TECHNOLOGY IN TEACHING AND LEARNING ENGLISH: IN-SERVICE AND PRE-SERICE TEACHERS' OPINIONS

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Tiivistelmä – Abstract

Tutkielmani tavoitteena on tutkia työssä olevien englannin opettajien ja opettajaopiskelijoiden näkemyksiä ja uskomuksia teknologian käytöstä opetuksessa. Tutkimuksen tarkoituksena on selvittää, onko ryhmien välillä eroavaisuuksia ja pohtia, mistä mahdolliset erot voisivat johtua. Tutkimusidea lähti liikkeelle vuonna 2023, kun seurasin mediassa käytävää diskurssia teknologian käytöstä opetuksessa. Uutiset ja keskustelut keskittyivät paljolti opettajien näkökulmiin, joten aloin pohtimaan, onko opettajaopiskelijoilla erilaisia mielipiteitä. Tutkimus on luonteeltaan määrällinen, ja sen aineisto kerättiin lähettämällä kysely Jyväskylän yliopiston ainejärjestölle Magna Carta ry:lle ja useisiin Facebookin englannin opettajien ryhmiin. Aineisto analysoitiin tilastollisen analyysin avulla erilaisia taulukoita ja kuvioita käyttäen. Tutkimuksessa oli myös muutama avoin kysymys, jotka analysoitiin kategorisoimalla aihealueita.

Tutkimuksen tulokset osoittivat, että molemmat ryhmät suhtautuvat positiivisesti teknologian käyttöön kielten opetuksessa ja oppimisessa. Vastausten pohjalta ilmeni, että teknologiaa käytetään suhteellisen tasapainoisesti muun opetusmateriaalin ohella. Tämän lisäksi tulokset osoittivat, että opettajat suhtautuvat teknologian käyttöön hieman positiivisemmin kuin opettajaopiskelijat. Opettajat myös kannustavat teknologian ja sen eri muotojen käyttöä hieman enemmän kuin opettajaopiskelijat. Opettajaopiskelijat kuitenkin ajattelivat puhelimien olevan hieman enemmän hyödyllisiä kuin työssä olevat opettajat. Tulokset osoittivat silti, että molemmat ryhmät kokevat puhelimet lähinnä häiritseviksi, eivätkä koe tarpeelliseksi niiden tai muun teknologian lisäämistä opetuksessa. Tulokset osoittivat myös, että työssä olevat opettajat ajattelivat tekoälyn roolin kasvavan tulevaisuudessa. Molemmat ryhmät myös ajattelivat erilaisten digitaalisten työkalujen, pelien ja materiaalien olevan hyödyllisiä opiskelijan oppimisprosessissa. Tuloksien mukaan molemmat ryhmät kannustivat tiettyjen pelien käyttöä luokan ulkopuolella: Wordle ja Duolingo.

Tulosten pohjalta voidaan todeta, että ryhmien välillä ei ollut merkittäviä eroja. Molemmat ryhmät tunnistivat teknologian hyödyt, mutta eivät halunneet lisätä teknologian käyttöä. Tämä on linjassa tämänhetkisen julkisen keskustelun kanssa. Tutkimusta ei voi yleistää liian pienen otosjoukon takia, mutta tutkimus luo silti hyvän pohjan jatkotutkimuksille. Jatkotutkimusta voitaisiin tehdä tutkimalla suurempaa otosta tai haastattelemalla työssä olevia opettajia ja opettajaopiskelijoita. Haastattelujen avulla saataisiin syvällisempää tietoa.

Avainsanat - Keywords
English teachers, English teacher students, MALL, applications, role of technology

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Muita tietoja - Additional information

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1 INTRODUCTION

> The Government will reinforce the powers of teachers and principals to intervene in activities that disrupt teaching and take place during school hours. We will make the necessary legislative amendments to enable more efficient restrictions in cases such as the use of mobile devices during the school day so that pupils and students can better concentrate on teaching (Finnish Government, 2023, p.94).

During the past year, technology and technological devices in teaching and learning have been a burning issue among teachers, the government, and households alike. Earlier discussions have revolved around integrating technology into learning and teaching. However, the discussion has now taken a more negative turn as can be seen in the government plan. The plan specifically mentions that the use of devices such as mobile phones should be restricted, and teachers should be given more power to intervene in the use of devices during school hours. Paananen (2024) states that the government indeed wants to ban the use of phones at the comprehensive school levels. The new law would make it so that students can only use phones when teachers give permission. Moreover, from my personal experience, I have heard that this already takes place in some schools. Personal experience from the field shows that teachers' views have become increasingly negative. The same can be noted by looking at the news.

Many news articles have been written on the topic. For instance, Sinkko-Westerholm (2024) wrote that teachers in Helsinki consider phones a major distraction and problem in schools. According to Sinkko-Westerholm, many agree that the government should write regulations on the use of phones in schools. However, some disagree with this as the problem extends to other environments. Interestingly, teachers also had differing opinions on whether phones are needed in schoolwork. Rissanen

(2024) points out that Espoo is, in fact, starting to take measures against phone use. Some schools have even taken a step backwards in time by starting to use physical books instead of digital copies as stated by Pellinen (2024). The topic of phones and digital technologies is clearly very timely. A simple Google search instantly brings up dozens of news articles on it.

The news articles referred to above give the impression that all the discourse is negative. However, there are news articles which indicate that some people view technology in a positive manner. For example, the director of basic education in Helsinki thinks that the balance between technology and traditional methods is fine (Rantasalo, 2023). This news article was written a year ago. Just by comparing it and the ones referred to above, it can be noted that discourse around the topic has turned slightly more negative over time. After reading some of these news articles, I noticed that there is not a lot of discussion around what teacher students think. Most discussion revolves around what teachers and politicians think about the matter. However, would it not be beneficial to explore whether teacher students viewed technology negatively? Furthermore, it could be beneficial to explore whether there were any differences between teachers and teacher students.

There have been previous Master's theses on English language teachers' attitudes and beliefs on technology. Moreover, there have been several studies about teachers' and EFL (English as a foreign language) teachers' opinions regarding the use of phones and technology in teaching (e.g., Alakurt & Ylimaz, 2021; Cakir, 2015; Dashetestani, 2013). There have also been studies about teachers and teacher students' perceptions of the use of technology (e.g., Chung, 2015; Polly et al., 2023; Spaulding, 2013). However, there seems to be little knowledge on the views of English teachers and teacher students in a Finnish context. So, the aim of this thesis is to examine whether there is, in fact, a difference between these two groups. Furthermore, the aim is to complement previous studies and find out what English teachers and teacher students think about the use of phones and other technologies in teaching and learning. This viewpoint offers timely insight into what teachers and teacher students are thinking as the discussion around technology is constantly changing. Moreover, it is vital to

examine the views of teacher students because they offer insight into what future teachers are thinking. Their views give an idea about what is timely amongst teacher students at present. Also, it is important to note that this study can function as a predecessor for larger scale research.

In this study, I shall refer to pre-service teachers as teachers and in-service teachers as teacher students. This makes the writing and reading more accessible and straightforward. Moreover, this choice may allow readers to engage with the materials more easily. In the first sections of this study, I shall describe the theoretical framework of the thesis. Thereafter, the methodology shall be presented and discussed. Thirdly, I will explain the results of the questionnaire. Finally, there shall be the discussion section where the main points of the study are discussed.

2 BACKGROUND

To clarify the premise of the present study, I am going to discuss some of the main ideas surrounding technology in EFL classrooms. Firstly, I am going to describe the history of technology in language teaching from the past to the present and discuss what the future holds. Secondly and thirdly, I shall explain what previous research has said about the positive and negative aspects of using and implementing technology in language teaching. Thereafter, I will present and discuss some of the applications used during teaching. Finally, I will discuss what previous research has said about teachers' views on technology.

2.1 Technology in the English classroom

How has technology usage in language classrooms changed from the past to the present? Moreover, how is it going to change in the future? This section aims to answer these questions and explain some of the key concepts such as CALL, CMC, gamification, and MALL.

2.1.1 Past

There are several approaches to describing the use of technology in language teaching. However, Ürün (2019, p. 76) explains that there have been two major phases, which are the audio media phase and the visual media phase. Furthermore, audio materials are often regarded as the first example of technology being used in language teaching.

As early as 1918, Clarke (1918, as cited in Salaberry, 2001, p. 40) pointed out that phonographs can positively affect pronunciation teaching and learning, and radios can be used to teach students from a distance. Other benefits of using radios in language teaching included contextualized teaching of grammar, listening to the target language spoken at normal speed, and being able to hear a variety of dialects (Wipf, 1984, as cited in Salaberry, 2001, p. 40). Interestingly, also during the 1980s, Twarog and Pereszlenyi-Pinter (1988, as cited in Salaberry, 2001, p. 40) discussed the implementation of a telephone-assisted language program, which could be interpreted as one of the forefathers of MALL (mobile assisted language learning). However, MALL will be discussed in more detail in Section 2.1.2.

Audiotapes have played a crucial role in language teaching and learning too. The first audiotapes date back to the 1950s, and sometime during the 1970s audiocassettes started to become popular, which started to enhance language teaching greatly (Ürün, 2019, p. 76). Ürün continues by explaining that audio language laboratories were created shortly afterwards. These language laboratories had several benefits such as being able to hear difficult sounds and sound sequences, providing students with stimuli, and helping with writing processes (Angelis, 1973; Church, 1986, as cited in Salaberry, 2001, p. 44). However, according to Holmes (1980), there were also issues such as a "lack of programs for advanced students and insufficient effort to make structural drills meaningful" (p. 197). After the development of audio language laboratories, the next steps were the introduction of CDs and computer-based digital audio (Ürün, 2019, p. 76).

The visual media phase often evolved alongside the audio media phase. Ürün (2019, p. 77) explains that slide -and overhead projectors, motion videos, and televisions date back to the 1960s. Furthermore, there were several benefits of using these methods such as being able to expose students to authentic materials, voices, and dialects (Swaffar & Vlatten, 1997, p. 175). However, Garrett (2009) points out that even though there are pedagogical benefits to using visual media, sometimes teachers might not use the technology "with maximum efficiency or imagination" (p. 700). Even though these methods had their uses, the development and integration of

computers led to the emergence of a new term: 'Computer Assisted Language Learning', also known as CALL (Ürün, 2019, p. 77).

Computers in language teaching and CALL have been in development as early as the 1960s (Warschauer & Healey, 1998, p. 57). Butler-Pascoe (Butler-Pascoe, 2011) continues by explaining that CALL's origins are "with the development of the mainframe computer" (p. 17). These programs and computers were situated in universities across the world. There have been several milestones in the development of CALL, however, this study shall not go through all those steps. It is also vital to understand that CALL does not only refer to the use of computers but to "any applications of information and Communication technology" (Tafazoli and Golshan, 2014, p. 32). Furthermore, even though CALL might seem like quite a recent phenomenon, its history expands over 50 years. This long history can be divided into three categories: Behaviourist CALL, Communicative CALL, and Integrative CALL (Ürün, 2019; Warschauer & Healey, 1998; Tafazoli & Golshan, 2014).

Behaviourist CALL was 'created' in the 1950s, but was only implemented in the 1960s and 1970s (Warschauer & Healey, 1998, p. 57; Tafazoli & Golshan, 2014, p. 33). Atkinson and Wilson (1969, as cited in Tafazoli & Golshan, 2014) state that the three main factors that affected the use of CALL during this time were: "the use of programmed instruction-based behaviorism, the enhanced sophistication of data processing, and the use of time-sharing systems for CALL purposes" (p. 33). During this phase, the focus was on repetitive language drills (Warschauer & Healey, 1998, p. 57). Moreover, the best-known tutorial system of this time was PLATO.

