technology into it.

Four basic concepts have been identified: the cultural beliefs dimension, the practices dimension, the socio-techno-spatial relations dimension, and the interaction with the 'outside world' dimension (Bielaczyc, 2006, pp. 303–304). The cultural beliefs refer to the beliefs related to technology and how they affect the way of doing things in the classroom (Bielaczyc, 2006, p. 303). The practices in the other hand consider aspects related to both the teachers' and the students' the practices of working in the classroom with technology (Bielaczyc, 2006, p. 303). The socio-techno-spatial relations include

how the teacher and the students interact with technology in physical space and cyberspace (Bielaczyc, 2006, p. 304). Lastly, the interaction with the 'outside world' takes into consideration how "students interact, online and offline, with people outside of their immediate classroom context" (Bielaczyc, 2006, p. 304). It is also noted that even though these four dimensions are separated, they are strongly connected and affect each other (Bielaczyc, 2006, p. 304). These will be discussed more in relation to the difficulties related to incorporating technology in teaching.

Sometimes, as Bielaczyc (2006) explains, it is necessary to reconsider beliefs related to learning and working with technology for it to be a successful part of teaching: "(a) how learning and knowledge are conceptualized, (b) how a student's social identity is understood, (c) how a teacher's social identity is understood, and (d) how the purpose of the tool is viewed" (p. 304). These questions may help in that process. In addition, the way that students perceive themselves and the others affects as well as how the teacher perceives themselves and the students' perceive the teacher (Bielaczyc, 2006, p. 305). This demonstrates that understanding the learning process and the different aspects related to it need to be understood for the technology use to be successful.

The Trojan Mouse effect is brought up in the article by Bielaczyc (2006). This means that as technology is used in a classroom, the teacher's role has been found to change from an authority to a facilitator (Schofield, 1995, 1997, as cited in Bielaczyc, 2006, p. 306). It is therefore important to consider the social identity of the teacher and the assumptions on the roles of the teacher and the students affect the learning environment and how the technological tool is incorporated (Bielaczyc, 2006, p. 306). These ideas of how the different aspects in the environment and people interact are similar to Vygotsky's (1978) socio-cultural theory.

Also, the cultural beliefs related to the technology tool affect how it is utilised in the classroom (Bielaczyc, 2006, p. 306). Sheingold, Hawkins and Char (1984) describe how the same game could be perceived different ways; some teachers viewed a game as a way of teaching math skills relevant to the curriculum, and others viewed it as a mere game of navigation that could be played outside class time (cited in Bielaczyc, 2006, p. 306). This shows the beliefs may influence the way a technological tool is used in teaching and whether its pedagogical potential is successfully taken advantage of. If the teacher does not see the potential in the technological tool, the students may not possibly see the connection of the topic and the real world, such as math and navigation.

As mentioned, these different dimensions are interrelated. For example, the social identity of students may be positively affected if there is some real-world connection such as sharing their work with people outside the school (Bielaczyc, 2006, p. 307). This could be realised either in an exposé or on a blog on the Internet, for instance. This way the dimensions of the cultural beliefs and the interaction

with the 'outside world' are connected (Bielaczyc, 2006, p. 307). The aspect of interaction is also present in the research by van Lier (2007), and meaningfulness is mentioned in Wilson's (2020) article and in the national core curriculum (Opetushallitus, 2016). Another example of how to take into account the interaction with the 'outside world' dimension is visiting experts or having them visit the class (Bielaczyc, 2006, p. 312). As Bielaczyc (2006) mentions, "[i]t opens up possibilities for building a deeper understanding, as well as developing the types of interactional and resource-gathering skills necessary to find and use external resources" (p. 312) which again creates the feeling of meaningfulness. This is also where technology can give opportunities for a wider 'outside world' connection.

Throughout the article Bielaczyc (2006) gives examples of questions that the teacher needs to consider in the process of planning the lesson and its activities from different perspectives. Here are some questions that are about the activities during lessons:

Should activity selection be left open to students, semistructured, or tightly sequenced? Should all students carry out the same activities, or should the activities differ according to the needs of particular students? Should remediation activities be provided if students have difficulties? A critical issue when working with technology-based tools concerns how to learn the functionality of the tool. Should this be a separate activity, or is the tool to be learned in the course of the broader set of activities? (p. 307)

Especially these are very relevant to my topic as they are related to the way of incorporating technology and the tasks related to it. However, the role of the teacher needs to be considered and to what extent they control and intervene in the learning process (Bielaczyc, 2006, p. 308). The benefit of control is that the teacher can ensure the student encounters what is intended, but this may diminish the feeling of ownership and autonomy; therefore, a balance between these two may be optimal (Bielaczyc, 2006, p. 308). The ownership and autonomy of the learner are given much importance in the national core curriculum (Opetushallitus, 2016) and van Lier's (2007) article.

Questions to consider regarding the socio-techno-spatial relations dimension include aspects such as the placement of technology, is there space next to the computers, and what the teacher does whilst the students are working on a computer or mobile phone (Bielaczyc, 2006, p. 310). Bielaczyc (2006) also notes that the availability of technology in the classroom may affect the learning experience (p. 310). Therefore, the differences in the number of devices in schools may affect the use of technology during the lessons. Hence, if each student has their own laptop, it may be used more frequently and fluently than if the school has one or two carts of laptops or such to share with many groups or even the whole school.

The socio-cultural theory (Vygotsky, 1978; Lantolf, 2000) provides a theoretical background through which the data and its extracts will be analysed. Technology is often used to do something and keep the learners active; hence, the data is analysed from the perspective of AB teaching (van Lier, 2007; Wilson, 2020). Affordance is a key term because there are many factors affecting the learning that need to be considered by the teacher, especially when incorporating technology (Haines, 2015; Karamifar et al., 2019; van Lier, 2004). The Finnish national core curriculum (Opetushallitus, 2016) is helpful in the analysis of how the teachers implement the curriculum in practice and how they think technology can be used to implement it. From the previous research, the three ways to integrate technology into teaching support the analysis as well (Hew & Brush, 2007). Motivating the learners, engagement and meaningfulness are also crucial aspects from the research (Anthony & Clark, 2011, as cited in Wilson, 2020; Wilson, 2020). These are the key concepts from the theoretical background and previous research that help in the analysis and discussion.

3. Data and method

As the approach for this study is of qualitative nature, the data that was collected by conducting interviews. The details of the interviews, the data collection process, and reasoning behind the choices related to these aspects are discussed in this section. In addition, the method and analysis process are described. The interviews were analysed using thematic analysis and the different steps of the analysis are explained. Because of the flexibility of the method, the researcher needs to be clear and transparent of what they do as Braun and Clarke (2006, p. 96) note. Therefore, there is a detailed description of the way thematic analysis is used. The ethical aspects and the different leaflets related to participation to this study are described in the end of this section.

3.1. Interviews

This research is a qualitative study based on qualitative interviews. As Roulston (2013) mentions, this is a method used in research that focuses “on examining peoples’ experiences, perspectives, and meaning making” (p. 1), which is what was done. As the method is qualitative, there were not many participants, and this way there was a possibility to get a more thorough understanding on the topic: participants experience on the use of technology in English teaching (Roulston, 2013, p. 1; Braun & Clarke, 2006, p. 78). Because of the nature of the data, the process of collecting, transcribing, and analysing is more time-consuming than if the data was of quantitative nature, for example (Roulston, 2013, p. 4; Riessman, 1993, p. 69).

To get the best understanding possible of the participants views and experiences, the interviews were semi-structured. This means that I made an interview guide with questions and topics of interest written down but did not restrict the discussion to those and asked follow-up questions (Roulston, 2013, pp. 1–2, 6). This way the participants had the possibility to bring up and elaborate on aspects related to teaching, language learning and the use of technology that came to their mind and provide their real point of view and experiences. All the questions were used in the interview, but some were not covered as thoroughly as others. This is because the aim was to have a relaxed setting and the interviews to be progressing naturally, like a discussion, based on the participant’s thoughts and experiences. The topics of interests were (1) how technology is used in English teaching to aid the learning process, (2) how English teachers use technology to help in their work, during lessons and outside lessons, and (3) how English teachers feel about the training related to the use of technology in teaching. Based on these topics, the following questions were formulated to have some starting points for the interviews:

- 1) How can technology be used in teaching?
- 2) What are your experiences of the use of technology in your teaching – during lessons and outside the lessons?
- 3) What kind of technology do you use in your daily life? How do you utilise this technology in language teaching?
- 4) How does the use of technology support language learning?
- 5) In what ways is technology present in students' daily lives and how is this seen in the classroom?
- 6) What kind of benefits does the use of technology in class bring to students?
- 7) How can technology be used to take into account the individual students and their different experiences with technology?
- 8) What kind of training related to the pedagogical use of technology in teaching have you received – during the teacher training and at work?

Two English teachers that have completed their teacher training and have had possibilities to work as an English teacher were needed as participants. The first step was contacting people I know that fit the description as this could result in a more relaxed and open discussion, which is beneficial as the relationship between the interviewer and interviewee is important and affects the discussion (Roulston, 2013, p. 4). In addition, an email was sent to the email list of Verba ry, the organisation of students of English, German, Swedish and French at the University of Oulu. In result, I got one participant via my contacts and one via the email I sent. They are referred to as Teacher A and Teacher B. Both teachers have experience from primary school, middle school and high school teaching. In addition to this, Teacher B has also experience from special needs education. Both have graduated quite recently as English teachers: Teacher A has graduated during this year, and Teacher B has graduated four years ago. At the time of the interviews, Teacher A was working as a substitute teacher, and Teacher B held a middle school English teacher's post.

To keep the conversation and situation as natural and relaxed as possible, the interviews were conducted in Finnish and later translated into English. Some precautions related to this will be discussed later among other ethical aspects that need to be considered. Before and whilst conducting the interviews, I reflected and was careful with my own standpoint on the topic as I am a future English teacher myself. As Roulston (2013) discusses, whether the researcher has an insider or outsider positioning regarding the research topic can affect the research and the participants (p. 5). This means that there is a possibility to leading the discussion into some direction which is why these are important points to reflect on and keep in mind whilst this whole process. In addition, the question

of bias and a neutral approach are something to keep in mind as well in order not to significantly affect the research (Roulston, 2013, p. 6). This requires attentiveness during the entire process, especially during the interviews and their analysis.

3.2. Thematic analysis

Due to the nature of the study and its aims, thematic analysis was chosen as the method of analysis. The data from the interviews was analysed thoroughly using the analysis method described in this section. This results in a deep understanding of the topic. First, thematic analysis and what its key terms mean are explained, and reasoning is given as to why this method was chosen. Then, the analysis process is gone through more in detail.

Thematic analysis is a flexible tool used in qualitative research in which the researcher studies the data closely to identify codes and themes (Braun & Clarke, 2006, pp. 78, 80). Codes are formed to note something interesting and meaningful in the data that will be later organised into themes, as Braun and Clarke (2006, p. 88) explain. There are two main ways to approach the data analysis: theoretical and inductive (Braun & Clarke, 2006, p. 83). In the theoretical approach, the analysis focuses on some topics of interest found from the data (Braun & Clarke, 2006, p. 84), and in the inductive approach, the focus is more on the entity of the data and what is brought up by the participants (Braun & Clarke, 2006, p. 83). In other words, the first one is more focused on the interests of the researcher than the latter which puts more emphasis on the data and the participants voice. As my aim is to find out about EFL teachers' thoughts and experiences on technology in teaching English, I have chosen the inductive thematic analysis approach.