Ürün (2019, p. 77) discusses how the second phase, communicative CALL, emerged during the 1980s. They continue by explaining that with the increasing number of personal computers, the focus switched from directly teaching students the forms of language to emphasizing the use of different forms. The goal was to encourage and allow students to produce original utterances. Moreover, it was important to get the students to interact with each other through the use of computers. Warschauer and Healey (1998, p. 57) describe similar ideas by stating that the focus was to get the

students to collaborate with each other while using computers rather than just using them on their own.

The goal of the third and final phase of CALL, also known as integrative CALL, was to "overcome the obstacles of language learning and teaching", and "optimize the opportunities for integrating new technologies in the language classroom" (Tafazoli & Golshan, 2014, p. 34). They continue by explaining that currently, it is very easy for people to use the internet and find information relating to all kinds of studies. However, it is worth noting that these phases do not fit perfectly into a specific timeline of use. In the next section, I shall briefly discuss the current use of CALL and explain what kind of technology is in use nowadays.

2.1.2 Present

The effect of technology on teaching and particularly on language teaching can be observed by any school visitor. In most grades, the students use phones, computers, and different forms of digital literacy to find information. In Finland, an emphasis on the use of technology and skills relating to the so-called new media was already pointed out by Luukka et al. (2008, p. 11) nearly 20 years ago. They continue by stating that in a knowledge society, a person can use technology in all its forms. Moreover, the role of technology has been increasing and people seem to value it more. Luuka et al. (2008, p. 26) argues that technology should not only be used in so-called ADP (automatic data processing) rooms but should be further incorporated into teaching. Interestingly, this has somewhat happened since the publication of their study. For instance, the rapid development of technology has led to there being more and more visual texts, which has given opportunities to new ways of reading and writing (Luukka et al., 2008, p. 22).

This rapidly changing school environment has led current teachers to not only need pedagogical knowledge but also an understanding of computers, hardware, and web browsers (Ivy, 2012, p. 206). For instance, teachers need to know how to use the internet, how to make multimedia presentations, how to use audiovisual equipment, and how to use shared drives. Moreover, teachers need to be able to communicate

through email. In terms of educational practices, there have also been several changes in the classroom. Warschauer and Healey (1998, pp. 59-61) and Ivy (2012, pp. 211-216) list several ways in which technology is used in the classroom. Warschauer and Healey explain that technology can be used, for example, to record students, provide realistic situations, and help with group projects. It is worth mentioning that Warschauer and Healey's study and Ivy's study might be a bit outdated, but some of their content holds up today. One of these is the CALL drill-and-practice, which Ivy also mentions. Ivy (2012, p. 212) describes that CALL can also be used with corpora learning.

The language classroom has also changed in terms of so-called physical technological equipment such as electronic whiteboards (Ivy, 2012, p. 213). Other prominent physical technologies in teaching and learning include phones and computers. A study by OECD (2024) offers insight into what kind of technologies are used in today's foreign language learning. They point out, for instance, that digital technologies offer "easier access to a greater range of foreign language materials" (p. 21). Furthermore, a vast number of digital tools enhance learners reading, listening, speaking, or writing experiences. They continue by explaining that these technologies also encourage collaboration and going "beyond the foreign language classroom" (p.21).

This can be achieved with for instance VR (Virtual reality) or AR (Artificial reality). Ivy (2012, p. 213) points out that this kind of Virtual Learning Environment (VLE) creates authentic experiences and allows the students to change who they are. OECD (2024) continues stating that AI can also be used for responding to students' individual needs. Worth mentioning is also that despite the possibilities of technology, it is "not having a transformative impact on foreign language teaching and learning" (p.21).

Another very current form of technology presented by Caponetto et al. (2014, p. 50) is gamification. They describe that gamification refers to transforming non-gaming environments into gameful experiences. Moreover, the goal of gamification is to motivate and enhance different experiences. The educational environment has been 'gamified' with several games and applications such as Kahoot and Quizlet. New games are being created all the time and it is up to the teachers to decide which

application they want to utilize. I shall discuss the use of applications in greater detail in Section 2.3.

When implementing technology into schools, it is vital to consider questions such as:" How can these resources be used and combined most efficiently to serve the established learning goals", and "How will I assess how effective students' use of these resources is in their attainment of the established learning goals?" (Chun et al., 2016, p. 70). Chun et al. (2016, p. 73) explain that the first question can be answered, for example, with the help of CMC (computer-mediated communication) technologies. CMC technologies enable language learners to listen to what native speakers sound like among other things.

Moreover, CMC technologies can be used to help students understand native-like speech. It is also interesting to note that these technologies are in many ways the same as the earliest uses of audio materials (see Section 2.1.1). Technology advances, yet the goal often remains the same. Other useful technologies mentioned by Chun et al. (2016, p. 73) include multimedia materials and translators. However, Chun et al. also note that some teachers do not encourage the use of translators. There are also a vast number of technologies, nowadays, to help teachers in evaluating and assessing students' work. Chun et al. (2016, p. 76) explain that it is possible to screen capture what the students are doing and even track their eye movements.

At present, MALL (mobile-assisted language learning) is a growing field of mobile learning research (Viberg & Grönlund, 2012; Miangah & Nezarat, 2012). And as stated in Section 2.1.1 telephones-assisted language programs can be considered the forefather of MALL. So, the basic premise of MALL is that students can use their phones to learn about new subjects, topics, and areas. Mobile phones can be used in teaching in several ways such as playing games and search information. Miangah and Nezarat (2012, p. 311) explain that phones are useful for doing activities outside the classroom. Furthermore, they state that phones are beneficial for SMS -and game-based learning. Mobile phones can also help in learning vocabulary, grammar, and pronunciation (Miangah & Nezarat, 2012, pp. 312-314). Moreover, phones can also help in listening and reading comprehension. The educational environment is

transforming all the time, and no one can predict all the possible changes. However, I shall discuss some of the possible future changes in the next section.

2.1.3 Future

Several technologies will become more prominent in the future (Yamazaki, 2019, p. 1). These include Intelligent CALL (previously there were 3 categories, see Section 2.1.1), VR and language learning, digital game-based language learning, virtual world, and language learning, computer-mediated communication (CMC), distance and blended learning, massive open online courses (MOOCs), and MALL. This study cannot go through all the possible changes the future holds. Instead, the focus will be on two topics mentioned in the previous sections: CMC and MALL.

CMC has become an integral part of teaching and learning while simultaneously evolving all the time. Kessler (2018, pp. 208) discusses how CMC has various forms such as online learning, social media and gaming experiences, and numerous mashups of all the previously mentioned. They continue by stating that at the core of these experiences is CMC and that there are promising avenues into the future. For instance, there are several web pages, such as wikis, that encourage and allow multiple writers to contribute to a single shared document (Kessler, Bikowski, & Boggs, 2012, as cited in Kessler, 2018, p. 208). Other platforms that encourage multiple writers include apps such as Word and PowerPoint. Kessler (2018, p. 209) highlights that to effectively enhance and advance CMC practices one must have an understanding of previous research. The goal is to create "individualized and intelligent data-driven learning systems of the future" (p. 209).

Even though most people have mobile phones nowadays, MALL will face issues in the future. A study by Bozdoğan (2015, p. 938) concludes that students are reluctant to participate in mobile-assisted tasks when participation is compulsory. Furthermore, students are not willing to use their own mobile devices in teaching because the devices contain sensitive information. To achieve all the benefits of MALL, one should integrate it into the course itself. Bozdoğan continues to explain that activities should not be too demanding or time-consuming. Rao (2019, p. 225) discusses how mobile

phones have indeed become an integral part of students' lives and learning. Therefore, it is up to the teachers to find ways to integrate phones into teaching in the future. It is, however, crucial to note here that not all teachers or people encourage the use of phones in schools. As stated in Chapter 1, the Finnish government is considering and suggesting giving teachers more power to remove phones from students during lessons. In many ways, MALL and the use of phones is a controversial topic of the future.

In the future, digital classrooms will become more common. These classrooms, as stated by Haleem et al. (2022, p. 277), can have several advantages such as collaboration, affordability, flexible learning, innovative content, and accessibility. Another future tool for teaching and learning could be AI. A study by OECD (2024, p. 6) pointed out that there is an emerging interest in using AI to support learning and teaching. They explain (OECD, 2024, p. 23) that AI can help students contextualize vocabulary and help teachers ensure that the lesson plans cater to a wide range of learning goals. Furthermore, AI voice generators can help turn text into speech (OECD, 2023, p. 23). OECD even argues that AI tools could transform the way writing a foreign language is taught.

So, it is difficult to predict how technology will affect teaching and learning in the future. Moreover, one can only guess what future classrooms might look like. It is, however, certain that technologies which were used in the past such as CMC and CALL will continue to advance and evolve further.

2.2 Different aspects of technology

It is important to understand the various ways in which technology can be used in teaching and learning English. In this chapter, I shall discuss what previous research has stated about the positive and negative aspects of using technology in teaching. There are other aspects to using technology in language teaching such as figuring out what students think about technology and how technology affects factors such as learning outcomes. However, this study shall focus on four different aspects of

technology in teaching: positive and negative aspects, applications in teaching and teachers' views on technology.

2.2.1 Positive aspects

There are several factors to consider when analysing the positive aspects of technology. The present study has taken the approach to present positive aspects from three different directions: the benefits of using ICT and gamification, and the use of MALL.

Information Communications technology tools also known as ICT tools have become more frequent in the school environment (Veljković Michos, 2017, p. 511). These tools offer opportunities for teachers to incorporate technology into teaching in a meaningful way. Isisag (2012, p. 2) explains that there are several advantages to using ICT in foreign language teaching. They begin by explaining that computers are useful for creating presentations, and they offer the teacher an opportunity to use and apply different kinds of materials from the internet. Moreover, computers help in giving feedback and their use can be adapted to teachers and students' personal needs. Another area Isisag discusses is the usefulness of the internet, and how it allows, for instance, access, flexibility, durability, and repeatability. Finally, Isisag (2012, p. 3) also explains that ICT technologies increase motivation and improve independent learning.

It is worth mentioning that there are several advantages of using so-called gamified tools in teaching and learning. Veljković Michos (2017, pp. 512-513) lists that gamification can, for instance, modify the mood in the classroom, increase learners' motivation, engagement and feeling of happiness, stimulate a goal-oriented activity, and make learning a fun experience.

It is a bit unclear how effective MALL and mobile devices are for teaching (Chen et al., 2020, 1769). Yet, Chen et al. attempt to examine the overall effectiveness by analysing 84 separate studies. They conclude that there was "a medium-to-high overall effect size for mobile devices on language learning achievement" (Chen et al., 2020, p. 1785). Therefore, it is fair to argue that there are positive outcomes to using mobile devices in teaching. Other significant findings concluded that MALL is more effective in English learning than in other languages. Moreover, MALL is more useful for

learning listening, writing, speaking, and vocabulary than reading. Other benefits of MALL include a variety of learning opportunities and being able to leave the "traditional border of fixed education" (Cakmak, 2019, p. 31). Phones can also be carried around easily and used to connect with others (Miangah & Nezarat, 2012, p. 310). They continue by stating that other advantages include social interactivity and individuality.

So, integrating technology into language teaching can have positive implications on several factors such as students' learning and achievement (Chang and Hung, 2019, pp. 12-13). Technology can also be beneficial for all L2 learning levels when implemented correctly. However, it is worth mentioning that Chang and Hung found it to be most useful for postsecondary learners and students in higher education. Even though it seems like there are a vast number of positive aspects of using technology in teaching, there are also several negative aspects which will be presented in the following section.

2.2.2 Negative aspects

The negative aspects of technology in teaching can be discussed from several viewpoints. In this section, I shall focus on only a few areas: general observations, gamification, and MALL.

As stated in Section 2.1.2, teachers need to understand how computers and other devices work. Nowadays, it is not merely enough for teachers to possess only pedagogical skills. Ivy (2012, p. 216) explains that teachers may lack effective training and understanding on how to optimize the use of technology. They continue to list several other problems teachers face when trying to integrate technology and teaching. All students may not have the possibility to submit homework through the Internet, and some schools might lack financial resources (Ivy, 2012, p. 217). Moreover, educators must invest their free time to learn how to use technology effectively. Ivy also brings up the issue of plagiarism, and how electronic translators and synonym generators may encourage students to use incorrect English words. Luckily applications exist to

assist teachers in detecting plagiarism among other things. These applications include turn-it-in, iThenticate, and googling up (Ivy, 2012, p. 219).

In previous sections, I have discussed the positive outcomes of using gamification and gamified tools. However, negative aspects also exist. Toda et al. (2017, p. 148) identify 4 negative effects of gamification in education: indifference, loss of performance, undesired behavior, and declining effects. Indifference refers to gamification "not improving learners' gain of knowledge compared to the traditional learning method" (Marcos et al., 2014, as cited in Toda et al., 2017, p. 151). In several cases, the students felt indifferent about gamified learning. Toda et al. (2017, p. 149) explain how loss of performance could occur when students were demotivated by a task, or students did not understand specific rules, whereas undesired behavior occurs when teachers plan activities badly or there is no planning at all (Toda et al., 2017, p. 150). Finally, Toda et al. (2017) explain that negative effects appeared when there was a "gradual loss of motivation and engagement due to the gamification that was deployed" (p. 151). So, it appears that when gamification or gamified tools are integrated poorly, the method does not result in desired outcomes.

In Section 2.1, I discussed the meaning of MALL, and in Section 2.2.1, I explored the positive aspects of using it in teaching. Yet, there are also negative aspects to it which should be explored. Miangah & Nezarat (2012, p. 311) explain that most phones have small screens, not being designed for learning environments. Furthermore, some tasks take longer to complete with phones. The three main issues with MALL relate to learner distraction, cheating, and teacher perception and readiness (Metruk, 2020, p. 4). Metruk (2020, p. 6) explains that students spend time texting and surfing the web, which can ultimately lead to them not paying attention during the lesson. Dashtestani (2016, as cited in Metruk, 2020, p. 6) points out that Iranian EFL learners use mobile phones for non-academic purposes. Metruk continues by claiming that modern technologies hinder learning when learners are distracted. Cakmak (2019, p. 33) also raises the question of how much phones distract from learning. They state that phones distract people all the time with notifications, flashing lights, and so on. Cheating with phones can occur in several ways, such as learners constantly communicating

with individuals outside the classroom (Metruk, 2020, p. 7). Moreover, cameras can be used to take photos of questions, which can be then viewed by outsiders. The third issue, teachers' perception, and readiness will be discussed in Section 2.4.

It is also worth noting that some social network applications are considered to have a negative effect in an educational setting. Yilmazsoy et al. (2020, p. 69) argue that one such application is WhatsApp. They argue that some negative aspects include: "students are often unable to control the time spent on messaging" and "students using WhatsApp may neglect their homework and be less disciplined than other students" (Yilmazsoy et al., 2020, p. 81). Other negative aspects listed by Yilmazsoy et al. (2020, p. 82) include the fact that students might get sleep-deprived and be unable to concentrate. However, other educational applications can be integrated into teaching. These will be discussed in the following section.

2.3 Applications in teaching

The internet is full of websites suggesting what kind of applications students and/or teachers could use in learning. For example, on the website WIRED, Hill (2023) suggests several applications one could use to learn languages. They recommend using applications such as Babbel, Duolingo, Memrise, and Busuu. Although a vast number of such learning applications exist, it would be beneficial to examine what specific applications would be useful in a language classroom.

Zou and Li (2015, p. 566-567) explored how different mobile applications affect students' learning. They found that applications such as BBC, TED Speech, and VOA positively affected the participants' listening and pronunciation skills. Moreover, communication tools such as QQ and WeChat made it easy and comfortable for the students to communicate through different forums. Jati (2017, p. 9) lists several links containing useful applications for learning and teaching writing. Some of these applications were: ProWritingAid, Canva, Scribus, Coggle, Google Docs, and Grammarly. They (2017, p. 10) also suggest links with applications for teaching reading. Some of the applications in these links included: Rainbow Sentences, Story Builder, reading

Remedies, Hauikudeck, Animoto, iMovie, Oxford Dictionaries, Moodle, Google Forms, and Audiobooks. Some of these might appear more familiar than others, which indicates just how many different applications exist.

It is also vital that teachers understand that students are already familiar with different applications and are using mobile phones to support their learning (Farley et al., 2015, p. 11). According to Farley et al. (2015, p. 10), teachers should actively recommend useful applications for students to use. Moreover, teachers could also encourage students to form Facebook groups to enhance their learning experiences. There the students can discuss different things and help each other when needed. Another application recommended by Farley et al. (2015, p. 9) is podcasts. Podcasts, for instance, allow students to listen to lectures at their own pace and time. Hasan and Hoon (2013, p. 130) also bring forth how podcasts can positively affect students' pronunciation and listening.

Other applications which were brought up in Section 2.3, included Kahoot and WhatsApp. Kahoot is a common teaching tool that teachers can use to introduce topics, review student knowledge, or even evaluate students' knowledge (Veljković Michos, 2017, p. 512). Veljković Michos (2017, p. 513) continues that Kahoot can be used to make quizzes, discussions, or surveys. Other applications brought up are for instance Socrative and Plickers. Yilmazsoy (2020, pp. 77) discusses some of the characteristics of WhatsApp in education. Social network applications accelerate education processes. WhatsApp's features such as file sharing and group conversations make it the most suitable social network application for learning. However, there are also negative aspects (see Section 2.2.2).

Applications for teaching and learning are so common that it is impossible to list each one. Moreover, new applications are being developed all the time and only time will show how their usefulness will change and evolve. Something to also keep in mind is that all teachers have their preferences on what applications to use in teaching. Some might even consider traditional teaching methods better than modern technology.

2.4 Teachers' views on technology

All teachers are individuals with different opinions about the use of technology in schools. For instance, Wood et al. (2005, pp. 196–197) explain that teachers have positive, negative, neutral, and complex emotions regarding the use of computers. Furthermore, with the rise of technology, some issues and barriers will appear. Wood et al. (2005, p. 190) continue to list six major content themes: support issues, teacher-level issues, context and access issues, student-level issues, computer hardware and software problems, and external-related issues. This section is, however, only focusing on the teacher-related issues. Wood et al. (2005, p. 192) explain that these issues are often related to the teacher's skills and characteristics. Moreover, teachers are more likely to integrate technology when they are comfortable with it and have experience with it (Wood et al., 2005, p. 201).

It is worth mentioning that the aforementioned study is nearly two decades old. A more recent study by Boonmoh et al. (2021, p. 16) indicates that teachers have a more positive outlook on the use of technology. Their study concluded that teachers think technology is necessary for the classroom, and integrating technology helps students. Moreover, teachers perceive themselves as having high skills in the use of technology. However, some teachers still decided not to use available applications in their classrooms (Boonmoh et al., 2021, p. 18).

Erişti et al. (2012, p. 34) list several problems teachers have with the use of technology. They explain that teachers have problems because they cannot keep up with technology and fail to use current technology. Moreover, teachers view that technology has issues when the internet does not work, or some other technological issue appears. However, according to Erişti et al. (2012, p. 37), teachers also have suggestions regarding how to effectively use technology. Teachers believe that they should keep up with current technology, develop activities around it, and be willing to ask for help from students when needed. Overall, teachers have positive views on technology when they have the know-how to use it effectively.

Finally, it is worth exploring teachers' perceptions and readiness to use MALL (Metruk, 2020, p. 8-9). Metruk points out that research into teachers' opinions on MALL and the use of mobile phones in teaching is very limited. Nevertheless, there exist a few studies explaining some of the views teachers have. For instance, Kim et al. (2013, p. 53) bring up the issue that many teachers view change negatively, and do not see themselves as a part of new learning culture. Moreover, they point out how future teachers would view MALL more positively if they had positive experiences using mobile technologies while they were students (Kim, 2013, p. 61). In another study, it was revealed that teachers' readiness to use mobile devices in teaching was low (Ismail et al., 2013, p. 16).

There are varying views on the use of technology in teaching. Teachers' opinions and thoughts are formed through different aspects such as personality, teaching experience, and age. With technology in teaching constantly changing and evolving, it is crucial to continue the study of teachers' perceptions of technology. Moreover, previous research about teachers' views has a mixture of negatives and positives. This study aims to provide insight into educational technology and complement these earlier studies by examining teachers and teacher students' opinions. Boonmoh (2021), for instance, explored how teachers have positive ideas about technology and integrating it to teaching. It shall be interesting to figure out whether thoughts about technology usage have turned more negative in the past few years. It will also be beneficial to explore MALL as Metruk (2020) did. By studying teachers and teacher students' opinions regarding MALL, we will get a more extensive look into teachers' readiness to use mobile phones in teaching. All in all, the findings of this study will offer up-to-date information to the ongoing discussion regarding technology integration and mobile phones in language teaching.

3 THE PRESENT STUDY

In this chapter, I shall describe the aims of the study and the research questions. Furthermore, I will also describe the online questionnaire and justify why it, and statistical analysis were the best methods for my study. I will also explain how content analysis might be useful in my study.

3.1 Aims and research questions.

The purpose of the present study is to gain information regarding teachers and teacher students' opinions and thoughts about the use of technological devices such as phones in English teaching. Their answers will be analysed and discussed with the help of the theoretical background and earlier studies. Moreover, the present study aims to find out what teachers think about the role of technology in language teaching. And finally, the goal is also to find out what kind of thoughts teachers have regarding the different applications the students use. The three research questions the present study aims to answer are as follows:

1. *According to teachers and teacher students, are technological devices such as phones useful for students when studying / learning English?*
2. *What do teachers' and teacher students think about the role of technology when studying / teaching English?*

3. *What kind of thoughts do teachers and teacher students have regarding the applications the students use for learning English?*

In this study, I shall also compare the two groups and find out whether there are any significant similarities or differences.

3.2 Questionnaire

The data for the present study were collected with an online questionnaire. According to Denscombe (2010, p. 156), questionnaires are appropriate when, for instance, there is a large number of respondents from different locations, the required data is straight-forward information, and there is a need for standardized data. The method is suited for the present study for the aforementioned reasons. Moreover, questionnaires are appropriate when trying to acquire generalizable data.