Braun and Clarke (2006) have identified six phases in the analysis but note that there is necessarily some back and forth movement between the data, the codes, and the written analysis (Braun & Clarke, 2006, p. 86). This also means that the analysis develops constantly. In the first phase you transcribe the interviews, get familiar with your data by reading it multiple times, and make notes on initial ideas for some codes (Braun & Clarke, 2006, p. 87). This means that I listened to the audio recordings and wrote the transcripts while making some notes. Microsoft Word was used for this. After having transcribed each interview, I listened and double-checked the whole interviews and made sure the transcripts were accurate. Due to the nature of the analysis, the transcriptions are done focusing on the content. When emphasis is applied, the word is written using uppercase. Sudden corrections or changes in a sentence are marked with a hyphen (-).

Coding is the focus in the second phase. In this phase the transcripts are again gone through several times and initial codes are formed (Braun & Clarke, 2006, p. 88). In this process, the theoretical approach chosen – in my case the inductive approach – is important to keep in mind (Braun & Clarke, 2006, p. 88). In other words, the focus was on the data and what the participants brought up, and I was not coding the data with, for example, the interview questions in mind. Other important aspects mentioned by Braun and Clarke (2006) are to remember to be equal with the attention you give to each interview and that you may code extracts of the interviews into several themes (p. 89). This means that there were some back and forth movement, and some changes in the coding occurred as the codes were identified. The coding happened on the transcription documents by making notes next to each utterance in uppercase and a red font.

You move into phase three when the data has been coded (Braun & Clarke, 2006, p. 89). During this phase, the formation of themes and sub-themes begins, and the codes and the data extracts are organised into bigger groups that form the themes (Braun & Clarke, 2006, p. 89). I made a table with colour coded themes and extracts to help in this process. Then in the fourth phase, the themes were reviewed in terms of how well the codes and the data extracts fit each theme, and how well the themes represent the data (Braun & Clarke, 2006, p. 91). This way it can be ensured that nothing is left without a code, and new themes may be formed.

In the fifth phase, the themes were defined and named (Braun & Clarke, 2006, p. 92). The names of the themes should be succinct and descriptive (Braun & Clarke, 2006, p. 93). At this phase, I started forming the visual representation (Figure 1) presented in section 4. As Braun and Clarke (2006) point out, “it is important to consider how it fits into the broader overall ‘story’ that you are telling about your data, in relation to the research question or questions, to ensure there is not too much overlap between themes” (p. 92). This means that the focus of the research needs to be kept in mind when defining and naming the themes.

Finally, in phase six, the analysis is put together in a written format. This coherent analysis should include many extracts from the data that are vivid and give a clear example of the theme (Braun & Clarke, 2006, p. 93). Braun and Clarke (2006) give some questions to help in the process of writing the analysis: “What does this theme mean?”, “What are the implications of this theme?” and “What is the overall story the different themes reveal about the topic?”, for instance (p. 94). This way the extracts are used to support the analysis. Another important remark they make on the analysis is that alternative interpretations of the data make a stronger analysis and the contradicting points in the data should not be excluded or ignored (Braun & Clarke, 2006, p. 95). This will give the reader the possibility to see the logic behind the analysis.

3.3. Ethical aspects

There are some ethical aspects that need to be carefully considered before and whilst doing this thesis. Firstly, as in any research, truthfulness is important, as the Finnish National Board on Research Integrity (later referred to as TENK) (2013) states and needs to be fulfilled throughout the process: in referencing as well as in collecting and presenting data (p. 32). This means that during the transcription and analysis process, some cautiousness was required as the interviews were conducted in Finnish and then translated into English. When in doubt of what the participant meant, the participant was contacted, and the meaning of their point verified to give a truthful analysis and representation of the data.

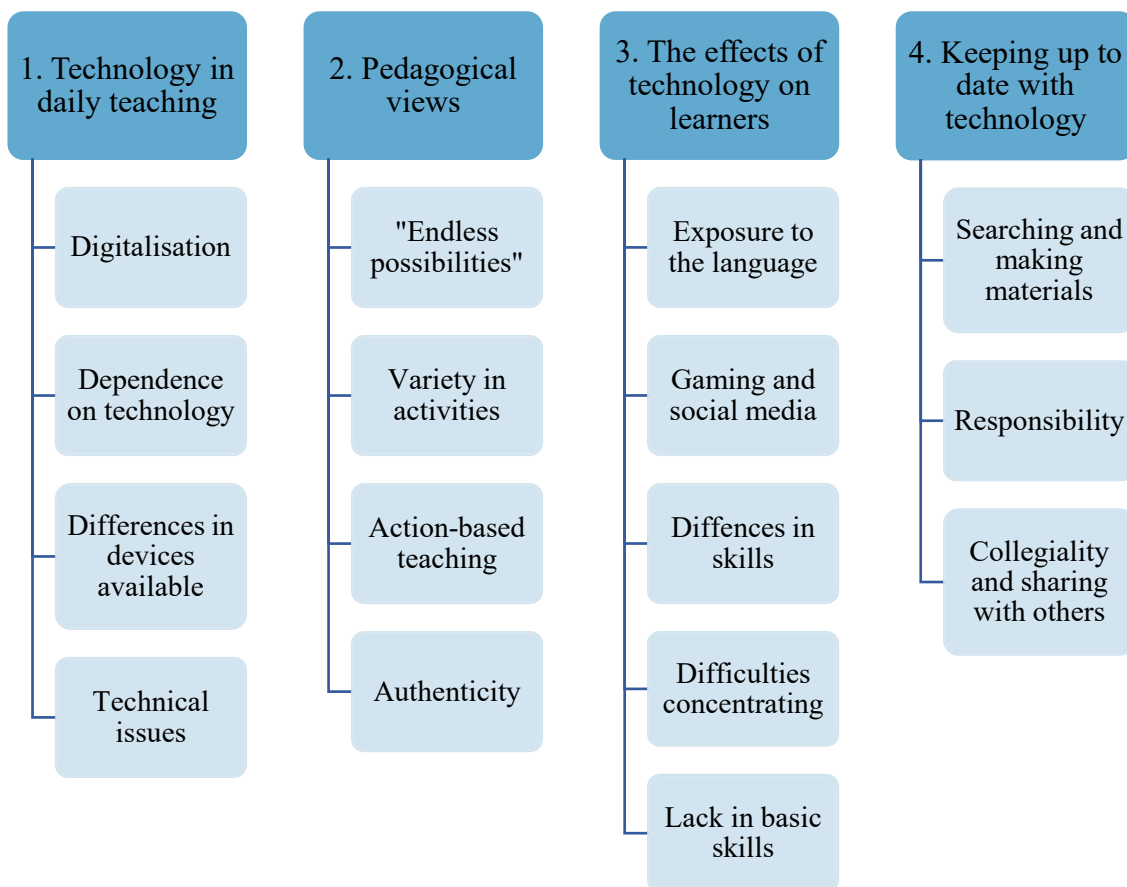
As human participants are involved, some forms – an informed consent form, an information leaflet, and a privacy notice – were created and filled in beforehand. An informed consent from the participant was needed and there was a possibility for withdrawal at any point (TENK, 2019, p. 51). This means that the participants were given sufficient, truthful, and understandable information about the study before participation in the form of an informed consent form, an information leaflet, and a privacy notice (TENK, 2019, p. 52). The informed consent form was given to the participants at least one day before the interview, allowing them to carefully read it and ask questions before participating. The form included a short description of the study, information about the possibility of withdrawal, contact information of the researcher, and giving consent on the other aspects mentioned in this section.

The privacy notice included information on the collection, processing, and storage of data. The data was collected using a smartphone and then transferred onto a laptop, which is protected with a password, instead of storing it in a cloud service. This was done to ensure the safety of the data. To have a backup audio recording, I also recorded the interviews on my laptop. No one else had access to the data, and the data was destroyed upon the completion of this thesis. No personal data was collected as it was not necessary. To protect the participants anonymity, pseudonyms were used, and the data was not made available for others (TENK, 2019, p. 57). Consent regarding the use of background information was asked. The background information that could be relevant include whether and when they had graduated, and how much experience they have in teaching. Any of this background information was information acquired in the interviews that the participants wished to give.

4. Findings

The findings and examples from the data are presented in this section. To get a general understanding of the findings and what will be discussed, key themes are visually presented in Figure 1:

Figure 1. Key themes



The analysis of the data shows that the digitalisation is a persistent theme. This is seen in the activities and exercises planned by the teachers as well as in the use of materials. Electronic materials have become a daily tool for the teacher and material from them is used often. Even though the teachers mention technology is an important and helpful tool in their job, there are some challenges too, such as technical issues. From the pedagogical point of view, the teachers describe a variety of ways to use technology in teaching to aid language learning. Especially the interactive games and the availability of authentic material on the Internet are something in which technology plays a key role.

The effects of technology in students are very visible for the teachers. Even though technology can add to the language learning, the use of technology may be difficult or cause distraction, for example. In addition, the substantial use of technology in daily life can be seen in students' skills: for instance, it may influence positively through exposure to English on free time, or negatively to writing skills.

This creates some difficulties that affect the teaching and learning that need to be considered by the teacher. However, the importance and significance of social media networks and collegiality in teachers' work are also notable. Technology enables a way to share and store ideas and materials with each other and search for them. These are the themes that will be discussed more in detail in the analysis.

4.1. Technology in daily teaching

It is clear from the data that technology is a big part of the daily teaching of English language teachers. The development of tools and materials is seen through digitalisation and how technology is present in every lesson. Many different kinds of tools are used to do something that used to be on paper or manual, which are considered to be more old-fashioned nowadays. Technology is used by teachers not only in the classroom, but also outside the classroom in different aspects related to their job. These aspects will be discussed more in depth in this section.

4.1.1 Digitalisation of materials

Many of the materials that are used in classrooms and outside classroom require technology. The examples given by the participants include electronic textbooks and workbooks, additional electronic materials offered by publishing companies, self-made PowerPoints and printable or electronic exercises, games, written assignments, and tests. Teacher A describes the usage of technology in the following way:

(1) Teacher A

[I]han perus käyttö, mitä käyttää lähes koko ajan, että niinku näyttää taululta niitä materiaaleja, koska mittään piirtoheittimiä ei oo enää missään käytössä. Eli sieltä teknologian avulla näytetään ne, mitä luetaan ja tehdään, ja sitten niitä on paljon niitä tehtäviä siellä, mitä voi tehdä niissä sähköisissä materiaaleissa.

Translation

[T]he basic usage that you use nearly all the time that you like show the materials on the blackboard/whiteboard because no overhead projectors are used anywhere anymore. So, you show with the help of technology what we are reading and doing, and then there's lots of exercises that can be done in the electronic materials.

The teacher mentions the “basic usage that you use nearly all the time”, which implies that there is some type of technology that is used frequently and is part of the teaching each day. The way of using technology that is described is using it as a visual aid for the students to see some materials as well as a resource for additional electronic materials provided by the publisher of the English book series. This shows the use of technology as a tool to aid interaction and improve the working methods’ multisensory experience, which is mentioned in the national core curriculum (Opetushallitus, 2016, p. 27). In addition, Opetushallitus (2016, p. 29) notes that personal using strategies need to be considered, and using technology may help in that. Seeing the text on the screen and hearing it simultaneously may aid language learning, and for some, the exercises in the electronic materials that are often different from the ones in textbooks or workbooks may help learning as they may be more engaging and intriguing. Hence, the digitalisation of the materials may help in those aspects.