Questionnaires have several advantages and disadvantages. Dörnyei (2010, p. 6) explains that questionnaires save the researchers time and energy. They continue by stating that questionnaires are also a very cost-effective way of collecting data. Peer et al. (2012, p. 94) point out that questionnaires are also suited when collecting data about, for instance, attitudes and opinions from a large number of people. However, there are also several disadvantages such as unreliable and unmotivated respondents, social desirability/bias, and fatigue effects (Dörnyei, 2010, pp. 7-9). To overcome the issues of fatigue effects, one must consider the length of the questionnaire. No exact rules on the answering time of a questionnaire exist, however, Denscombe (2010, p. 162) does suggest that one should only ask necessary questions and pilot the questionnaire to find out possible problems.

There are also ethical points one must consider while conducting research. Denscombe (2010, p. 7) states that participants must remain anonymous, and they should be made aware of the nature of the study. In the present study, the participants' anonymity is ensured by not asking any personal and identifiable questions. Denscombe (2010, p. 7) also expresses that it is key that the participants understand

that taking part in the study is voluntary. The data must also be stored in a safe location, which in this case will be the University of Jyväskylä's iCloud drive.

The participants for the questionnaire were reached from various places. The teacher students were reached by sending the survey invitation to several different Facebook groups such as "English teachers" and "English teachers in high school", whereas the teachers were contacted through the student association Magna Carta ry. The goal of the current study was to acquire 30 responses from each group.

The questionnaire itself was conducted on the web service Webropol. The questions for the survey were designed to acquire information about the participants' thoughts on the use of technology in schools. Many questions are formed to fit the Likert scale because it will provide information about the participants' agreement or disagreement. It is vital to ask contradictory questions such as "Phones should be banned during the lesson" vs. "phones are useful for language teaching and learning". The questionnaire will also have a question about what applications the teachers know and use. The list of applications was created with the help of a university course called KOPS1100 (New Tools and environments for Language Learning) and previous research. The rest of the tentative questions can be found in the Appendix.

3.3 Statistical analysis

To analyse the data from the questionnaire, I used statistical methods. Chiang (2003, p. 1) explains that statistical analysis is considered by many researchers as an integral part of research, and it helps in discovering the unknown. They continue by explaining that the key element in statistical analysis is the "variable, the characteristics or outcome, which is measured or counted" (p.1). In the case of the current study, one of the variables is to see how many teachers and teacher students agree or disagree on specific statements.

The statistical analysis must be planned before collecting data (Myers et al., 2010, p. 4). Planning the analysis ensures that the researchers have specified the questions asked. Furthermore, planning enables the researcher to be sure that "the targeted

questions can be answered by a statistical analysis" (p.4). With the data, I will be able to analyse how teachers and teacher students' opinions and thoughts differ from each other. It is also crucial to note that statistical analysis is different from personal data. Statistical data is a group of measurements or observations, whereas personal data focuses on factors such as age and weight (Chiang, 2003, p. 2). The current study does not acquire any personal information from the participants.

There are several advantages and disadvantages to quantitative analyses. According to Denscombe (2010, pp. 269-270), these advantages include factors such as the analyses being based on objective observation rather than subjective biases, and the statistics giving confidence in terms of interpretation and reliability. Moreover, the data is easily presented with different figures and/or tables. Some of the disadvantages include the quality of the data and data overload. Quality of the data refers to the data being as good as the methods and questions asked. Data overload refers to there being too much complexity in the data itself.

The collected data was analysed with SPSS. Moreover, cross-tabulation was used to describe the relationship between two variables, which in this case were teachers and teacher students. The goal was to find out whether there was a statistically significant association between the groups. If the chi-square (χ^2) test has a p-value smaller than .05, one can conclude that there is, in fact, a statistically significant association between the groups. SPSS was also used to find out the means of the groups. Furthermore, SPSS easily showed the percentage and number of answers to specific questions. Finally, SPSS could be used to create a few figures to illustrate the differences between the groups. The data is analysed and discussed section by section.

There were a few open-ended questions in the questionnaire, which were categorized. Bengtsson (2016, p. 12) explains that categories and themes are identified in categorization. In the case of the present study, this was not a difficult process as all the open-ended questions resulted in specific answers for specific questions. For instance, in Q12 participants gave answers only relating to the question, providing no reason to build a detailed table. Furthermore, the answers were often sparse, containing only a single word. This can also be stated for the other open-ended questions.

However, some longer answers were also given. This leads to the issue of subjectivity as presented by Harwood and Garry (2003, p. 484-485). While analysing the longer answers, I must keep in mind the ideas of reliability and validity.

4 RESULTS

In the following sections, I shall describe the results of the questionnaire by analyzing whether there are any differences between teachers and teacher students. This was done with the help of SPSS to determine whether there was statistical significance between the two groups. Furthermore, I will present some tables and figures to indicate and give insight into what some of these answers looked like. In Figure 1, there is a pie chart of the participants in the questionnaire. 63.5% (N = 47) of the participants were teachers, whereas 36.5% (N = 27) were teacher students. All in all, there was a total of 74 answers.

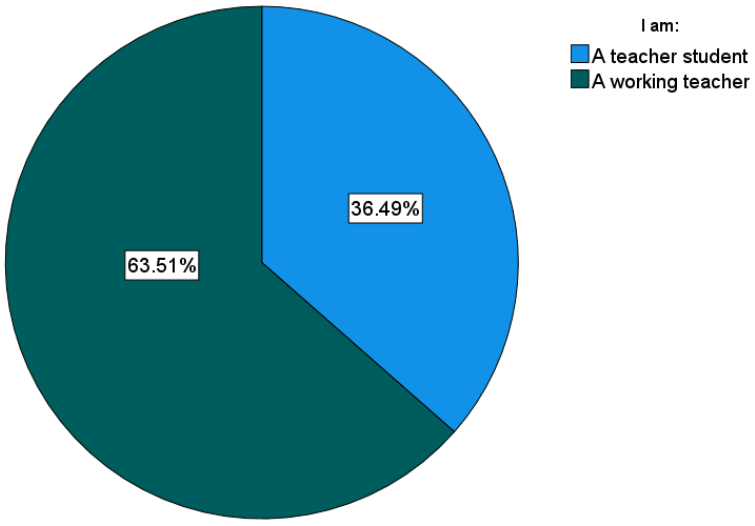

Figure 1 A pie chart of the participants in the questionnaire.

Firstly, I shall discuss the answers to the first research question: according to teachers and teacher students, are technological devices such as phones useful for students when studying/learning English? Thereafter, I shall state the answers to the second research question about teachers' and teacher students' thoughts about the role of technology when studying/teaching English. Lastly, I will discuss the answers to the third research question: what kind of thoughts do teachers and teacher students have regarding the applications the students use for learning English?

4.1 Technology in teaching and learning English

In this section, I shall discuss teachers' and teacher students' thoughts on the usefulness of technology in teaching and learning. Moreover, I shall explore the two groups' answers to the first research question. Firstly, I will examine some of the technology used in teaching and learning. Thereafter, I will highlight some of the main points which teachers and teacher students brought up concerning the use of mobile phones in language teaching and learning.

4.1.1 The usefulness of technology

Participants were asked about the usefulness of online platforms and how often they use them in teaching. The questions are summarized in Table 1.

TABLE 1 Online learning platforms and other technology

Technology and learning:	Mean (Teacher students)	Mean (Teachers)	Pearson Chi-Square (χ^2)	df	p-value
Q2.1: How often do you use online learning platforms in teaching?	3.8	3.9	7.2	4	.125
Q2.2: How often do you use phones in teaching?	2.8	3.1	6.1	4	.194
Q2.3: How often do you use some other form of technology?	2.8	3.7	10.8	4	.028

By looking at Q1.1, it can be noted that both groups do indeed use technology in language teaching. Moreover, both groups lean towards using it more than less. However, for Q2.2 in seems that both groups do not use phones that often in teaching. For Q2.2, it is clear that teachers are more likely to use other forms of technology compared to students. Furthermore, by examining the answers in more detail, it can be observed that there was no statistically significant difference between the groups for Q2.1, χ^2 (4, N = 74) = 7.20, p = .125. The same can be stated for Q2.2, χ^2 (4, N = 74) = 6.1, p = .0194. The results indicated that teachers and teacher students use online learning platforms weekly, whereas phones are used less frequently. However, for Q2.3 there in fact exists a statistically significant association, χ^2 (4, N = 74) = 10.8, p = .028. By comparing the means of the groups, it can be stated that teacher students do not consider other forms of technology as useful as teachers. Furthermore, teacher students use other forms of technology only occasionally, whereas teachers use other forms of technology weekly.

For Q5, the participants were asked an open-ended question regarding the kind of other technology they use. Only 8 teacher students answered the questions, whereas 29 teachers shared their views. This is not surprising, because as indicated previously, teachers use other forms of technology more frequently than teacher students. The answers for Q5 indicate that technology is, in fact, useful when planning lessons and teaching languages. This can be noted, for instance when several teachers mentioned using a smart board in teaching:

> "Smart board, nice that one can circle and underline important factors from the slides at the same time as explaining what something means" (T)

Some teachers also mentioned using Chromebooks in teaching. Both groups, however, recognized the importance of using all kinds of tablets and computers in teaching and learning. These devices, as pointed out by both groups, can be used for playing games. Some of the games mentioned were Duolingo, Wordwall, and Blooket. However, applications shall be discussed in more detail in Section 4.3. The results show that both groups, in fact, see the benefits of using technology in language teaching. Moreover,

both groups also mentioned social platforms that students and teachers can use in teaching and learning:

> "Social media" (TS)
>
> "Videos, new articles […]" (T)
>
> "Webpages, social media" (T)

Interestingly, there was also one teacher student who considered technology to not be so useful. Using a pen and a paper would benefit students more according to them. A topic only brought up by teachers was AI. The results indicate that teachers consider and think about how AI can be beneficial for teaching and learning in the future. One of these teachers stated:

> "The use of AI is increasing all the time, and we should keep up. We should especially guide young people on how to use AI correctly and ethically (for example plagiarism)." (T)

Another teacher reflected that:

> "AI is an interesting addition to what we already have. I wish I could learn to use it in a way that would actually matter […]" (T)

By examining the teachers' thoughts on AI, it can be noted that AI is thought of as a current topic. However, it is not reasonable to contemplate why teacher students did not write about the topic for there were less teacher student participants in general. Nevertheless, by looking at the answers and the data, it seems like both groups acknowledge that technology has a significant usefulness in teaching and learning.

4.1.2 Phones in teaching and learning English

In Table 2 are listed different claims regarding the use of phones during lessons. Both groups were asked to answer whether they agree with specific statement or not.

TABLE 2 Phones during lessons

The use of phones during lessons	Mean (Teacher students)	Mean (Teachers)	Pearson Chi-Square (χ^2)	df	p-value

Q11.1: Phones are useful for teaching in general	2.9	2.7	3.9	4	.408
Q11.2: Phones are useful for teaching languages	3.0	3.2	2.6	4	.634
Q11.3: Phones are useful when learning languages general	3.4	3.3	1.1	4	.908
Q11.4: Phones are useful for learning languages	3.6	3.7	11.9	4	.018
Q11.5: The use of phones distracts students learning	4.2	4.3	3.1	4	.540
Q11.6: Phones distract the teachers teaching	4.4	4.1	1.9	4	.748
Q11.7: Phones should be banned from lessons	3.7	3.6	5.8	4	.217
Q11.8: In the future phones should be used more in teaching/learning languages	2.4	2.6	7.1	4	.130

The participants were asked whether they consider the use of phones to be beneficial for learning/teaching. Furthermore, they were asked to ponder whether phones are distracting and should be banned. The results showed that in most cases both groups seemed to agree with the statements given. Moreover, quite often both groups' answers were of the mean 3. This means that they neither agreed nor disagreed with the statements.

When comparing the groups, it can be noted that almost all questions were not statistically significant. For instance, for Q11.1, there was no statistical significance between the groups, and it appears that teachers and teacher students had similar

answers, χ^2 (4, N = 74) = 3.9, p = .408. The same can be concluded for Q11.2 and for Q11.3. For Q11.1 and for Q11.2, it seems that both groups neither agreed nor disagreed with the statements given. Yet, for Q11.3 both groups acknowledged that phones could, in fact, be useful when learning languages in general. For Q11.4 there seems to be a statistical significance between the two groups, χ^2 (4, N = 74) = 11.9, p = .018. However, here it must be stated that the means between the groups are very similar. Teacher students have a mean of 3.4 and teachers have a mean of 3.4. Thus, it must be stated that sometimes the results of Chi-Square cannot be trusted because the number of participants is too little. Moreover, this means that sometimes there truly is no difference between the groups. This can be seen by looking at Table 2 and the means. Nevertheless, it is worth mentioning that teacher students were more likely to pick option 3 (neither agreed nor disagreed) compared to the teachers.

For Q11.5, Q11.6, and Q11.7, there was no statistical significance between the two groups. Furthermore, both groups lean towards the viewpoint that phones distract teaching and learning and should perhaps be banned from teaching. For Q11.8, it can also be noted that there was no statistically significant association between the groups, χ^2 (4, N = 74) = 7.1, p = .130. Both groups thought that phones should not be used more in the future.

Even though most participants agreed that phones should not be used more, they considered phones to have several benefits. This can be observed by looking at Table 3. For Q13, the teachers and teacher students were asked to state in what ways they consider phones to be useful for teaching and learning.

TABLE 3 In what ways are phones useful

Q13: Phones are useful:	Yes: Teacher students	Yes: Teachers	Total percentage amount
A) In practicing listening	66.7%	66.0%	66.2%
B) In practicing writing	59.3%	44.7%	50.0%

C) In practicing speaking	70.4%	55.3%	60.8%
D) In practicing reading	63.0%	46.8%	52.7%
E) Nothing	11.1%	10.6%	10.8%
F) Something else	0,0%	38.3%	24.3%

Table 3 shows the groups answers regarding the benefits of phones. The first and second column show how many chose option A, B, C, D, E, or F. The final column indicates the total amount of answers. By looking at Table 3, it can be noted that more than half of the participants chose options A-D. This indicated that both groups have an understating of the possible benefits of using phones in teaching and learning,

So, by looking at Table 3, it is possible to observe that in most cases both groups seem to agree on the ways in which phones benefit the learners. Nevertheless, it is also clear that teacher students seem to somewhat more optimistic towards phone usage. For instance, nearly 60% of teacher students consider phones to be helpful in writing practice whereas less than 50% of teachers agree with this statement. However, it is important to note that even though teacher students were generally more positive, they also had a larger percentage of respondents stating phones to be useless. The biggest differences occur in sections B, C, and D. In section F, the teachers also wrote down several ideas of their own on how phones could be useful. 10 participants pointed out that phones could be used to learn vocabulary. Furthermore, 1 participant emphasized that phones could help in learning about culture, and another stated they could be used for playing games. All in all, the results show that both groups recognize that phones can benefit students.

For Q14, the participants were asked to explain the reason behind their answers for Q13. The results show that quite many focused on the negative aspects of phones and why phones perhaps are not the best devices for teaching. For instance:

> "[…] requires constant supervision from the teacher so that the student only do what I asked of them" (T)

> "When using a phone, a student might easily get distracted because there are so much other things to do with the phone" (T)

> "[…] student might explore the internet or play other games when the task at hand should be done" (TS)

In several instances both groups mentioned that phones distract the learner from focusing on the task at hand. Furthermore, participants from both groups thought it would be impossible to monitor what the students were doing. Consequently, computers and tablets were offered as better solutions to use in teaching and learning. One teacher pointed out that the school's tablets cannot be used for TikTok or Snapchat. Both groups, however, had plenty of positive answers for Q14:

> "Phones can be used to record oneself speaking" (T)

> "There are several positive ways to use phones in interaction by writing or speaking, on top of that there are several applications to choose from" (TS)

4 teachers and 1 student pointed out that phones can be used to record speaking, which can thereafter be sent to the teacher. Moreover, 3 other teachers pointed out that phones are quick and easy to use almost with any task. According to the results, there are members in each group who acknowledge the possible benefits of using phones. However, it is crucial to note that there were also some who think negatively about using phones. For Q14, it seems that teacher students viewed the use of phones more positively than the teachers. This is interesting as 11.1% of them thought phones to not be useful at all (see Q13). One participant, for example, thought face-to-face exercises were better than digital exercises.

For Q12, the participants were asked whether there was a difference in the use of phones in teaching other languages. 13 out 27 teachers stated no and 4 out of 5 teacher students stated no. The results showed that a majority consider the usage of phones to be the same between languages. However, a few teachers pointed out that it is easier to find digital material for English. Because only a few answered Q12, the implications for the findings are quite minimal. All in all, the results showed that both groups viewed technology as a positive factor in teaching and learning. However, both groups also raised the importance of using it in a meaningful manner.

4.2 The role of technology

The questionnaire also aimed to find out answers to the second research question about teachers' and teacher students' thoughts about the role of technology. Table 4 shows the participants answers regarding technology and teaching/learning.

TABLE 4 Technology and teaching

Technology and learning:	**Mean (Teacher students)**	**Mean (Teachers)**	**Pearson Chi-Square (χ^2)**	**df**	**p-value**
Q1.1: Using technology affects positively to learning languages	4.1	4.3	6.5	3	.092
Q1.2: Using technology negatively affects learning languages	2.8	2.6	6.0	4	.198
Q1.3: Technology affects positively teaching languages	4.0	4.5	8.3	3	0.040
Q1.4: Technology affects negatively teaching languages	2.7	2.1	6.6	4	0.157
Q1.5: It is difficult to balance traditional and new learning methods	2.7	2.1	10.9	4	.027
Q1.6: I encourage my students to use technology and its various forms	3.9	4.3	10.7	4	.030
Q1.7: In the future we should use technology even more in language learning	3.1	3.3	1.9	4	.738

Both groups seemed to think positively about technology when looking at Q1.1 and Q1.3. As for Q1.2 and Q1.4, it seems that both did not view the use of technology in an extremely negative manner. Moreover, both groups encouraged the use technology (see Q1.6). However, they were also hesitant to increase the use of technology in the future.

By comparing the two groups, it can be noted that for Q1.1 there is no statistical significance between teachers and teacher students, χ^2 (3, N = 74) = 6.5, p = .092. Both teachers and teacher students agreed that using technology positively affects language learning. This can also be seen when looking at the means for Q1.1 in Table 4. When asked if using technology negatively affects learning (Q1.2), it is clear from Table 4 that again there is no statistical significance between the two groups, χ^2 (4, N = 74) =

6.0, p = .198. The mean between the two groups can also observed being 2.8 (teacher-student) and 2.6 (teachers). This indicates that both groups had neither agreed nor disagreed with Q1.2. Interestingly, however, for Q15 some teachers and teacher students had negative things to say about the role of technology:

> "Too much is too much. We are already going backwards in work. Some a pen and paper can help learning even better. Many people enjoy the physical book. Reading from the computer annoys in the long run" (T)

> "[…] that technology has become an absolute value: the amount of technology in teaching has increased in the past 10 years a lot, however, does it bring anything more compared to traditional values?" (TS)

The answers indicate that there are members in both groups who thought technology has too big a role in language teaching. The teacher student even asks whether technology brings anything beneficial compared to traditional methods. However, not all answers for Q15 were negative. Moreover, some teacher students for instance had mixed thoughts on the topic and thought finding balance would be beneficial:

> "A very double-edged sword, there are lot of benefits however also negative aspects" (TS)

> "I think it import to find balance; however, I still think about the screen time of student when I also notice myself looking at screens during teaching" (TS)

The results showed that teacher students had mixed feelings about the role of technology in language teaching. Some teacher students reflected that in a world full of technology, it would be beneficial to find a balance on how much technology should be used. In general, however, both groups viewed technology as having a positive impact on teaching and learning.

For Q1.3, it can be observed that there is a statistically significant association between teachers and teacher students, χ^2 (3, N = 74) = 8.3, p = .040. This indicates that the two groups might have differing opinions regarding how positively technology affects language teaching. Furthermore, the means between the two groups show that teachers view technology somewhat more highly than teacher students. Yet again for Q1.4, there is no statistical significance between the two groups, χ^2 (4, N = 74) = 6.6, p = .157. Overall, the results showed that both groups viewed the role of technology to be more positive than negative.

When observing Q1.5, it can be noted that there exists a statistical association between teachers and teacher students. The Chi-square test shows that the groups had differing answers regarding whether it is difficult to balance traditional methods or not (Q1.5), χ^2 (4, N = 74) = 10.9, p = .027. The means in Table 4 show that teachers (2.1) considered it less difficult to balance traditional methods than the teacher students (2.7). However, one teacher still pointed out that it might be difficult to balance traditional and new methods:

> "More education and information of the possibility of technology to teacher so that one does not have find all the information alone. For example, some good platform where this information can be found." (T)

The teacher points out that there is no specific platform for teachers to gain information on the use of technology and often the work must be done alone. For Q6.1, the statistical association also exists, χ^2 (4, N = 74) = 10.7, p = .030. Thus, by observing Table 4 it can be stated that teachers encourage the use of technology a bit more than teacher students. However, for Q1.7, it can be noted that there is no statistically significant association between the two groups, χ^2 (4, N = 74) = 1.9, p = .738). Moreover, this can also be noted by looking at the means. Both groups neither agree nor disagree on whether technology should be used more in the future.

All in all, both groups have positive views on the role of technology in language teaching and learning. Both groups also have some issues regarding how to use the technology and whether it is used too much.

4.3 Applications and their usage

In the following sections, I shall explore what reading and writing applications the participants were aware of. Moreover, I shall explore how the answers related to the third research questions about what kind of thoughts teachers and teacher students have regarding applications students use in learning English. Firstly, I will discuss various writing and reading applications. Secondly, I shall discuss online learning

platforms. Finally, I will also state what language skills improve, according to the groups, through the use of applications.

4.3.1 Applications in teaching and learning

Table 5 shows what writing applications the teachers and teacher students do not know, know but have not used, or have used. The participants had to pick one of the three categorizes. Moreover, under each column, it can be seen how many picked the specific category. The writing applications are listed on the left side of Table 5.

TABLE 5 Writing applications

Q6: Mark the writing applications that you know or have used	**Teachers: Do not know**	**Teachers: Knows but have not used**	**Teachers: Have used**	**Teacher students: Do not know**	**Teacher students: Knows but have not used**	**Teacher students: Have used**
ProWritingAid	**45**	**2**	**0**	**26**	**1**	**0**
Canva	**7**	**20**	**20**	**1**	**15**	**11**
Scribus	41	6	0	26	0	1
Coggle	37	7	3	25	1	1
Google Docs	1	18	55	0	6	21
Grammarly	3	35	9	3	22	2

Table 5 shows how many teachers and teacher students picked a specific category. For example, as seen in Figure 2 (see below), most teachers (N = 45) and teacher students (N = 26) do not know what ProWritingAid is. Furthermore, only 1 teacher and 2 teacher students knew the application but have not used it.