The second participant gives a very good example of how these electronic materials may be more AB:

(2) Teacher B

Sitten on ihan- kirjantekijöillä on niissä digimateriaaleissa paljon vaikka semmosia niinkö pelejä, mutta riippuu ryhmästä, että osallistuuko ne semmoseen. Mutta että ne voi toiminnallisesti niinkö tehdä sitä. Ne voi ite tulla siihen [SMART Boardin] kosketusnäyttöön tekkeen niitä. Käydä koskettamassa jotain tai yhistää sanoja ja semmosia.

Translation

Then in the electronic materials offered by the publishers there’s like for instance games, but it much depends on the group whether they participate in those. But they can do them in an action-based manner. They can come and do them themselves on the touch screen [of the SMART Board]. Touch something or connect words and so on.

This example demonstrates how AB teaching can be done utilising technological tools, which in this case are the Smartboard and the electronic materials by the publisher. From the three ways of integrating technology in teaching identified by Hew and Brush (2006), these extracts show amplification and transformation (p. 227). In other words, technology is used to amplify something: the printed version of the book is amplified to an electronic version, and the text and some additional materials are shown on the whiteboard or listened to. What is transformed is the way of going through the text and playing the game: listening to it rather than reading, and playing the game on the SMART Board rather than doing some exercises on a paper with a pencil. As seen, technology can be used in

many ways to do something that can also be done without it, but it can also be used to add something new.

Throughout the interviews, it is noticeable that technology is present in nearly every aspect of teaching. As seen from the examples so far, the materials used in English teaching have become more and more digital and the use of technology is inevitable. The teachers themselves note that technology could be used in anything or that there are “endless possibilities” of what you can do with technology. These ideas are present in the following two extracts.

(3) Teacher A

Mmm, no siis tavallaan [teknologiaa voi hyödyntää] niinku oikeesti ihan varmaan kaikkeen, että... ihan just niinku kielioppiinki, että sitten voi niinku ite tehdä just vaikka, jos tuntuu, että joku asia on semmonen epäselvä niin sit voi ite tehdä sellasen selkeyttävän vaikka PowerPointin tai jotaki, mikä silleen auttaa ja semmosia tehtäviä siihenki, että ne on kyllä hyödyllisiä ja, ja- no sitten tietysti se on tosi kiva, että kun me niinku kieltenopiskelussa tutustutaan näihin eri kulttuureihin kans. Niin sittenhän se on niinku parasta kattoa just jotaki videoita ja kuunnella jotaki lauluja silleen.

Translation

Hmm, well you can kinda [make use of technology] in pretty much everything like... even like in grammar you can yourself make a clarifying PowerPoint for instance or something that helps or some exercises related to it, so they really are useful and, and- well then of course it's really nice that when we get to know different cultures also as we learn languages. So, it's like the best thing to watch some videos and listen to some songs and so on.

From this example, it can be seen that the teacher views technology as a versatile tool that can be used in many different ways. An example that is given is making PowerPoints for clarifying purposes and creating additional materials. The material made by the teacher is created to support the other materials that are used. This allows differentiating – which will be discussed more later in section 4.2 – and creating materials that suit just your learners' needs. Another interesting and important point from the example is related to how technology can be used in getting to know the different cultures – which is a key component in language learning even mentioned in the national core curriculum. Technology allows to explore them in a whole other level than just through books and brings more multisensory experiences and authenticity – which are both brought up in the curriculum (Opetushallitus, 2016, pp. 27, 348) – to English teaching. This technology is used as often as nearly each lesson: “mä varmaan joka tunnilla melkeen- nii ku tulee joku juttu vastaan nii sitten niinku aina

meen Googleen ja näytän” (Teacher A, transl. I probably each lesson- when we come across something I always go on Google and show). The way this is done in practice is demonstrated like this:

(4) Teacher A

[N]e oli niinku ne [kirjan] hahmot jossain Lontoossa ja sit siinä oli, että ‘saatavilla englantilaista aamupallaa’. Ja sitten mä olin, että ‘tiiätekö minkälainen on englantilainen aamupala?’. Ja sitten katottiin yhdessä ja niinku ihan tommosia juttuja, ku ne pystyy heti siitä kattoon ja sitten voi olla silleen ‘aaa, mä oon syöny tuota’.

Translation

[T]he characters [in the book] were somewhere in London and it said ‘English breakfast available’. And then I was like ‘do you know what an English breakfast is like?’. And then we looked together, and like those kinds of things when they can straight away look and then they can be like ‘oh, I have eaten that’.

Here is an example of how technology is used to show something on the Internet that is directly related to the topic they are going through. Even though the specific example of what is shown is about third graders, a similar situation most probably can occur with seven to ninth graders with just a different topic – after all, this type of a situation is said to happen “probably each lesson”. This indicates that Internet, the computer, and the whiteboard screen are essential and very much in use in everyday language teaching. Without it, it would require more preparation from the teacher and some spontaneous learning situations may not happen without the access to Internet and search engines such as Google, and the other technology to use and show something.

Even though this digitalisation brings many new opportunities, there are some downsides as well. Both participants have been in situations where the equipment does not work. For example, the audio systems are mentioned to often cause issues (see section 4.4.1 example 26). In these instances, they mention they have called the ICT support. Other possibilities mentioned to solve the situation is to search Google for help or ask a colleague. However, sometimes there is no solution found in the moment and the lesson needs to be kept different from the plans. This might result in some anxiety and here is how one of the teachers describes how they feel about when the technology fails:

(5) Teacher A

Hmm, no jos mä meen nyt pitämään tuntia ja ne laitteet ei toimi niin mä oon aika paniikissa. Koska se tavallaan niinku ylleensä tosi paljon riippuu se opetus siitä. Mut sitten tietysti, jos se

ei toimi niin kyllä sitten onnistuu se silleen niinku vanhanakaisillaki keinoilla pittää sitä tuntia, mut siis se niinku mun mielestä se opetus on oikeesti aika riippuvaista siitä teknologiasta.

Translation

Hmm, well if I go give a lesson and the equipment don't work, I'm quite panicked. Because in a way, like usually the teaching is very much dependent of it. But then of course if it doesn't work, it's then possible to keep the lesson using old-fashioned ways, but like the teaching is really quite reliant on technology.

The dependability of the teaching on technology is clearly demonstrated in the example. In addition, it shows that even though teachers rely much on technology, they need to have the flexibility and skills to switch their plans and find ways to keep the lesson without technology sometimes. The words used to describe teaching that does not include technology is interesting. During the interviews also the word *perinteinen* (transl. traditional) has come up when talking about using a pen and paper to write essays, for example, and in the example the word *vanhanaikainen* (transl. old-fashioned). This demonstrates that technology actually is newer and current, and used a lot and most of the time.

To conclude, technology is a very important and big part of language teaching nowadays. Teaching is to some extent dependent on technology, which can be challenging for the teacher at times. Digitalisation can be seen in the materials and tools used in the classroom, and this impacts the daily tasks of both the teacher and the learners.

4.1.2 Technological tools replacing traditional tools

As noted from the previous analysis, technology is very present in the language teacher's and learners' day. In some ways, technology has made it possible to be more efficient and provide the teacher with more time to spend on other aspects of their job. This is also brought up in the interview:

(6) Teacher A

No tavallaan ainakin minusta tuntuu, että se niinkun on myös mulle hyvä, koska se [teknologia] helpottaa mun työtä kans, että mä voin hyödyntää sitä ja sitten mulla on ehkä aikaa enemmän auttaa ja olla silleen siellä... niinku keskittyä muihin juttuihin ja vaikka olla niitten oppilaitten kanssa enemmän.

Translation

Well, I kinda feel like it's also good for me, because the technology makes also my job easier so I can utilise it and then I have maybe more time to help and be there... like focus on other things and for instance be more with the pupils.

This demonstrates that technology really is a helpful and useful tool for the teacher. Also, the focus on the teaching and the learners can be seen: the teacher wants to be there to help their pupils and use technology to make their teaching better and more beneficial for the pupils. The different technological tools are a big part of teaching and add to it. For example, the electronic materials by the publishers are essential:

(7) Teacher A

Ainakin toi kielten opetus, että kun siellä on just kaikki ne, öö- voihan sen vaikka sen tekstin ja sanaston niinku lukkee ja näin, mutta yleensä ne aina kuunnellaan ja siellä on niin paljon semmosta lisämateriaalia siellä, mitä voidaan kuunnella, ja tutustua ja perehtyä [aiheeseen], ja niinku siellä tavallaan nettimateriaaleissa. (...) Että se niinku on aika iso pala siitä pois, jos sitä ei niinku olis. Että kyllä se [teknologia] on tosi iso osa sitä. Ja sitten niinku just kaikki tehtävien tarkistamiset ja kuuntelut, ja ihan niinku kaikkihan siellä on.

Translation

At least in language teaching when there's all those, uhm- for example the text and the vocabulary could be read and so on, but usually we always listen to them and there's so much additional material there that can be listened to, and get to know and go deeper into [the topic], and like in the electronic materials on the Internet. (...) So, it's quite a big part that goes missing if it, like, wouldn't exist. So, [technology] really is a big part of it. And then like, all the checking of the exercises and the listening exercises, and like everything is there.

Firstly, the electronic materials include the same texts and exercises that the books have so that they can be easily shown on the white board. However, as mentioned by the teacher, the materials allow listening to the text and showing the correct answers, allowing for some variety in the ways of going through the texts and exercises. Simultaneously, this might bring some efficiency in some tasks: for example, if a text has been read together in a previous class, the same text can be listened to so that there will be more time for exercises and discussion. In addition, the correct answers are easy to show, and if the classroom is equipped with a SMART Board, the learners can themselves come to the screen and participate in a more AB manner. This all is possible without any additional materials done by the teacher. The publishers also provide some additional materials, as mentioned in the

example, which can include games or videos. Again, it saves time from the teacher and allows them to search or create some more specific exercises.

Other than materials, technology is used by teachers in other parts of their jobs than keeping the lesson. For instance, some parts of their work outside the classroom involve technology, especially social platforms, or other technical tools. These include such tasks as searching for materials, planning, note-keeping, communicating with parents and staff, and such. There are many ways to find ideas for materials and some ready-made materials on the Internet via different platforms. These will be discussed more later, in section 4.4. However, in planning both participants used technical tools by Microsoft Office, such as Word. Teacher A said they were always used to doing lesson plans electronically, but Teacher B has recently switched towards this habit:

(8) Teacher B

Mä tykkään tehdä [tuntisuunnitelmat] paperille, ehkä ite. Se on jotenki mulle selkeempi. Mutta nytten mä- sitten ku on kaikki paperit aina hukassa... (naurua) Nyt mä oon alkanu tekemään niinku tuntisuunnitelmia itelle tonne Drive'iin esimerkiksi. Ja paljon mulla on siellä- mä oon koostanu sinne eri niinkö ryhmien ja eri ikäryhmien niinkö tavallaan matskuja ja lisämateriaaleja, mitä voi käyttää.

Translation

I, myself, maybe like to do [lesson plans] on paper. It's somehow clearer to me. But now I- well when all the paper are always lost... (laughter) Now I have started to do more lesson plans for myself to that Drive, for example. And I have there a lot- I have kind of compiled materials and additional materials there for different groups and different age groups that can be used.

Lesson plans made to Word are not only a habit, but they are easily found and kept in order, as seen from the example. If you think about flexibility and longevity, these lesson plans can be effortlessly edited, organised, and stored. In contrast, those made on paper may get lost, files or such may get too small to contain all the new plans, and changes may require more effort and lead to unclear documents.