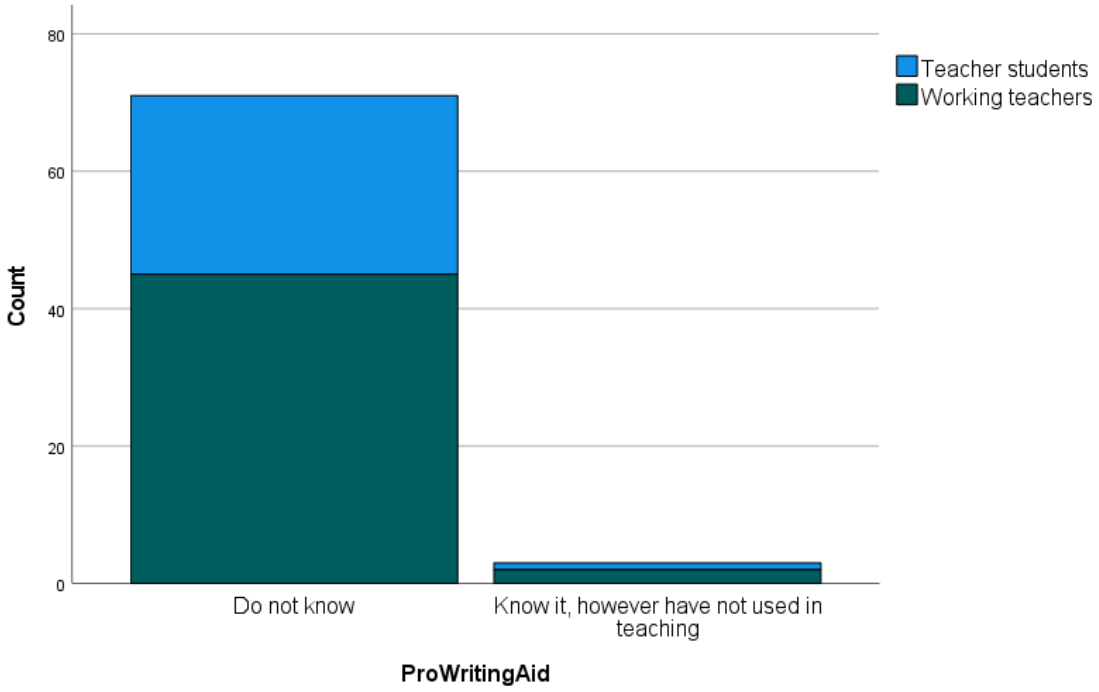

Figure 2 ProWritingAid

Similarly, Scribus and Coggle are not generally known by the two groups. For Q6, it seems that both groups generally picked the same answers when it came to specific writing applications. For instance, in the case of Grammarly, 35 teachers and 22 teacher students knew of the application but did not use it.

In Table 5, it can also be observed that both groups had similar answers regarding Canva and Google Docs. For instance, as seen in Figure 3 (see below) nearly half of teachers (N = 20) and half of teacher students (N = 15) knew the application and did not use it. Furthermore, 20 teachers and 11 teacher students used the application in their teaching. All in all, both groups had similar answers for Q6. However, 10 teachers also gave their own examples of writing applications.

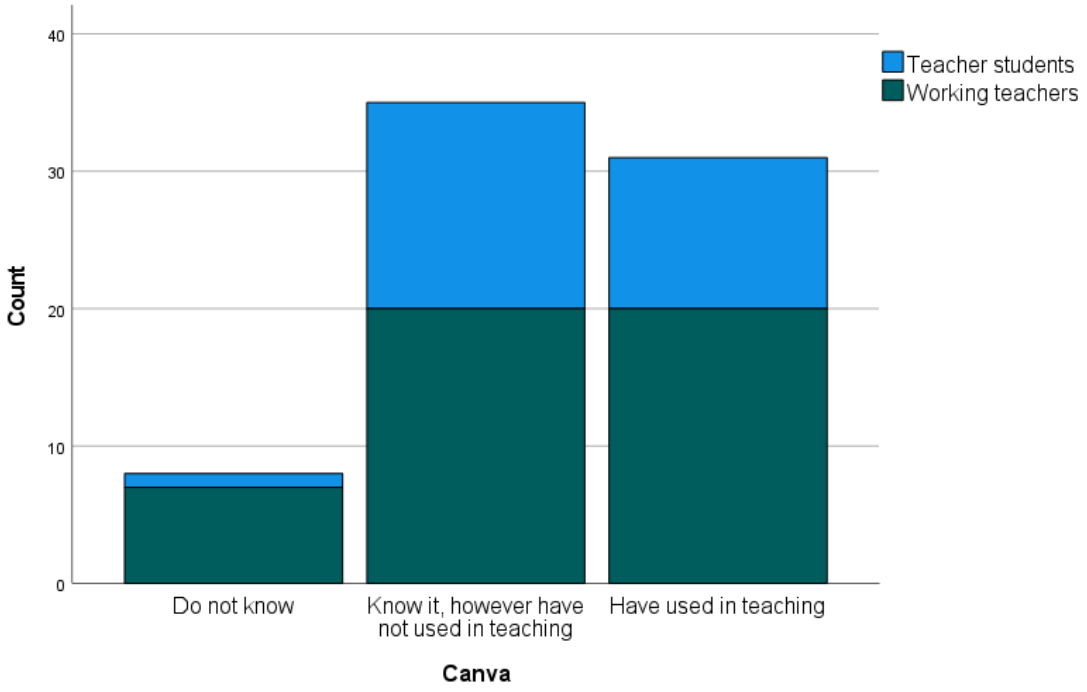

Figure 3 Canva

Two participants mentioned different games such as Wordwall, Gimkit, Bamboozle, and Quizlet. The other two participants mentioned Microsoft as a possible tool for learning writing. Furthermore, one participant mentioned a speech-to-text application, and another brought up learning platforms such as Studeon and Peda.net. One participant even mentioned TED and Merriam-Webster. However, the most frequently mentioned application was Chat GPT (N = 4). It seems that AI, as mentioned in previous sections, is becoming a more frequent method of English learning. All in all, there was no statistical significance between the groups.

Table 6 shows what reading applications the teachers and teacher students do not know, know but have not used, or have used. Again, the participants had to choose one of the three categories. Furthermore, the reading applications are listed on the left side of the table. Just as in Table 5, both groups seemed to have very similar answers regarding which applications they were aware of.

TABLE 6 Reading applications

Q7: Mark the reading applications that you know or have used	Teachers: Do not know	Teachers: Knows but have not used	Teachers: Have used	Teacher students: Do not know	Teacher students: Knows but have not used	Teacher students: Have used
Rainbow Sentences	47	0	0	26	1	0
Story Builder	40	6	1	24	3	0
Reading Remedies	**47**	**0**	**0**	**26**	**0**	**1**
Animoto	44	2	1	25	1	1
iMovie	9	25	13	5	19	3
Oxford Dictionaries	3	25	19	4	13	10
Moodle	1	33	13	0	19	8
Google Forms	**0**	**7**	**40**	**0**	**12**	**16**
Audiobooks	13	27	7	12	13	2

So, for Q7, the participants were asked what different reading applications they knew or used. For instance, in Figure 4 (see below) it can be observed that teachers (N = 47) and almost all teacher students (N = 26) are not familiar with the application Reading Remedies. The same phenomenon can be noted in the applications: Story Builder, Rainbow Sentences, and Animoto.

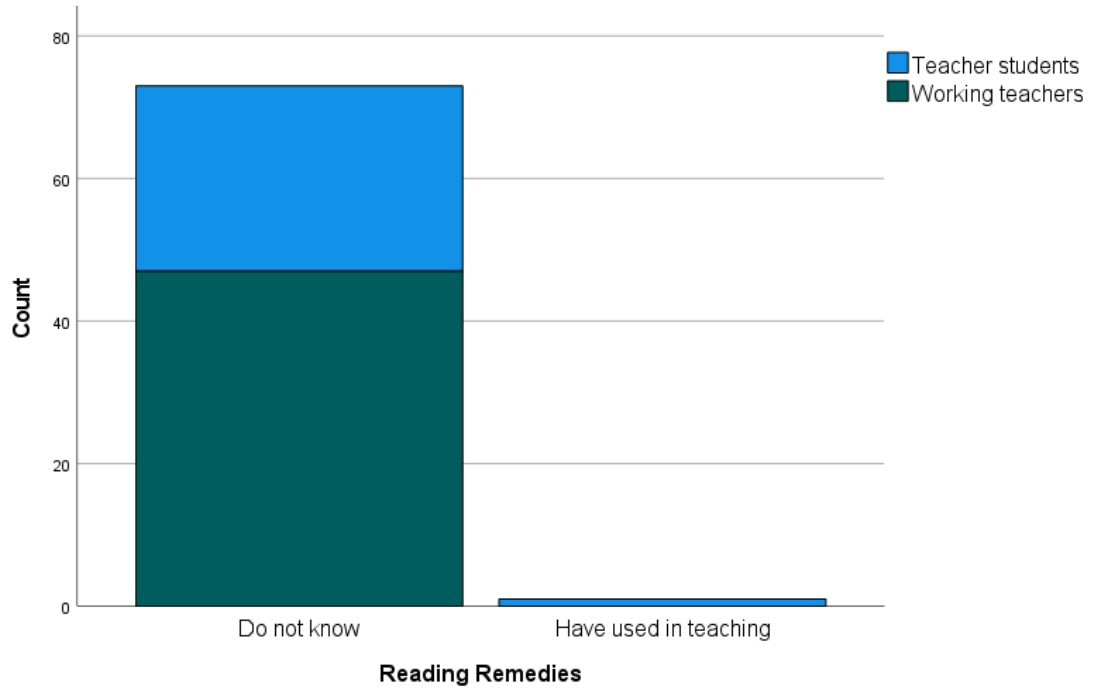

Figure 4 Reading Remedies

It appears that both groups also have familiar knowledge of iMovie, Oxford Dictionaries, Moodle, and Audiobooks. In the case of these applications, both groups seem to know the applications but do not use them in teaching. The only statistically significant association between the groups was Google Forms, χ^2 (1, N = 74) = 7.9, p = .005. As seen in Figure 5 (see below), more teachers (N = 40) use the application than teacher students (N = 16). Table 6 shows that nearly half of the teacher students (N = 12) and only a few teachers (N = 7) know the applications but do not use them.

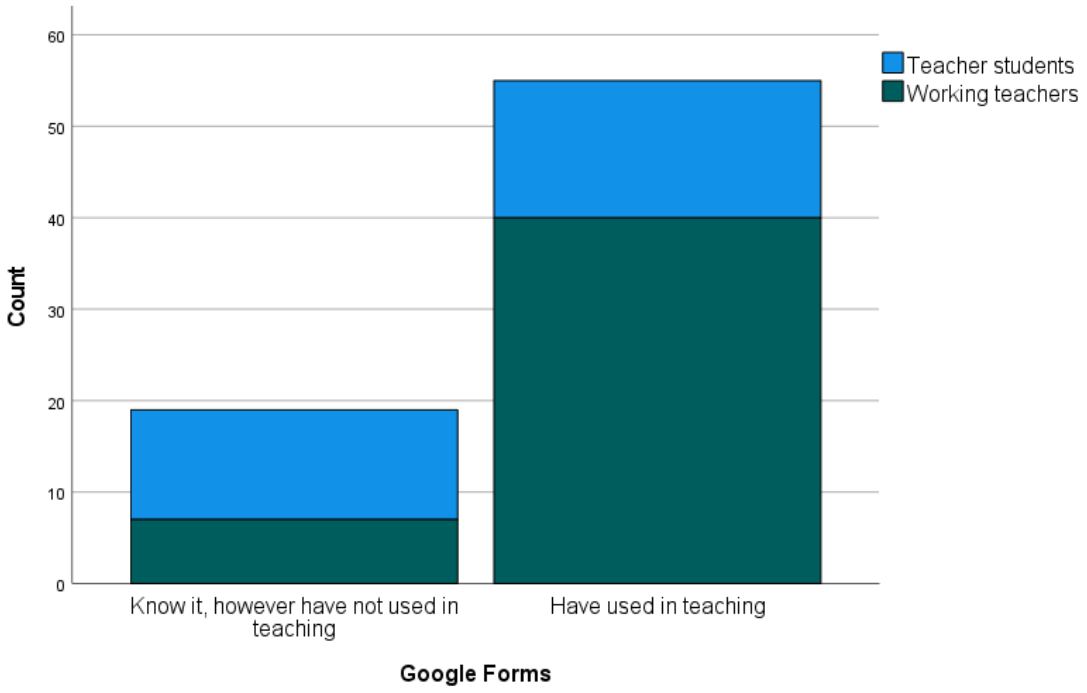

Figure 5 Google Forms

For Q7, the participants were also allowed to write down their own suggestions for applications. Only two teachers responded. The first one listed 3 applications: ReadTheory, TedEdLessons, and Immersive Reader. Interestingly, the second respondent also mentioned the application ReadTheory. All in all, the results indicate, similarity to writing applications, that both groups have quite equal knowledge on the topic and there is no statistical significance between the groups.

Table 7 shows teachers' and teacher students' answers regarding different applications and online learning platforms. Similarity to Table 5 and 6, the three options for the groups are listed on top of Table 7. Moreover, the applications are on the left side.

As seen in Table 7, in most cases it seems that both groups agree on which applications are useful for teaching and learning. Furthermore, they often agree on which applications they recommend to their students.

TABLE 7 Online learning platforms

Q8: Mark the applications/online learning platforms you have encouraged the student to use/or have used in teaching	Teachers: Have encouraged	Teachers: Have used	Teachers: Neither	Teacher students: Have encouraged	Teacher students: Have used	Teacher students: Neither
Babble	1	4	44	2	1	25
Duolingo	**36**	**5**	**10**	**16**	**4**	**12**
Flinga	**1**	**14**	**42**	**4**	**18**	**9**
Kahoot!	11	46	1	9	26	0
Padlet	13	34	0	4	20	7
Quizizz	5	24	24	2	13	13
Quizlet	26	44	1	10	23	3
Prezi	2	25	21	4	8	18
Tarsia	0	5	67	0	0	25
Wordle	47	11	47	8	11	15

For Q8, there was no statistically significant association between the group with nearly any of the applications. However, some statistically significant association occurred with the applications of Duolingo and Flinga. So, there was in fact a statistically significant association between the groups when choosing the option "neither" with Duolingo, χ^2 (1, N = 74) = 4.4, p = .036. It appears, as seen in Table 7, that over half of the teacher students and only 10 teachers picked the option "neither".

For Q8, the other statistically significant association occurred with Flinga in each of the three categories. Firstly, teacher students seemed to encourage the use more, χ^2 (1, N = 74) = 4.9, p = .036. Secondly, teacher students have used it more, χ^2 (1, N = 74) = 9.5, p = .002. And thirdly, teachers picked the option "neither" more frequently, χ^2 (1, N = 74) = 9.5, p = .002. The results indicated that teacher students are more likely to use and encourage Flinga compared to teachers. Interestingly, teachers (N = 13)

were again the group that suggested some applications of their own. They mostly mentioned other games such as WordWall and Bamboozle. Two teachers also mentioned Otso.

4.3.2 The usefulness of applications

Table 8 consists of four different statements that the teachers and teacher students had to ponder. The participants were asked about Facebook, WhatsApp, news, and communication applications. As seen in Table 8, teachers and teacher students had very similar answers.

TABLE 8 Other applications

Other applications:	**Mean (Teacher students)**	**Mean (Teachers)**	**Pearson Chi-Square (χ^2)**	**df**	**p-value**
Q9.1: Facebook is useful for learning	2.6	2.3	1.1	3	.774
Q9.2: WhatsApp is useful for learning	2.8	2.6	1.8	4	.771
Q9.3: News applications such as BBC are useful for learning	4.3	4.5	1.4	3	.697
Q9.4: Communication applications such as QQ and WeChat are useful for learning	2.8	2.9	0.9	4	.922

For Q9, both groups were asked for their views on the usefulness of the following platforms: Facebook, WhatsApp, various news applications, and communication applications such as QQ and WeChat. By looking the Table 8, it can be observed that there is no statistically significant association between the groups. Both groups thought that using Facebook would not be beneficial for learning. Similarly, they also considered WhatsApp to not enrich learning experiences. Furthermore, for Q9.4 both groups neither agreed nor disagreed on whether communication application are useful. However, by looking at the means in Q9.3 it can be noted that both groups found news applications to be mostly beneficial in learning.

For Q10, teachers and teacher students were asked to choose which skills increase while using different applications. The table below shows how many teachers

and teacher students stated 'yes' to specific benefits. On the right side, it can be observed how many in total agreed.

TABLE 9 Language skills

Q10: Mark what come better while using apps	Yes: Teacher students	Yes: Teachers	Total percentage amount
A) Listening	23	46	93.2%
B) Speaking	21	34	74.3%
C) Reading	26	45	95.9%
D) Writing	24	39	85.1%
E) Grammar skills	25	36	82.4%
F) Vocabulary size	25	46	95.9%

Both groups seem to mostly agree that that using application can benefit learners in several ways. Thus, as seen in Table 9, there does not appear to be much difference between the groups. Both groups agree that listening, reading, writing, grammar skills, and vocabulary size evolve as one is using different applications. However, there seems to be a slight difference between the answers in option B (speaking). According to the table, less teachers than usual thought that applications could be beneficial to speaking skills. However, the same can be observed with teacher students. Moreover, option B was the least chosen by both groups.

All in all, it seems that in most cases teachers and teacher students agree on the benefits of application usage. Both groups had similar answers regarding which applications can be of benefit to students.

5 DISCUSSION

In this chapter, I shall discuss the findings of the study presented in the previous chapter. The findings will relate to previous research and the research questions presented in Chapter 3. The research questions were:

1. *According to teachers and teacher students, are technological devices such as phones useful for students when studying / learning English?*
2. *What do teachers and teacher students think about the role of technology when studying / teaching English?*
3. *What kind of thoughts do teachers and teacher students have regarding the applications the students use for learning English?*

Firstly, I shall discuss each research question in relation to the findings and previous research. Thereafter, I will examine the limitations of this study. Finally, I shall describe possible future research.

5.1 The usefulness of technological devices according to teachers and teacher students

The results showed that both teachers and teachers students agreed that technological devices are beneficial for teaching and learning. Both groups discuss the use of social media, online learning, and gameful experiences. This is an indication that they might be familiar with CMC without even mentioning it. It could be therefore argued that

teachers and teacher students are aware of certain teaching and learning methods, but for reasons unknown fail to mention the bigger concepts and terms.

In general, it seemed that teachers had a more positive outlook on other forms of technology such as the aforementioned smart boards. The reason behind teacher students' unwillingness or rather dislike to use other forms of technology can only be speculated. However, it could be argued that teachers view other forms of technology more positively because they are more familiar with them or just simply have more experience. Furthermore, even though previous research shows that education is heading towards a more digitalized path, it was interesting to see that some teacher students found the current situation to be bad, suggesting that perhaps it could be beneficial to return to the past ways of using a pen and paper. However, as a whole, it is clear that both groups view technology as an asset to be used in teaching and learning.

Applications will be discussed in greater detail in Section 5.3. However, here it is worth mentioning that both groups mentioned the use of games. Both groups acknowledged that technological devices can be used to play them. Neither group specifically mentioned gamified tools as presented by Caponetto et al. (2014, p. 50) in Section 2.1.1. Nevertheless, by examining the findings, it is clear that both groups are aware that applications and games exist to help students in learning. Another theme mentioned in Sections 2.1.1, and in 2.1.2, was AI. As OECD (2024) pointed out, AI does not seem to be having a huge impact on language teaching, but there is an emerging interest in its use. Interestingly, only teachers mentioned the use of AI. Moreover, several teachers also mentioned AI applications such as ChatGPT to support learning in the open-ended questions in section 4.3.1. It appears that teacher students might not have thought of it as a crucial element. However, it is also vital to note that 36.5% (N = 27) of the participants were teacher students whereas 63.5% (N = 47) were teachers. The lack of teacher students' answers can be a result of them not having as much to say as teachers. On the other hand, if there were more participants, perhaps teacher students would have also mentioned AI.

When it came to the use of phones in teaching and learning, both groups seemed to lean towards them having a more negative effect. As stated by Bozdoğan (2015, p. 938), students are reluctant to participate in mobile-assisted tasks. It also seems that teachers and teacher students are quite reluctant to use mobile devices in learning. Both groups, however, do think that mobile phones are in fact beneficial for learning languages. Most participants in both groups thought that phones usage should not be increased in the future. Furthermore, both groups leaned towards banning phones, which is not surprising considering the current public discourse on the topic.

Even though both groups thought phones should not be used more in the future, they considered mobile phones having several benefits. As stated by Miangah and Nezarat (2012, pp. 312-314) mobile phones are, in fact, useful for things such as listening and learning grammar. The results of the present study confirm those found in previous research. However, the results indicate that teacher students have a slightly more positive outlook on the use of phones. Perhaps the reason behind this is the fact that teacher students might know more about the benefits of MALL as it is a new growing field. Both teachers and teacher students agreed that phones can be distracting, which aligns with previous research (Cakmak, 2019; Metruk, 2020).

Both groups thought that there were benefits to playing games and using social media in teaching and learning. Furthermore, both groups were hesitant to use mobile phones in the future. However, teacher students viewed the benefits of using phones slightly higher than teachers. Moreover, teachers frequently mentioned the topic of AI, which was overlooked by the teacher students. Teachers also viewed other forms of technology slightly more highly than teacher-students. All in all, it can be stated that both groups had an overall positive outlook on the usefulness of technological devices in teaching.

5.2 The role of technology in learning and teaching English

While both groups seem to have a positive outlook on the role of technology in language teaching in learning, it also seems like there are differences between the two

groups. The results indicated that it is easier for teachers to balance traditional and new methods. There can be several reasons for this, the most likely ones being experience and knowledge. Interestingly, the findings also indicated that teacher students were somewhat unsure in certain questions compared to teachers, as they often chose the middle ground option. This may be due to, as mentioned above, a lack of experience and knowledge. However, in general it seemed that most participants were confident in their own technological skills.

Both groups also noted that there are negative aspects to using technology and some considered its role to be too high. Nevertheless, most thoughts relating to the role of technology were positive. It seemed that both groups understood the importance of integrating technology into teaching. Yet, there was a slight difference between the two groups. Teachers thought that technology was very beneficial to teaching languages, whereas teacher students found it merely beneficial. One is free to speculate as to why this is. One reason may be that teacher students do not yet know all the possible ways to integrate technology into teaching.