Microsoft Office or other similar platform is used in many of the logistics related to teaching. Teacher B mentions the following to give some examples: "Sitten tässä työpaikassa nii meillä on niinkö tuo Microsoft käytössä nii meillä on siellä kaikki tavallaan listat ja läppärivaraukset ja kaikki semmoset. Kalenterit ja tämmöset." (transl. "Then in this workplace, we have that Microsoft in use, so we have all kind of lists there and laptop reservations and so on. Calendars and those."). Similar uses are

mentioned by the other teacher, and it shows that much of the preparations and work outside the lesson time happens using technology. Another common platform used is Wilma where the learners and their guardians have access to some parts as well. Here is how the participant describes and compares the uses of Microsoft Office and Wilma:

(9) Teacher B

Sinne [Wilmaan] tulee niinkö poissaolot ja- mä oon ehkä edellisessä työpaikassa tottunu, että siellä tapahtuu suurin osa niinkö kommunikoinnista työkavereittenki välillä, mutta täällä käytetään enemmän sitä Microsoftin sähköpostia useemmin, ku Wilmaa. Mutta sitten kaikki arviointit ja kokeen tulokset ja tämmöset sinne Wilmaan ja tuntiaktiivisuudet ja käyttäytymisestä. Että mä siihen nojaan tosi paljon arviointivaiheessa, että katon sieltä arviointit ja sitten mitä merkintöjä vaikka tunneilta on, onko kotiläksyt tehtynä ja näin. Ja sitten toki niinkö, jos pittää olla huoltajiin yhteydessä nii käytän sitä sillon.

Translation

The absences are put into [Wilma] and- in my previous workplace, I was maybe used to most of the communication happening there, even with colleagues, but here we use more often Microsoft's email than Wilma. But then again all the assessment and results of tests and such are in Wilma, and about activeness and behaviour. So, I rely on it a lot when grading so I look at the assessments and then what markings from the lessons there are, is homework done, and so on. And then of course, if I have to contact the guardians, I use it then.

It can be noticed through this example that different platforms can be used slightly differently depending on the school. In addition, Wilma is a platform that is used for a wide variety of matters. As seen, it is not only used for storage or communication for information among teachers and staff, but also for guardians and their children. This demonstrates that the implications of technology reach the guardians in addition to the teacher and their pupils. The other teacher also notes that Wilma is used often but explains that there may be differences in how often behaviour markings are done. The positive feedback is emphasised and that students actively use Wilma to check what they have for homework:

(10) Teacher A

No sinne laitetaan ne tuntimerkinnät. Jotkut laittaa, tai se riippuu opettajasta, että joku laittaa joka tunnin jälkeen, joku ei laita ku vaan, jos on joku niinku **TODELLA** vaikka huonosti mennyt tunti. Mutta sitten musta tuntuu, että nyt koko ajan enemmän laitetaan niitä positiivisia merkintöjä sinne. Että sinne laitetaan aika oikeesti aika paljon niitä ja ööö. Se on nyt kans,

että nykyään tuntuu, että kaikki oppilaat olettaa, että just kaikki läksyt ja kaikki tulee Wilmaan. Mikä tietysti on ihan hyvä, että on niinku yhdessä paikassa kaikki tommoset.

Translation

Well, the lesson markings are noted there. Some, or it depends on the teacher, put them there after each lesson, some put it only if some lesson has gone REALLY badly. But then I feel like nowadays more and more positive markings are put there. So quite a lot of them are put there, and uhm. And it also feels like nowadays all the pupils assume that like all of the homework and everything is noted in Wilma.

Learners have also adopted these tools and platforms as part of their daily life as seen above. Even though this takes away some of the responsibility of writing down the homework, the learners know where to get the information from. It could be seen as a change in the responsibility too: now they must check Wilma to see what they had for homework. Together examples 9 and 10 show the amount of information that is kept in Wilma is vast. It is a good tool for teachers to keep up with different aspects related to teaching, especially as all the information is in the same place, as mentioned by one of the participants.

As seen from the previous examples, there are some differences in which technology or platforms are used and how they are used. An important aspect related to this is the differences in technological devices available in schools. This may result in difficulties using the devices as they may be different which is mentioned in example number 26 (see section 4.4.1). In addition they could impact on how much technology is incorporated in the teaching. In example 11, Teacher A describes how different the availability of laptops or tablets may be:

(11) Teacher A

Aika monissa paikoissa on niitä kärryjä, mitä voi aina vuokrata, mutta joissakin niitä tietenkin vaikuttaa olevan aika vähän. Että sitten se on varmastikki aika harvinaista tavallaan, että hyödyntää niitä. Kun sitten taas joissakin paikoissa niitä on niinku jopa silleen luokkakohtaisesti sellanen kärry. Nii kyllähän niitä sitten tulee paljon enemmän käytettyä.

Translation

In quite many places there are those carts that you can always rent, but in some there seems to be quite few of them. So, then it's probably quite rare to make use of them. Then again in some places there's even one cart per classroom. So, then they do be used much more.

As it can be noticed, there may be significantly more technology available for the students to use. If there is one cart available that is in the use of several groups, the teacher needs to make sure in advance that the cart is available for their group to use when needed. This may result in using less the laptops or tablets and takes away some of the flexibility as the exact lesson they are needed on must be known in advance; hence, no changes in plans requiring this equipment can be done with short notice. As Teacher A notes, the devices are naturally more used if the availability is as great as each classroom has their own set of devices.

4.2. Pedagogical views on using technology

There are many ways technology can be used in language teaching that are described by the participants. From the examples they give, the reasoning behind the involvement of the different technical tools can be understood to be pedagogical. As in example 3 (see section 4.1.1) it is mentioned, technology can be used in almost anything, but there is always some reason for its use. As seen in the previous section, it may be related to the teacher's job in practice or – as it will be shown in this section – it may be related to the learner's job: learning and how it is aided. These themes will be elaborated on in this section.

4.2.1 Variety of activities

Using technology and the Internet in addition to physical books and paper brings some variety to the lessons. This can enhance the motivation of the learners and help in engaging them (Anthony & Clark, 2011, as cited in Wilson, 2020, p. 128). Both participants described how the use of technology, such as smartphones, laptops, or tablets, seemed to bring joy to the learners. Tasks involving a quiz or game played on a device, watching a video, or exploring the Internet for information retrieval purposes, for instance, came up as some examples of what the students enjoyed. Here is an example of a project that included technology:

(12) Teacher B

No ne tykkäs siitä just mistä mä puhuin, se USA-projekti. Se oli semmonen, että- mulla oli tavallaan semmonen fyysinen vihko, jonka jokainen sai ja sitten mä tein vielä sillä tavalla, että mä sanoin, että 'tää on itsenäisen opiskelun jakso'. Että mä tavallaan sanoin, että 'mä en puutu siihen, että jos et sä tee tunnilla näitä tehtäviä nii sä et tee, mutta niitten pittää olla sitte tehtynä joskus'. Että tavallaan mä siirsin niille tosi paljon vastuuta. Joillekki se toimi tosi

hyvin nii- sitten siinä yleensä on ollu positiivisia, että ne saa käyttää teknologiaa ja netistä ettiä tietoa ja sitten oli kaikkea videoita ja tämmöstä. Nii ne tykkäs siitä. Että jokainen sai omaa tahtia tehdä, joka niinku tavallaan- mä olin laittanu sinne vähä silleen, että oli- eriyttää ylös tai alaspäin. Vai pitääkö perustehtävistä tai sitten oli semmosia tehtäviä, että sai tehdä vaikka semmosen blogin siihen aiheeseen liittyen ja näin. Nii siitä ne kyllä tykkäs.

Translation

Well, they liked the one I talked about, the USA project. It was like- I had kinda a physical notebook that each one was given and then I did it so that I said that ‘this is an independent study period’. So, I kinda said that ‘I won’t intervene in it, so if you don’t do these exercises during the lesson, you don’t, but they do need to be done at a given time’. I kinda gave them a lot of responsibility. For some, it worked very well- usually it’s been always positive that they can use technology and search for information from the Internet and there’s all these videos and so on. So, they liked that. Everyone could do them on their pace which kinda- I had put there so there was- differentiating down or upwards. Or if you like basic exercises or then there were exercises that you could make this blog related to the topic and so on. So, they did like it.

The variety of the different aspects that this project includes is interesting. This type of a project-based work gives the learners freedom and independency in planning their learning. By giving them responsibility about their tasks – therefore, of their learning – helps in engaging and motivating them. In addition, the variety of exercises of different difficulty levels supports the individual learners and their needs and skill development. Lastly, the aspect of technology made the project more interesting and pleasant for the learners. In this project technology offered the possibility to create something using technology such as write a blog, seek for information using the Internet on some device, or get some audio-visual stimulus and exposure to the language. These are aspects also mentioned in the curriculum (Opetushallitus, 2016, pp. 27, 284, 348) and previous research (Bielaczyc, 2006, Tan & Rivet, 2008, van Lier, 2007). Hence, it can be noted that technology helps in achieving the goals set in the curriculum and, therefore, aids language learning.

Variety and motivation are also present in the next example that demonstrates how this is achieved using technology. Example 13 shows the use of technological tools in a way that provides possibilities for the learners to do or create something they might usually do in a different way. In this case the tasks are acting out situations where they use the language and some specific vocabulary and giving an oral demonstration.

(13) Teacher B

No ehkä se auttaa myös siinä, että- just se eriyttäminen sekä ylös että alaspäin ja just se, että se tarjoaa enemmän sitä kieltä. Nii se on siinä se hyöty ja sitten, että se luo semmosia mahdollisuuksia, ku vaikka, mitä mä sanoin, esimerkiksi siitä suullisesta näytöstä, että on mahdollisuus tehdä se teknologian avulla ja niinkö näin. Ja sitten se monesti auttaa siihen, että sitten, jos vaikka... no meillä on joskus semmosia, että on vaikka ryhmätehtävä, jos on joku kappale, jossa on ruokasanastoa tai kahvilassa asiointia nii sitten on ollu tehtävänä vaikka, että keksikää semmosia tilanteita ja näytelkää se ja nauhottakkaa se. Nii sitte, että tehhään se vähän eri tavalla- et se sanaston oppiminen ja ne saa mennä keskenään harjottelemaan ja kuvaamaan sitä nii sitte ne innostuu siitä. Siinä on nii paljon mahdollisuuksia, miten sitä voi käyttää nii se tuo sitä vaihtelevuutta ja ehkä nostaa sitä motivaatiota oppilailla.

Translation

Well, maybe it also helps in that- the differentiating, both up and downwards and like that it offers more of the language. So that's the benefit and then that it creates possibilities like what I said, for example, about the oral demonstration, that there's a possibility to do it with the help of technology and like this. And then often it helps in that if, for instance... well, we have sometimes these kinds of group exercises, if there's a chapter where there's food vocabulary or going to a coffeeshop so then there's been a task to come up with those kinds of situations and act them out and record it. So, then it's done a bit differently- so the vocabulary learning, and they can go practice by themselves and film it, so they get excited about it. There are so many possibilities of how to use it, so it brings variety and maybe increases that motivation for pupils.

The two given task examples are tasks that could be done without the technology, but they are chosen to be done with the help of these to bring variability to the execution of the different learning tasks. Motivation is named as one key aspect, but in the oral task, the individual learners and their needs are being considered carefully: it takes some pressure off from the oral demonstration when the more timid learners can record their demonstration on their own in a space with no one else if they wish to do so. The participant has noticed that this possibility is good for those learners and has used Google's Classroom as a platform to collect these and some other tasks such as self-assessments. Likewise, the Teacher A mentions the aspect of variety and motivation:

(14) Teacher A

No mun mielestä se monipuolistaa sitä, et ei oo vaan niinku kynää ja paperia. Ei tarvii vaan vaikka yrittää kuunnella, mitä opettaja sanoo. Että se ottaa huomioon oppilaat silleen visuaalisemmin ja pystyy niinku justiin kattomaan ja lukemaan ja kuuntelemaan ja vähän kaikkee niinku erillaista silleen monipuolisesti. Ja varsinkin nyt, kun elämme tätä tällästä älypuhelinaikaa niin tuntuu, että eihän siis kukkaan jaksa keskittyäkään, jos ei oo niinku joku värikäs video siellä pyörimässä. Että sinänsä se niinku välillä on ihan mukava pittää sellasia ei niin teknologiapainotteisia tunteja myös, mutta tuntuu, että suurimmaks osaks oppilaatki, ne saa vähän semmosia virikkeitä enemmän niin se pysyy se mielenkiinto vähän paremmin siinä.

Translation

Well, I think that it diversifies it, so it's not only like pen and paper. Don't need to just try to listen what the teacher says. So, it takes into consideration students more visually and you can like look and read and listen and pretty much everything different, like, diversely. And especially now that we live this era of smartphones it feels like nobody can focus if there isn't some colourful video on. So, it's like pretty nice to keep those not so technology-based lessons too, but it feels like, for most of the time, the pupils they get a little more stimulus so they stay a little more easily interested.

Here the notions of stimulus and attention span are brought up. The use of technology is explained as bringing some versatility and interest to the teaching methods, and to keep learners interested and engaged. These are related to the multisensory aspect of learning in the ecological perspective of language learning described by van Lier (2004). Technology enables to use a variety of different types of stimuli, such as videos, audios, pictures, and texts, as described in example 14. As Teacher A mentions, the effects of our daily lives and the much used technology can be seen on the lessons as the shortening of the attention span of the learners and need or want for more vivid stimulus – which is an interesting point that came up several times during the interviews and will be discussed in section 4.3. Also, the aspect of engagement and AB learning is becoming more and more noticeable through these examples and will be elaborated more.

4.2.2 Activating and engaging learners

As it can be seen from many of the examples given from the interviews, the use of technology is often related to activation and engagement of the pupils. The pupils use technology to create something or

participate in something, and these are important aspects in learning that are present in the socio-cultural theory (Vygotsky, 1978) as well as in the Finnish national core curriculum (Opetushallitus, 2016). This activation can be done using the SMART Boards for doing some activities (see example 2 in section 4.1.1) or seeking for information and utilising smartphones, tablets, or laptops (see example 12 in section 4.2.1). In example 13 (see section 4.2.1) engagement is achieved by using a task that involves acting and filming. These are all examples of different ways to get the pupils more interested with the help of an AB approach to learning and teaching that is discussed in van Lier's (2007) work. As Teacher B mentions, “[n]iin sitä mä ehkä aattelen, et se voi toimia semmosena niinkö tuen välineenä, mutta sitten se voi olla myös semmonen, että missä on niinkö loputtomasti mahdollisuuksia siihen, mitä kaikkea sä pystyt sieltä hyödyntämään.” (transl. “[w]ell I maybe think that it can be used as a tool for support, but then it can be like something that has endless possibilities for all that you can utilise from there.”). These examples show that there really are many possibilities what to do with the technology as the tasks and ideas presented in the examples can be refined and adjusted to different topics and areas of language teaching.

A specific type of activity that came up several times during the interviews was quizzes and games, such as Kahoot and Quizlet. These are games that can be created by teachers – or the teacher could utilise some made by others – and played using a device such as a smartphone or a laptop. These are also liked by the pupils, and this is how Teacher A describes the impact of these activities:

(15) Teacher A

No siis ne pelit, puhelimella pelattavat pelit on niinku ihan- nehän niitä haluais aina pelata. (...) Kahootia ja just niin. Oikeestaan niille kelpaa melkein mikä vaan niistä, että kuhan aina vaan sais jotakin pelata ja tavallaan sehän on ihan kiva, koska silleen semmosen kautta sitä voi oppia sitä sanastoa just vaikka, kun siinä silleen toistuu, niin mikspä ei. Ei tarvi vaan päntätä. Että kyllä mun mielestä on paljonkin hyötyjä siinä, et sitä teknologiaa käytetään.

Translation

Well, those games, the games you play with a phone are like- they'd like to play those all the time. (...) Kahoot and those. Really, they'd like almost any of those as long as they can play something and kinda it is quite nice, because through those you can learn vocabulary for instance when there's repetition, so why not. It's not always just swotting. So, I do think there's quite many benefits in the use of technology.

This example not only indicates that these activities are liked by the pupils, but also that these can add to the teaching and offer a different way to practice vocabulary for example. The idea that

studying words by swotting is not as liked is also noticeable. The joy that these activities and their adaptability is recognised by Teacher B as well.

Projects were mentioned as a type of activity in which technology is often utilised for information retrieval and the creation of a text or other produce. In the project described by Teacher B in example 23 the students are given more freedom and are therefore more in charge of their learning, which requires engagement (see section 4.3.2). These types of projects can include several different tasks that could require more activeness from the student and require using technology for information retrieval or taking pictures, for example. Other interesting points about information retrieval will be discussed in section 4.3.2 as some important aspects of it were introduced in the interviews.

Lastly, another way of engaging the pupils that was present in the interviews is utilising the Internet to show something and getting the students engaged in discussion. This also keeps them interested when something that is mentioned in the textbook can be shown and researched more together. Here is an example of what Teacher A thinks showing a video adds to the lesson and teaching:

(16) Teacher A

[A]inaki tuntuu, että monesti se on semmonen mitä niinku ainaki ussemmat seuraa. Ne on jotenki semmosia kiinnostavia. Tai sit se on vaan minä, joka on kiinnostunu. (naurua) Se vähän tuo sitä oikean- oikeeta niinku maailmaa siihen liittää silleen kivasti.

Translation

[I]t at least feels like it's often something that like most of them follow. They are somehow interesting. Or then it's just me who's interested. (laughter) It kinda brings the real- connects like the real world to it in a nice way.

The engagement and interest are something to be noted from the example. Showing something from the real world keeps the teaching not only interesting and may result in discussion, but also creates meaningfulness: the English breakfast mentioned in the textbook (see example 4 in section 4.1.1) becomes very real and students get to learn some new sides of the topic in the classroom. Authenticity is also mentioned in the national core curriculum (Opetushallitus, 2016, p. 348) and research (Bielaczyc, 2006, p. 307). The curriculum also gives areas of information and communication technology competence to be included in teaching. Many of these examples show implementation of them, especially of practical skills and creating, data management and investigative and creative working, and interaction and networking (Opetushallitus, 2016, p. 284). As Wilson (2020) discusses throughout their article, the use of technology can add meaningfulness, but also the way technology

is used needs to be meaningful. Hence, this is a good way to utilise technology to keep students engaged.

4.3. The effects of technology on learners

As technology is present in many ways in the teachers' work, it is understandable that it is also present in the students' lives. The interviewed teachers gave a variety of interesting examples of how they perceive technology impacts the students' English learning as well as their behaviour in general in the classroom. As Teacher B said about technology use in the classroom: "se on mun mielestä hyvä asia niinku tietyssä määrin. Ehkä niinku kaiken kanssa nii siitä saa myös negatiivisen." (transl. "it's good, like, to some extent. Maybe like with everything, you can get negatives out of it too."). The examples in this section show both the positive and the negative effects technology can have in students.

4.3.1 Exposure to the language through social media and gaming

Both participants mention the exposure to the language on Internet can help in improving the learner's English skills. Some examples of where this exposure happens on the Internet are social media platforms (e.g., Instagram, TikTok, YouTube) and playing games. In the social media platforms, the learner can read and hear English, and possibly write and speak it. When the learner plays games, they can also read the language and often interact using the language as well. The difference between these two types of media is that playing games is often more interactive, especially in the case of multiplayer games. However, in both, the social medias and the games, there is exposure to English and the possibility for interaction. The participants have noticed this exposure in the vocabulary and the way of speaking and writing of their pupils. Hence, this shows how technology can serve as a platform for exposure to the language and provide possibilities to learn and use the language outside the classroom.

Especially gaming was discussed by both teachers. Its impact on the language skills were brought up by both participants. There are both positive and negative effects that the teachers have noticed. Here is an example by Teacher B:

(17) Teacher B

Just nuo yläkoululaiset on sanonu vaikka, että ne paljon niinkö- tai itsearviointiin laittanu, että ne käyttää [teknologiaa] vapaa-ajalla. Ehkä semmonen niinkö pelaaminen näkyy tosi vahvasti.

Että [niillä], jotka pelaa paljon, on monesti semmosta kielitaitoa paljon. Se on sitten taas aika semmosta... puhekielistä. Ja sitten kyllä ne seuraa somea ja kyllä sen tavallaan huomaa sen altistuksen sille kielelle, että se auttaa siinä. Että jos niillä on vaikka englanninkielisiä tyyppejä, joita ne seuraa niin onhan seki aina eteenpäin.

Translation

Like those middle schoolers have for instance said that they often like- or put into the self-assessments that they use [technology] on their free time. Maybe this gaming is quite strongly noticeable. So, [those] who play a lot have often that kind of language skills a lot. Then again, it's kinda a lot like... colloquial. And then, they do follow social media and the exposure to the language can be kinda noticed so it helps in it. So, if they have for instance English people they follow, it always takes it forward.

Example 17 demonstrates that the exposure to English is generally seen as a positive aspect that can support the language skills of the learner. However, Teacher B mentions that the effects can be seen as colloquial language. Some specific examples of this are shortening words and using “texting language”, which is mentioned in the next example. Even though Teacher B mentions in the interview that technology can be used in many ways to add to the teaching, she continues with the following:

(18) Teacher B

Mutta sitten taas musta tuntuu välillä, että, en tiä, että ajattelenko mä jotenki tosi vanhanaikaisesti, mutta sitten taas se ehkä näkyy siinä tavallaan, että semmonen niinkö ihan aineitten kirjottaminen on paljon niinkö vaikeutunu. Et siinä on paljon haasteita vielä semmosissa, että osataan vaikka isot alkukirjaimet ja pisteet, ja kaikkea ei voi lyhentää niinku muutamalla kirjaimella. Niin jotenki tuntuu, että semmosta näkyy paljon enemmän, että ei osata niinkö kirjottaa enää, että kaikki on semmosta vähän niinku tekstarikieltä, mihin on ehkä somessa tai netissä totuttu.

Translation

But then again, I sometimes feel like, I don't know if I think somehow really old-fashionably, but then again, it's maybe seen in that writing essays is getting a lot harder. There's a lot of challenges still in such things as knowing the capital initial letters and full stops and that everything cannot be shortened to like a few letters. So, somehow it feels like there's much more of that you can't write anymore that everything is like somewhat a texting language to which you're used to on social media or on Internet.

This example gives some specific examples of how these effects can be seen concretely: writing essays. A few possible explanations come to mind. It could show that learners use and are exposed to different type of language outside the classroom, or that they forget how to use it in different types of contexts (e.g., formal written task vs. messaging). Another possibility is that learners forget, or find it hard to learn and remember, the grammar rules or spellings as they may differ a lot from what they see in social media or video games. Interestingly, the notion of traditional or old-fashioned way of doing something is again brought up. This time it is interestingly related to the way of thinking and is verbalised by the participant. It shows that Teacher B reflects on their own thoughts and beliefs related to language teaching.

Gaming and the substantial use of smartphones impacts the language learning also in implicit ways making the learning situation more difficult. Both participants discussed that they have heard and noticed their pupils being tired due to staying up late and gaming. Often the pupils may tell how they stayed up late because their gaming opponents from the other side of the world came online late in the night due to the different time zones. Teacher A even mentions that the behaviour seems sometimes somewhat addictive. These challenges can be noted in the following examples.