Another interesting finding was that teachers encourage students to use technology somewhat more than teacher students do. Most groups are definitely aware of the benefits of using technology in the classroom and at home. However, for some reason there is a difference between the groups. Again, the reason can only be speculated. I would argue that experience and knowledge lead to respondents encouraging the use of technology. The results showed an interesting finding about whether the groups wanted to use technology more in the future. It appears that neither group wanted to use technology more in the future despite noting its several benefits. One obvious reason behind this is the current conversation about technology in schools, as more and more schools aim to cut down on technology in classrooms.

Both groups had negative thoughts about the role of technology, yet both also acknowledged its positive sides. Nevertheless, neither group wanted more technology in the future. The findings also indicate that teachers in general view technology somewhat more positively than teacher students. Moreover, the findings showed that teacher students were a bit uncertain about the use of technology in general. Overall,

it seems that both teachers and teacher students view the role of technology in a positive manner.

5.3 Teachers' and teacher students' thoughts regarding applications

While both groups seemed to recognize and know several applications for learning and teaching writing, it seemed like most applications were quite unfamiliar. Then again, the links suggested by Jati (2017) are very extensive and one cannot expect teachers nor teacher students to know all of the applications. Table 5 clearly indicated that both groups had familiar answers regarding what writing applications they were aware of. The reason behind both groups' similar answers most likely can be traced to teacher education. Most of the applications that teacher students use are learned from either watching someone teach or an employed teacher telling about them. Some might argue that more applications should be known, which is completely valid. Nevertheless, an interesting finding is that teachers were the only group to suggest other applications in Q6, Q7, and Q8. This indicates that teachers might have more knowledge about other applications which were not listed in the questionnaire.

Similarly, both groups were aware of the same applications for teaching and learning reading. Most applications found behind Jatis's (2017) links were unfamiliar to the groups. Several of them were applications they knew but did not use. Interestingly, the results indicated that teachers use Google Docs more in teaching than teacher students. The reason behind this can only be speculated. One reason could be, for instance, that teacher students use some other alternative applications.

As stated in Section 2.3, teachers should actively recommend useful applications for students to use (Farley et al., 2015, p. 10). However, it seems that both groups fail to recommend most of the applications in Table 7. The exceptions are Duolingo and Wordle. However, the results also indicate that teachers encouraged the use of technology and its other forms slightly more than teacher students (check Section 4.2). Perhaps both groups do not consider it necessary to encourage students to use the listed applications on Table 7. The results also indicated that teachers use Duolingo a

bit more than students. The most significant difference between the groups is with Flinga. For some reason, teacher students view the application higher than teachers and thus recommend it to students. However, in most cases, the groups seem to agree.

Both groups viewed Facebook and communication chats such as QQ and WeChat as not being necessarily useful for learning. This contradicts Farley (2015, p. 9), who concluded that forming Facebook groups could enhance the learning experience. I would argue that the reason behind this is that both groups know little of the benefits of Facebook. Moreover, QQ and WeChat might be unfamiliar to the participants. However, both groups agreed that news applications can be beneficial for learning. The groups also did not seem to see the benefits of WhatsApp as stated by Yilmazsoy (2020, pp. 77) in Section 2.3. Finally, the results also indicate that both groups agree that applications enhance listening, speaking, reading, writing, grammar skills, and vocabulary size. This finding concurs with what the OECD (2024) stated about digital tools enhancing reading, listening, speaking, or writing experiences.

Both groups had difficulties in recognizing all the applications listed in the questionnaire. However, they did manage to choose some writing and reading applications. Teachers were the only group giving their own suggestions on applications and furthermore, they used Google Docs and Duolingo more than the teacher students. The same can be said with the teacher students using Flinga. Neither group suggested students to use the listed applications that much. However, teachers encouraged the use of technology and its other forms slightly more. Both groups agreed on all the benefits of using applications in learning. All in all, there was not much difference between the groups when it came to applications and their benefits.

5.4 Limitations and future research

The present study seemed to have some limitations; the most significant one being the number of participants. To be more specific, there were not enough teacher student participants. With a larger sample size, the groups would have been more even, and it would have been easier to compare the two groups and find more discrepancies

between the groups. For reasons unknown, teacher students were not eager to answer the questionnaire despite it being sent out three times. This can be due to a lack of interest in the topic or some mundane reason such as lack of time.

Another limitation of the present study was that the questionnaire assumed that teachers and teacher students use phones in teaching and learning. In reality, many schools might actually use iPads or other different kinds of tablets. In future research, the questions should be described in more detail to avoid confusion. Finally, the applications asked about in the questionnaire should perhaps have been more aligned with what teachers and teacher students actually use in teaching. Despite its limitations, the present study cannot be generalized to the wider population of teachers and teacher students. However, the present study can work as a stepping stone for future research.

Future research on the topic should be conducted by examining a larger group of teachers and teacher students. In a few years, it would be interesting to, for example, find out the thoughts on MALL in learning and teaching, and whether both groups continued to dislike the topic or has there been an increase in interest? Furthermore, it also might be interesting to study what different age groups think about the use of technology in teaching and learning. Moreover, it could be more beneficial to gain information by interviewing the teachers or teacher students of different age groups. By interviewing one could get more in-depth and personal information on the topic, and it would be easier for the participants to express themselves. The field of technology in language teaching and learning is constantly evolving and future research will thus need to be conducted. Only time will tell how the views on technology will change.

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APPENDICES

APPENDIX 1: QUESTINAIRE QUESTIONS

SUOSTUMUS OSALLISTUMISEEN

Jyväskylän yliopisto - Aaro Turunen

Tämän tutkimuksen tarkoituksena on selvittää minkälaisia ajatuksia englannin opettajilla ja opettajaopiskelijoilla on teknologian käytöstä opetuksessa. Kyselyyn vastaaminen kestää noin 10–15 minuuttia.
Kyselyssä ei kysytä henkilötietoja. Kyselyn aineisto säilytetään Jyväskylän Yliopiston iCloud tiedostossa tutkimuksen keston ajan. Tämän jälkeen vastaukset hävitetään tietoturvallisesti.

Vastaamalla ja lähettämällä tämän kyselyn annat suostumuksesi vastauksien käyttöön pro gradu tutkielmassa.

Yhteystiedot:

Päivämäärä:
09.08.2024

Sitten vain vastaamaan kyselyyn!

- 1) Annan suostumukseni vastauksieni käyttöön pro gradu tutkielmassa

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- 2) Olen:
  - Opettaja opiskelija
  - Opettaja

Vaihtoehdot: Ei lainkaan samaa mieltä, osittain eri mieltä, ei samaa eikä eri mieltä, osittain samaa mieltä ja ehdottomasti samaa mieltä

- 3) Teknologia ja oppiminen
  - Teknologian käyttö vaikuttaa positiivisesti kielten oppimiseen
  - Teknologian käyttö vaikuttaa negatiivisesti kielten oppimiseen
  - Teknologian käyttö vaikuttaa positiivisesti kielten opetukseen
  - Teknologian käyttö vaikuttaa negatiivisesti kielten opetukseen

    - On haastavaa tasapainottaa perinteisiä ja uusia oppimisen tapoja
    - Kannustan opetuksessani oppilaita hyödyntämään teknologiaa ja sen eri muotoja
    - Tulevaisuudessa teknologiaa tulisi hyödyntää yhä enemmän kielten oppimisessa

Verkko-oppimisalustoilla tarkoitetaan esimerkiksi erilaisia verkko-oppimisympäristöjä kuten Moodle ja Google Classroom. Oppimisalustoja voi olla myös erilaiset applikaatiot, joilla harjoitellaan eri kielitaidon osa-alueita.

Vaihtoehdot: En koskaan, harvemmin, aina silloin tällöin, joka viikko, useamman kerran viikossa

- 4) Verkko-oppimisalustat ja muu teknologia
    - Kuinka usein hyödynnät verkko-oppimisialustoja opetuksessa
    - Kuinka usein hyödynnät puhelimia opetuksessa
    - Kuinka usein hyödynnät jotakin muuta teknologiaa opetuksessa
- 5) Minkälaista muuta teknologiaa hyödynnät opetuksessa?

Tässä osiossa selvitetään mitä erilaisia alustoja tunnistetaan tai käytetään opetuksessa.

- 6) Merkitse ne kirjoittamisen oppimista kannustavat applikaatiot, jotka tunnistat tai ole käyttänyt
    - ProWritingAid
    - Canva
    - Scribus
    - Coggle
    - Google Docs
    - Grammarly
- 7) Merkitse ne lukemisen oppimista kannustavat applikaatiot, jotka tunnistat tai ole käyttänyt
    - Rainbow Sentences
    - Stroy Builder
    - Reading Remedies
    - Animoto
    - iMovie
    - Oxford Dictionaries
    - Moodle
    - Google Forms
    - Audiobooks

- 8) Merkitse kaikki ne verkko-oppimisalustat, joita olet kannustanut oppilaita käyttämään tai/ja olet itse käyttänyt opetuksessa
  - Babbel
  - Duolingo
  - Flinga
  - Kahoot
  - PAdlet
  - Quizizz
  - Quizlet
  - Prezi
  - Tarsia
  - Wordle

Vaihtoehdot: Ei lainkaan samaa mieltä, osittain eri mieltä, ei samaa eikä eri mieltä, osittain samaa mieltä ja ehdottomasti samaa mieltä

- 9) Muut erilaiset applikaatiot
  - Facebook on hyödyllinen oppimisessa
  - WhatsApp on hyödyllinen oppimisessa
  - Uutisapplikaatiot, kuten BBC on hyödyllinen oppisessa
  - Kommunikaatiotapplikaatiot, kuten QQ ja WeChat ovat hyödyllisiä oppimisessa
- 10) Merkitse ne kielitaidon osa-alueet, jotka voivat kehittyä applikaatioita käyttäessä
  - Kuunteleminen
  - Puhuminen
  - Lukeminen
  - Kirjoittaminen
  - Kielioppitaidot
  - Sanaston koko

Vaihtoehdot: Ei lainkaan samaa mieltä, osittain eri mieltä, ei samaa eikä eri mieltä, osittain samaa mieltä ja ehdottomasti samaa mieltä

- 11) Puhelimen käyttö oppitunnilla
  - Puhelimet ovat hyödyllisiä opetuksessa yleisesti
  - Puhelimet ovat hyödyllisiä kielten opetuksessa
  - Puhelimet ovat hyödyllisiä kielten oppimisessa

    - Puhelimet ovat hyödyllisiä oppimisessa yleisesti
    - Puhelimen käyttäminen häiritsee opiskelijoiden oppimista
    - Puhelimen käyttäminen häiritsee opettajan opettamista
    - Puhelimet tulisi kieltää oppitunneilla
    - Tulevaisuudessa puhelimia tulisi hyödyntää yhä enemmän kielten oppimisessa/opettamisessa
- 12) Jos opetat useampaa kieltä, niin onko puhelimen käytössä eroja eri kielissä
- 13) Puhelimet ovat hyödyllisiä: (Voit valita useita vaihtoehtoja)
    - Kuuntelun harjoittamisessa
    - Kirjoittamisen harjoittelussa
    - Puheen harjoittamisessa
    - Lukemisen oppimisessa
    - Ei missään
- 14) Miten perustelet yllä olevia valintojasi?
- 15) Heräsikö kyselyä tehdessä vielä jotain muita ajatuksia teknologian hyödyntämisestä opetuksessa?