(19) Teacher A

Ei ne tee muuta, kun pelaa niillä puhelimilla jotakin, mutta tota- ja sitten ne tulee myös mukana luokkaan monesti, että sit se alkaa olemaan vähän niinku semmosta riippuvaista ainakin osalla. Niin sehän nyt tietysti on huono asia, että siitä ei pysty päästämään irti. Kyllä sen niinku- just varmaan se, miten ne ehkä kotona pelaa tietokonneella ja pleikkareilla ja tälleen, on niin paljon. Nii sitten monesti aina kuulee sitä, että ‘valvoin neljään, pelasin’. Niin sitten se tietysti vaikuttaa negatiivisesti siihen kokonaisuuteen.

Translation

They don't do anything other than play something with their phones, but like- and then they often come with them to the classroom, so it begins to be like a little addictive, at least with some of them. So, of course it's bad when you can't let go of it. It does like- probably the way they maybe play at home on the computer, or with the PlayStation and so on, is very much. So then often you always hear that ‘I stayed up until four, I played’. So then of course it affects negatively to the big picture.

Example 19 demonstrates some of the negative effects technology – in this case gaming – can have and how they influence the learning of the language. The increasing use of technology in daily life

can therefore have negative impacts in school and outside school. However, Teacher A continues on a more positive note:

(20) Teacher A

Mut sitten toisaalta tietysti onhan siinä sekin, että sitten, kun nuoret on netissä ja pelaa ja näin, niin kyllähän sitten kielten oppimisen kannalta [siinä] on sitä sanaston oppimista ja semmosta paljon sitä kautta.

Translation

But then again, of course there is that when the youth are on the Internet and play games and so on, from the language learning point of view, [there] still is quite a lot of vocabulary learning and that sort of thing.

Together examples 19 and 20 raise the notion that technology can have both positive and negative impacts as mentioned before. The worry about addictive behaviour regarding the use of technology is something that affects teaching in a lot of ways because the effects can be seen in many areas of language learning as seen from the examples: grammar, vocabulary, and sleep. To some areas the effects are negative and to some there are positive and negative effects. The interviews show that the teachers understand the diversity of technology and the impacts it has to their pupils and their English learning.

4.3.2 Challenges whilst using technology

As it is noted, technology can impact positively and negatively the language learning process. Many challenges related to the use of technology were discussed in the interviews. These challenges influence not only the students' learning but also the teachers' job, creating new aspects to consider whilst planning and during the lessons. Both participants note that technology can lead to distractions during the lessons. This is especially the case with smartphones as Teacher B tells: "No negatiivinen puoli on ne puhelimet, että ne häiritsee opetusta... välillä paljonkin." (transl. "Well, the negative side is the phones, they distract teaching... sometimes a lot."). This is something that was mentioned during both interviews on several occasions. After this, Teacher B raises the issue of bullying that has taken some new forms as most learners have a smartphone: "Sitten siinä on tietenki- jos ei mieltä pelkästään kieltenopetuksen kannalta, mutta laajemmin, niin siinä on se kiusaamisaspekti. Semmonen nettikiusaaminen ja koulussa tapahtuva niinkö luvaton kuvaaminen vaikka." (transl. "Then there's of course- if you don't only think from the perspective of language teaching, but more broadly, there's

the bullying aspect. The cyberbullying and unauthorised filming that happens in school, for instance.”). Bullying can nowadays be less visible for the teacher as before: it may happen in in the classroom via group chats or by sending pictures, or even after the school day on social media. Here is an example of a situation that Teacher A gives:

(21) Teacher A

No oli myös semmonenki yksittäistapaus, että kun oltiin- oppilaat teki niillä läppäreillä niitä tehtäviä, niin sitten ne oli vähän levittäytyny silleen jonnekki käytävälle ja sitten yks kuvas toista salaa. Ja siitä sitten tuli semmonen show. Että jos ne ois tehny [tehtäviä] kynällä ja paperilla niin eihän siinä ois ollu semmosta vaihtoehtoa, tai mahdollisuutta. (...) Että voihan niitä silleen väärinkäyttää. Sitä tietotekniikkaa.

Translation

Well, there's this one case when we were- pupils were doing exercises with the laptops, so then they were a bit spread out somewhere to the corridor and then one secretly filmed the other. And it became like a show. So, if they'd been doing [the exercises] with a pen and paper, there wouldn't have been the possibility, or opportunity. (...) So, it can be misused. The information technology.

This example demonstrates that the use of technology for doing some tasks is perceived to increase the likeliness of distractions, such as bullying or other misuses of the technology. With the possibility to utilise technology during the lessons, there comes more variables to consider. Some possible aspects to consider are when to use technological tools, how are they used, and how to prevent some possible risks of misuses and distractions. Nevertheless, there are some possible risks of, for example, distraction or bullying even when technology is not used, but the presence of technology and using it for a task can increase some of the risks and create new, different types of risks.

The participants also mentioned the notions of impatience and distraction, which are seen in how learners do tasks in classroom. These include examples of how smartphones generally distract the students and how the frequent use of technology perhaps affects the patience whilst doing different kinds of tasks. Here is an example of the mentioned challenges:

(22) Teacher A

No siis on- totta kai sitä on paljon, että jos me vaikka otetaan läppärit ja tehhään jotakin niin sittenhän siellä ollaan monesti ihan jossain muualla [kuin missä pitäisi]. Että sinänsä se niinku- että niistä puhelimistaki voi olla silleen, niinku että 'puhelimet pois', mutta sitten, jos ollaan

niinku koneella ja sitten ne silti on suhun silleen- ethän sä nää, mitä ne tekee siellä. Niin kyllä niinku semmosta on ja sitten just sitä copy pastettamista paljon, että tehtäviä tehään ja näin, että ei niitä- Mutta se on niinku varmaan sekä kirjallisissa- sekä kirjaan tehtävissä että noissa, että tehään vähän silleen hutasten kaikki ja ei oikeen keskitytä mihinkään. En mä tiä auttaako se tietokone siihen, että tehäänkö niitä edelleen vaan silleen, tai vielä ehkä enemmänki ku taas sitten niitä [kirjan] tehtäviä.

Translation

Well, there's- of course there's a lot of that if we take laptops, for example, and do something, they are often somewhere completely elsewhere [where they should be]. So, in a way it like- about the phones, you can tell them like 'phones aways', but then if we are on computers and then, anyway, they are- you don't see what they're doing there. So, there is kinda that and then like there's a lot of copy-pasting, so they do exercise and so on, but not- But it's like probably in both, written- in both, exercises done in books as well as in those, so they do them carelessly and don't really focus on anything. I don't know if the computer helps in that or if they still do them like that, or even more so than those exercises [in books].

As Teacher A describes, smartphones are quite a big distraction in the classroom. In addition, she has noticed some impatience and carelessness in doing exercises. Interestingly this has been noticed more when using technological tools, such as laptops. At the end of example 22, an aspect that came up several times in both interviews is mentioned: a decrease in attention span. A topic that is currently much talked about in media is fast-paced content, which is available especially on TikTok but more and more on other social media platforms that used to be focused on slower-pace content, such as YouTube. This raises the question of how much does the use of technology on free time impact the attention span of learners? The role of the increasing exposure to fast-paced content on social media is something that will probably be studied more in the future.

However, there were some examples in the interviews that did not only bring up the attention span challenge, but also the possible lack in information retrieval skills of the learners. For instance, examples 23 and 24 show these.

(23) Teacher B

Ja sitten siellä oli vaikka- saatto olla semmonen tehtävä, että semmosen QR-koodin takaa pääsi jollekki sivustolle ja piti ettiä sieltä vaikka, että paljonko maksaa vaikka Disneylandin liput ja mitä vaihtoehtoja siellä on. Nii, jos ne mennee sillä QR-koodilla sinne sivustolle ja, jos se ei heti siinä etusivulla tuu silmille se vastaus, niin ne ei jaksa niinkö lähteä ettimään sitä

sieltä. En tiiä, että onko siinä joku yhteys tai niinkö mistä se johtuu. Mutta ehkä siinä niinku tulee esille se, että vaikka ajatellaan, että nuoret ossaa tosi hyvin käyttää teknologiaa ja tämmöstä ossaa tietyssä määrin, mutta ei ne niinkö tommosia mun mielestä aika tärkeitä taitoja [osaa]- niin ne on vielä hakusessa.

Translation

And then if we had, for instance- there could be an exercise in which you could access some website through a QR code and you had to search from there, for example, what Disneyland tickets cost and what options they have. So, if they go to the site using the QR code and if the answer doesn't strike the eye on the home page, they can't be bothered to search it from there. I don't know if there's a connection or what's the reason behind it. But maybe it like shows how we think that youth can use technology very well and have skills to some extent, but like they don't [have] those, in my opinion, quite important skills- so, they still need practice.

As example 23 demonstrates, exercises that are planned to be activating and try to encourage towards exploration and information seeking may raise surprising challenges. It is notable in different examples from the interviews – including example 23 – that attention and keeping the lesson interesting is important. The aspect of a lack of persistency is seen as something related to the issue and is clearly seen in the example above. There may be several possibilities for the reasons behind this. However, the ones raised by both teachers are difficulties focusing, a shortening of the attention span, and a lack in information retrieval skills. Teacher A mentions that the information retrieval difficulties are apparent in projects. Both teachers have remarked the learners ICT skills are not as good as they would have expected. The learners' need for guidance related to technological tools has sometimes surprised them. However, both address also the notion that sometimes students seem to act as if they do not know how to use the technology. This was also noticed in distance teaching by Teacher B, who was teaching at the time the Covid-19 pandemic started and the shift to distance teaching happened.

The lack in basic technological tool skills has been noticed by other teachers as well, as Teacher B mentions. However, interestingly, the students may have some more modern ways to achieve something than what the teachers would intend. Example 24 shows one case:

(24) Teacher B

Ja sitten mä en tiiä onko tää liian kaukaa haettua, mutta mä oon monen opettajan kanssa puhunu siitä, että teknologia on mahdollistanu meille sen, että kaikki on jotenki tosi näppärää ja helposti saatavilla. Ja sitten, jos on tunneilla vaikka jotain tiedonhakutehtäviä, vaikka, että

'etsi osavaltioita, jotka alkaa A:lla' tai mitä nyt onkaan niin ne ei jaksa tehdä sitä tiedonhakua vaan ne ottaa puhelimen ja kyssyy sieltä, että 'mikä osavaltio alkaa a:lla?'.

Translation

And then I don't know if this is too far-fetched, but I have talked with many teachers about technology having enabled everything to be somehow so handy and easily available for us. And then if on the lessons there's, let's say, some information retrieval exercises, for example 'search for states that start with A' or whatever it may be, they can't manage to do that information retrieval but rather take their phone and ask from there 'which state starts with A?'.

This is an example of how an information retrieval exercise may be done by learners nowadays. The example could imply, as mentioned previously, a lack of information retrieval skills, or at least in those type of information retrieval skills that were intended to be practiced in the exercise. This could be interpreted as an example of impatience too. However, this method of using voice command raises the question of how trustworthy the source used is; assessing the trustworthiness of a source is also something that can be part of an information retrieval exercises. Another aspect that is portrayed in example 24 is the differences between generations: the younger generation has different styles and ways of using technology than the older generations have. Some could describe the use of technology presented in the example as an effective way of doing information retrieval. These are again some notions to consider whilst planning the lessons and how technology can be used in different tasks.

In addition, there are some differences in skills related to technology use which needs to be acknowledged and recognised too. Both teachers mention that there is sometimes quite a big difference between the use of technology in free time: some students use lots of different applications on a smartphone and play games on the computer, but others use less technology. This is visible in the classroom, and the teachers say that they need to make sure they guide in the use of a new application or technological tool if they plan to incorporate something they have not used before in class. For instance, these differences are seen in group works in which more freedom on the final product is given:

(25) Teacher A

Kyllä se niinku silleen osittain näkyy myös, että kun jotkut edelleen kokkee sen paljon mukavampana, että ne tekkee ihan sellasen posterin niinku käsin. Versus että- niinku tuntuu, että silleen mitä on nyt nähny nii- ollu tekkee jotakin tollasia ryhmätöitä niin sitten olettais, että kyllä ne ossais tehdä vaikka PowerPointeja ja tämmösiä. Semmoset niinku perustaidot ei

välttämättä oo kovin hyviä loppupelleissä. (...) Siis yllättäen- sitä vois kuvitella, että 'joo nyt ne saa käyttää ja saa valita ite, että teetkö just vaikka videon jopa tai jonkun, ihan mitä tahansa' niin sitten ei kuitenkaan lähetä ehkä niin silleen rohkeasti- että ne on ehkä vähän vielä sellasia yksittäistapauksia, jotka sitten niinkun- joilla on tiiätkö taitoa lähteä tekkee sellasia erilaisia toteutustapoja tommosiin, vähän niinku tommosiin luovempiin töihin.

Translation

Yeah, it is also like partly seen in that some still feel it more comfortable to merely do a poster like by hand. Versus that- like it feels like, from what I've seen- doing some group work like that you would assume that they know how to make a PowerPoint and such. Those kinds of basic skills are not necessarily very good in the end. (...) Well, surprisingly- you could imagine that 'yeah now they can use and choose by themselves whether they like do a video or something, what ever', but they still aren't so bold- like they are maybe still one-off cases that will like- that have skills to undertake some different realisations in those, like in those more creative works.

Example 25 shows how differently the learners may approach a task and most of them prefer doing a poster than something more creative using technology perhaps. As Teacher A and B both describe, learners do not feel as comfortable in using technology as one would think. This is especially the case in such tools as PowerPoint, Word, and email. These examples show that the four areas that should be included in teaching mentioned in the curriculum are useful. These are (1) practical skills and creating, (2) responsible and safe activity, (3) data management and investigative and creative working, and (4) interaction and networking (Opetushallitus, 2016, p. 284). Most examples of activities that the teachers give cover the first, third and fourth area. The expectations of the skills they have are quite different to the reality. The impact of technological development can be causing this as the youth grow up using partly different technological tools and application than those that were used by youth, for example, 15 years ago. These challenges indicate that the incorporation of technology may add new challenges, as seen from the examples.

4.4. Keeping up to date with technology and teaching

Many interesting points on education related to technology use in language teaching were discussed in the interviews. The participants shared where they get help from and where they get ideas for their teaching. They described how they have learned to use the technology they use and where they get new ideas from. Several social media groups or users were named, and this shows that sharing ideas

with colleagues is an important part of the professional development. Throughout the examples they gave, the feeling of responsibility and collegiality are noticeable.

4.4.1 Feeling of responsibility

Both participants mention that they have not received a lot of education focusing on the technology that can be used in language teaching or in teaching in general. They mention some aspects, such as Wilma and the use of electronic materials, have been briefly checked during the pedagogic studies. The next example shows several examples of how the use of technology in language teaching can be learned even though it is not much discussed during the studies:

(26) Teacher A

Ööö, no siis mä en nyt ainakaan muista, että ois niinku mittään ollu muuta kun, että sitten opeharkassa tavallaan. En mä tiä opeteltiinko me mitenkään sielläkään. Tavallaan vaan niinku varmaan katottiin, että jotenkuten onnistuu se niitten [sähköisten] materiaalien avvaaminen ja semmonen. Tai niinku ehkä siinä, ku sitä seuras niitä tunteja ja ne opettajat piti niitä, että miten ne hyödyntää niitä, mut ei varmaan- en mä ainakaan muista nyt äkkiseltään, että ois ollu mittään silleen opettelua muuta kun, että me siis katottiin Wilmaa. Että mitä Wilmassa on. Mutta sitten kaiken muun mä oon niinku ite opetellu ja tutustunu. (...) Ja varsinkin nyt, kun on ollu eri kouluilla ja kaikilla on eri materiaalit käytössä niin sitä on niinku- nähny kaikkea ja sitten on vaan ite niihin [opetellu]. Ja sitten nyt on kyllä sekin, että on nähnyt oikeesti sata eri niitä laitteitakin niin onhan- pitäs kyllä niinku osata käyttää niitä, että ne kaikki toimii. (...) ja aina joku niinku oikeesti ei toimi. Varsinkin äänet. Ne ei toimi ikinä. (naurua)

Translation

Uhm, well I can't at least right know recall we would've had anything else than in the teacher practice, kinda. I don't know if the studied it in any way there either. We kinda just checked that we somehow know how to open the [electronic] materials and so on. Or like, maybe when we followed the lessons and the teachers kept them, so how to utilise them, but not possibly- at least I can't recall off the top of my head that we would've had practiced anything other than we looked at Wilma. What was in Wilma. But then everything else I have like learned and gotten familiar with by myself. (...) And especially now that I've been in different schools and each have different materials they use, I've like- seen everything and then I've just [learned] them. And then, now there's that I've seen really hundred different devices so it's-

I should know how to use them, so they all work. (...) and always like something doesn't work. Especially the audio. It never works. (laughter)

As Teacher A explains in the example, not much about the use of technology is taught in pedagogic studies. This is something that Teacher B noted as well. However, as seen in the example too, both mention that they have learned diverse ways to use technology and different platforms by themselves through exploring and getting ideas from their colleagues. Also, the aspect of experience and being exposed to slightly different materials and tools is brought up. The notion of learning themselves by exploring and trying is present in the following example too:

(27) Teacher B

Ja sitten soittanu johki tukinumeroon niitten sähkösten materiaalien kanssa myöskin. Että mä oon niinku silleen ite rohkeesti kokkeillu- jotkut asiat on alusta asti ite niinkö kokkeillu. Että siks niinkö on justinsa hyvä vaikka se sometili, että sieltä löytää semmosia, mitä ei oo itellä tullu mieleen. Niin niitä oon myös pystyny hyödyntää.

Translation

And then also, I've called to some support number with the electronic materials. So, I have like fearlessly tried myself- I have tried some things myself right from the beginning. That's why the social media account is good, like, you find some things you haven't thought about. So, I have managed to utilise those as well.

As both examples 26 and 27 demonstrate, the teachers have both been active and taken initiative in learning ways to incorporate technology into language teaching. In the interviews, both mention they ask colleagues and search from Google when they face some difficulties, and this also shows they are active. As Teacher A tells: "Ei, tuntuu, että ei siihen oikeen [oo saanu koulutusta], mut siihen kyllä vois ite opetella vähän niinku paremmaks vielä." (transl. "No, I feel like we didn't really [any education], but I could learn myself to be still a little better at it."). The way the participants describe their experiences and ways of learning quite strongly shows they feel responsible for educating themselves and exploring ways to use technology. They have a will to improve their skills and develop professionally – which is mentioned in previous research (Karamifar et al., 2019). Exploring and getting ideas can happen by asking colleagues face-to-face or even through social media as Teacher B mentions in example 27. The social media account she talks about is an account by a teacher on Instagram. This social media account and social media in general are discussed more next as social media and sharing are important aspects for the participants in the context of learning and getting inspiration.

4.4.2 Collegiality and sharing materials

As mentioned, social media and sharing ideas and thoughts with colleagues and other teachers are one way of learning more on technology use in teaching. On social media, it is possible to interchange knowledge and experiences with teachers outside your own circle of acquaintances. There are communities and groups created for this, and it is also possible by following, and perhaps interacting with, some accounts on social media. One example of the first mentioned is a Facebook group of English teachers, *Englannin opettajat*, which is mentioned by Teacher A:

(28) Teacher A

Ja sitten myös mä seuraan sitä Facebook-ryhmää *Englannin opettajat*. Niin sinne porukka siis ihan hyvää hyvyttään jakaa [juttuja]. Niin se on kyllä, mitä aion hyödyntää jatkossa, että jos mulla on joku, että mä tarviin johonkin tiettyyn aiheeseen vaikka jotakin, niin sieltä varmasti löytyy jotaki kivoja juttuja.

Translation

And then I also follow that Facebook group *Englannin opettajat*. So, people actually share there [things] out of generosity. So, that's something that I'll utilise in the future if I have something that I need for some specific topic, for example, there surely can be found some nice things from there.

The aspect of collegiality is noticeable in the example. Teachers have created a group where they share ideas and thoughts with each other on their free time, out of their free will, as Teacher A describes. This demonstrates a feeling of community between English teachers and a will to help each other. It can be used as a place to get different ideas and different types of exercises for their own teaching; hence, it can serve as a learning platform for the teachers. The socio-cultural theory supports this social and interactive way of learning (Vygotsky, 1978; van Lier, 2007). Similarly, teachers can use other social media platforms. Both mention Instagram and Teacher A mentions even TikTok. Teacher A continues about the Facebook group and other social media:

(29) Teacher A

Sitä aion hyödyntää ja sitten, jos mulla nyt tulee jotakin vastaan netissä tai vaikka somessa, niin sitten mä tallennan niitä itelleni. Ja en mä tiiä löyänkö mä niitä enää ikinä tai älyänkö mä mennä kattoon niitä, mutta... (naurua) (...) Siis ihan Instagramista esim. on tullu jotaki vastaan

tai jotakin opevinkkejä tai jotakin. Jotkut päivittää niitä. Ja TikTokissa. Varmaan niinku noi algoritmit laittaa niitä sitten- sitä sisältöä, mitä haluan nähä.

Translation

That's something I'll utilise and then if I come across something on the Internet or in social media, I save it for myself. And I don't now if I find them ever again or if I twig to go check them, but... (laughter) (...) Well, actually, on Instagram, for example, I've come across something or like some teacher tips or something. Some people post them. And on TikTok. Probably like the algorithms put them- the content I want to see.

Example 29 shows that ideas and tips related to teaching can be found on different types of social media platforms, which means that there is quite a lot of content available related to teaching. Through these platforms, there can be found some organisational tips or ideas for exercises and activities by other teachers. Sometimes there may be materials or links to materials made by others that can be used as they are. Teacher B has found an account on Instagram through which she has found some websites that she uses a lot:

(30) Teacher B

[M]ä seuraan Instagramissa- mä en tiiä tiiätkö semmosta, ku *Alakoulunkielia*¹? (...) Se on semmonen opettaja, joka- siis sillä on semmonen tili siellä, ja se välillä jakkaa, mitä kaikkea se on ite tehny oppilaitten kanssa. Niin tuota, mä oon sieltä- jos se on laittanu jotaki linkkejä, mistä löytyy materiaaleja niin mä käytän niitä tosi paljon hyväksi. Ja niinku semmosia sivustoja, missä on erilaisia matskuja.

Translation

[I] follow on Instagram- I don't know if you know *Alakoulunkielia*? (...) It's like a teacher who- well, they have this account there and they sometimes share what they have done with their pupils. So, I've from there- if they've put some links from where you can find materials, so I utilise them a lot. And, like, these websites with different materials.

These social medias and websites demonstrate again how important sharing is among teachers. Sometimes even the pupils have noticed something interesting on social media and ask for the teacher to do something similar with them. The websites that Teacher B refers to are *TeachersPayTeachers* and *Freed*, and they are mentioned in an example by Teacher B after example 31. An important

¹ The name of the Instagram account has changed in autumn 2022 from *Alakoulunkielia* to *Peruskoulunkielia* after the interview.

theme in these examples is collegiality. The examples demonstrate that collegiality is notably an important aspect in learning how to use technology and finding new materials and ideas. As noted, this is both present between strangers in social medias such as Facebook, Instagram and TikTok, and between colleagues – or previous colleagues, as Teacher B does:

(31) Teacher B

[J]a sit mulla on tuota entisestä työpaikasta- meitä on kolme opettajaa niin meillä on semmonen yhteinen Drive-kansio, mihin me vaikka tehhään jotain lisämateriaalia tai jottain. Meillä on eri kategoriat siellä, nii me lisätään se [materiaali] sinne kansioon, että kaikki saa sitä hyödyntää.

Translation

[A]nd then, I have, well, from my previous workplace- there's three of us teachers that have this shared Drive folder where we, for instance, make some additional materials or something. We have different categories there, so we add [the material] in the folder so that everyone can utilise it.

From this example, it can be seen how teachers collaborate and create resources to be used by and shared with each other. This again shows the feeling of responsibility and will to learn and share, which were discussed in the previous section. Even though this can be done between colleagues, as Teacher B does, this can be done with previous colleagues or possibly with teacher friends. Technology and cloud services similar to OneDrive can be useful and make sharing materials and ideas easier and more efficient. In addition, they can be good tools to keep materials organised and in one place, as Teacher B mentioned in the interview.

However, even though both teachers shared how they use technology to get inspiration and find new exercises, they acknowledge that not every lesson or exercise needs to be something new and innovative. In addition, the point that everything does not need to be done and created by the teacher themselves is brought up by Teacher B: "No mä oon ehkä siitä nytten niinkö jotenki oon havahtunu siihen, ettei kaikkea tarvi tehdä ite. On semmonen sivusto, ku *TeachersPayTeachers* ja *Freed* niin sieltä mä oon ottanu [tehtäviä]." (transl. "Well, I have maybe like now realised that you don't have to make everything yourself. There's this website called *TeachersPayTeachers* and *Freed*, so I've taken [exercises] from there."). This demonstrates that even though technology can be used as a source of inspiration, it can be also used as a source for materials that can be used as they are. For this, websites – such as the ones mentioned in the previous example by Teacher B – are good. The materials offered by the publishers – mentioned in example 2 (see section 4.1.1) – must not be

forgotten either. This notion reflects the idea that often new teachers feel like they need or want to create new and exciting exercises for their students, and again demonstrates the feeling of responsibility and will to learn and succeed at their job.

5. Discussion

The studies discussed in the theoretical background and previous research helped to divide the themes into categories. The theoretical background and the ways technology is used (Hew & Brush, 2007) provide some insight to the pedagogical views of technology use as well as how and in which kind of tasks technology is used by the teachers. Also, some previous research (Bielaczyc, 2006) on difficulties in the incorporation of technology in teaching helps to analyse the challenges experienced by the interviewed teachers. A section in the analysis is also dedicated to the training of teachers, which is also discussed in previous research (Karamifar et al., 2019). In this section, these themes are discussed further in relation to the theoretical background and previous research to answer the research question: what are English teachers' thoughts and experiences on technology in teaching English to middle schoolers?

Throughout the interviews, the importance of technology in the language teachers' job was distinguishable. The use of technology is present daily in the teachers' job. The digitalisation is clearly visible: technology is used whilst planning, teaching, and sometimes even evaluation. Most notable affordances setting restrictions or challenges mentioned by the teachers are how much and what kind of technology is available in the school, and whether it works as planned. These are similar issues to those mentioned in previous research (Haines, 2015; Hew & Brush, 2006; Karamifar et al., 2019; van Lier, 2004). These aspects affect how and how much technology is used in the teaching. However, Teacher A and B both utilise technology a lot and find it a useful and crucial tool in their language teaching.

The findings demonstrate that technology especially enables to bring more of the authentic language and culture to the classroom and broaden the world of the textbooks. This can be linked to the meaningfulness of what is learned and how technology is used; thus, help deepening the knowledge (Wilson, 2020; Bielaczyc, 2006). In addition, many of the examples include elements of AB teaching and the socio-cultural learning aspect (Anthony & Clark, 2011, as cited in Wilson, 2020; Lantolf, 2000; van Lier, 2004, 2007; Vygotsky, 1978): learners enjoy being active and use technology to play, seek for information, and create something (e.g., in projects) – even though technology may also create challenges for the teacher and the learner. In addition, meaningfulness and authenticity are mentioned in the Finnish national core curriculum, and technology can help in implementing these aspects into teaching (Opetuhallitus, 2016).

The data shows different uses of technology as a tool to do something. From the viewpoint of the learner, technology can be used, for instance, to access and use the learning materials, play a game,

or prepare a presentation. This indicates two types of different uses: a personal use and a communal use. Technology such as laptops and smartphones can be used as tools for personal use and looking at the electronic materials or searching for information. In the other hand, some specific tasks enable the use of technology to enhance the sense of community and collaboration: preparing a groupwork together and playing a game such as Quizlet. Thinking about the ways of integrating technology in teaching, the personal use can often be categorised as replacement and amplification, and the communal use as transformation (Hew & Brush, 2006). These examples cover some areas of information and communication technology competence to be covered in middle school (Opetushallitus, 2016) and apply the socio-cultural learning theory in practice (Lantolf, 2000; van Lier, 2004, 2007; Vygotsky, 1978). With the feedback and observations the teachers have done, it could be concluded that when teaching is amplified with technology, the students are more excited and motivated – which again is supported by the theoretical background and other previous research (Anthony & Clark, 2011, as cited in Wilson; Karamifar et al., 2019; Lantolf, 2000; van Lier, 2004, 2007; Vygotsky, 1978). In addition, many of the described tasks include elements of AB teaching which is a key component in socio-cultural learning theories (Lantolf, 2000; van Lier, 2004, 2007; Vygotsky, 1978; Wilson, 2020). Hence, the aspect of communality and using technology to create something or be interactive are considered important in the incorporation of technology in teaching.

However, even though both teachers find technology useful and think it adds to the teaching, they recognise some challenges. Although learners use technology a lot on their free time, their basic technology skills may be lacking. This abundant use of technology negatively affects the attentiveness, persistency, and sleep, and creates other challenges in the classroom (e.g., misuses of technology and bullying). Additionally, the recognition of the different uses and formalities of language cause trouble for the middle schoolers. However, the exposure to English on the Internet and in video games can have positive effects to the vocabulary, for instance. These points are part of the affordances that may affect teaching and need to be considered when planning the lessons (Haines, 2015; van Lier, 2004).

The will to utilise technology in teaching and improve in it is notable in the data. The teachers want to use more of the resources available and recognise that not every task needs to include technology or be created by them. Both teachers seek for ideas and help mainly from colleagues and the Internet. Collegiality is a key theme in learning, sharing, and developing ideas and skills related to technology use and other tips related to teaching – also on the Internet via different platforms and groups. This shows the sense of community and interactive nature of a teacher's job, and that technology is part of these aspects. These aspects again reflect the socio-cultural learning theory (Lantolf, 2000; van

Lier, 2004, 2007; Vygotsky, 1978) and show continuing professional development (Karamifar et al., 2019). Interestingly, no need for further education related to the use of technology in teaching was mentioned by the participants even though it was discussed in research (Hew & Brush, 2006; Karamifar et al., 2019). This could be due to the generational changes and that Teacher A and B may be more comfortable and familiar with technology than the participants in the mentioned studies.

It is clear from the data that Teacher A and B both have thought about the meaningfulness and the intents in using technology and make sure that there is pedagogical reasoning supporting it – which are discussed in research by Anthony and Clark (2011, as cited in Wilson, 2020), Bielaczyc (2006), Wilson (2020) and the Finnish national core curriculum (Opetushallitus, 2016). The instances in which technology is used in an AB teaching manner and learners are active (e.g., projects, information retrieval exercises, and group work) show indications of the Trojan Mouse effect: the teacher becomes more of a facilitator than an authority (Schofield, 1995, 1997, as cited in Bielaczyc, 2006). This increases the agency of the learner, which increases the feeling of meaningfulness (Barton, Tan & Rivet, 2008; Bielaczyc, 2006, van Lier, 2007; Opetushallitus, 2016). In addition, the variety of examples of games used by the teachers shows the teachers' view on games in language teaching: they can be used as a way of teaching relevant skills or knowledge (Sheingold, Hawkins & Char, 1984, as cited in Bielaczyc, 2006). This shows technology and games are used pedagogically by them.

6. Conclusion

The aim of this study was to research what English teachers' thoughts and experiences are on technology in teaching English to middle schoolers by conducting semi-structured interviews and doing a thematic analysis of the data collected. To summarise the results and the discussion, the data reflects the current trend of digitalisation. As technology develops, teachers need to keep up with the development, and the will and interest to do so is visible in the data. The interviewed teachers describe how technology has a crucial role in their language teaching: technology is part of more institutional aspects of the job (e.g., planning, grading, and communicating) as well as the pedagogical aspects (e.g., AB teaching, variety, and agency). From the point of view of the teachers, they can focus more on the learners; hence, technology could be said to increase the efficiency and quality of language teaching. The notion of authenticity is mentioned by both teachers, and they highlight that technology plays an important role in it. This is especially the case with English teaching as the Internet and technological devices allow the exposure to substantial amounts of authentic language and material from different cultures.

In addition to these positives, the teachers see negatives too. The teachers describe challenges with the devices not working as expected and challenges that technology brings to the classroom (e.g., different challenges related to learning and behaviour). Technology also brings teachers together and allows a wider sense of community in which to share thoughts and ideas on teaching as well as a platform to store, find and share materials. To conclude, the English teachers' thoughts and experiences on technology in teaching English to middle schoolers show the important role of technology in the current English language teaching and that technology is a useful, crucial tool looking at the pedagogy and what the Finnish national core curriculum guides.

This thesis shows that the implications of technology are vast. It also gives a variety of different aspects that are present in the English teacher's job on daily basis. The examples show how the teachers view and experience the use and impacts of technology in the different areas of their job. Hence, this thesis could act as inspiration for further research as there are many possible topics that could be studied more in depth. One possible topic is how English teachers feel about the training related to the use of technology in teaching. This was one of the topics of interests that was mentioned whilst discussing aspects related to the interviews but was not covered in the interviews as much or as in depth as other topics. In addition, it would be interesting to focus on one of the themes (e.g., the effects of technology in learners or keeping up to date with technology and teaching) and go more in detail. These seem to be very relevant fields of study as technology and teaching continue to develop and different sub-themes may be noticed.

One of the main strengths of this thesis are the many extracts from the interviews as they allow for the reader to see what and how the teachers discussed the different topics and themes. In addition, the method and thematic analysis works well with the aim of the thesis. The inductive thematic analysis allowed to study the data closely. Especially the way the analysis process is formed – including defining and redefining themes – helped in doing a thorough analysis and forming conclusions. However, interviewing more participants and possibly focusing on one more succinct theme could have allowed to focus on one aspect and get a deeper understanding on the topic. The increase in the use of platforms such as Zoom brought some variety in the participants as they did not need to be from schools in the area of Oulu. Nevertheless, conducting the interviews in Zoom resulted in spending slightly more time on transcribing due to some audio quality or technical issues (e.g., delay in connection, echoing and crackling). Overall, the process was successful and gives insight on English teachers' thoughts and experiences on technology in language teaching after the peak Covid-19 crisis of 2020 and 2021. The pandemic and the abrupt change to distance teaching and working, and the ongoing digitalisation development of technology will without a doubt affect teaching; thus, technology in teaching is a field that will increasingly be researched.

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