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1. Introduction

‘School 4.0’, ‘Tablets instead of schoolbooks’, and ‘media literacy as an individual subject’ are headlines which were recently found in the education section of newspapers (Löwenstein 2017, Ostermann 2017, Hagen 2016). These sections were most likely be read on people’s smartphones on their way to work, on their tablet while sitting in a train, or on their computer during a break at work. There is no doubt that people’s lives are digitalized. Due to the growing importance of digital media technologies in people’s daily life, it is time to also include this media trend in the classroom context (Magenheim & Meister 2011: 2). Additionally, in such a technology driven time, students, starting from an early age, should become aware of the numerous possibilities new media technologies provide for them, but also about potential issues or dangers they might encounter. Thus, to guide students towards a conscious usage of current technologies is now the school’s task (Federal Ministry of Education 2017). In Austria, the Federal Ministry of Education (2017) has taken measures to integrate the importance of media knowledge into the school setting. For some parents or teachers, the implementation of digital media technologies such as tablets and smartphones into the classroom might initially be regarded skeptically since it might be believed that students could be easily distracted by other activities found on the medium (Williams & Pence 2011: 684). However, research confirms that the usage of new media makes students more attentive and provides several vital benefits for their learning process (Chebchoub 2011: 240-241). The aim of this thesis is to find out if students’ actually have a positive attitude towards the implementation of new media technologies in class and if these technologies then, indeed, have a positive effect on their motivation to learn English. This study has a particular focus on the motivation towards language learning and was therefore conducted in an English lesson in three different schools in Lower Austria. The thesis is divided into four parts.

The first chapter deals with the theoretical underpinning of the term ‘new media’ and points out the different connotations the term has for our society. Moreover, the

concept of ‘Computer Assisted Language Learning (=CALL)’ is explained and the involved benefits and potential disadvantages are pointed out. Finally, this chapter comments on the current situation in Austrian schools and the measurements that have been taken by the education system.

Chapter 3 turns towards the multifaceted concept of motivation. It starts with a general definition of the topic and goes on to point out different motivational theories which provide relevant knowledge useful for the empirical part of the study.

In Chapter 4 the empirical study is presented by presenting the research questions and the respective hypotheses. Subsequently, the construction of the questionnaire which was used to assess students’ attitudes towards new media technologies and their motivation to learn English will be described in detail. The core findings of the research conclude this chapter.

In the last chapter, the main findings of the research will be discussed by connecting them to the research questions and compare or contrast them to the defined hypotheses. The possible impact these results might have on the actual teaching will finally be discussed as well. The conclusion summarizes the most relevant findings and possible conclusions regarding the usage of new media in the English classroom are drawn.

2. New Media

The following chapter will provide an overview of the new media landscape and its applications in an educational setting. First, a definition of new media is provided followed by a discussion of different perspectives of the term ‘new’. Subsequently, the concept of computer assisted language learning (CALL) with its benefits and drawbacks will be reviewed. The final section will deal with the implementation of new media technologies into the language classroom with special focus on the actual situation in Austria by pointing out the current measurements taken by the education system to ensure media literacy in each classroom.

2.1. Defining new media

First of all, in order to understand and discuss the complex concept of new media technologies, a definition needs to be given. After detailed research, it became obvious that the term ‘new media’ is highly multifaceted and, therefore, not straightforward to define. According to Linda and Hershey Friedman, new media technologies *“encompass a wide variety of web-related communication technologies, such as blogs, wikis, online social networking, virtual worlds and other social media forms”* (Friedman L. & Friedman H. 2008: 1). This definition emphasizes the diversity of the phenomenon by pointing out the various forms of technologies which belong to the umbrella-term ‘new media’. Another rather general definition is provided by the ‘New Media Institute’. They define new media as *“a 21st Century catchall term used to define all that is related to the internet and the interplay between technology, images and sound”* (Socha & Eber-Schmid 2014). These two definitions infer that recent technologies which offer digital interaction belong to the category of new media.

Nevertheless, the question arises how a medium can be categorized as recent or ‘new’? Since new media *“evolves and morphs continuously”* (Socha & Eber-Schmid 2014), it is impossible to accurately define this elusive term. What we call ‘new’ today, might be considered as ‘old’ in a few years, months or even days. However, in order to properly understand the concept of new media, it should not be seen as a singular

concept but rather as two independent and various concepts, namely ‘new’ and ‘media’. The meaning of the ‘new’ is highly varied, yet, for the use of this thesis the term will be examined according to two perspectives which will be explained in the next chapter.

2.2. What is ‘new’?

First of all, Linda & Hershey Friedman (2008: 4-5) emphasize that the word ‘new’ conveys a time factor and suggest placing the term into a temporal and historical context. Nevertheless, ‘new’ things will be developed almost on a daily basis which makes it difficult to effectively restrict the term (Friedman L. & Friedman H. 2008: 4-5). Over the course of the last centuries there have always been ‘new’ media in different areas. To put it differently, the term ‘new’ is only temporary and thus, quickly replaced by another ‘new’ breakthrough discovery.

According to Darnton (2008: 1), the first change in technology took place in the development of writing and is considered as the most important milestone so far. Around 4000 B.C, humans started to use bones, stones and clays to create records on cave walls or other items, which enabled them to communicate with other humans in a written form for the first time (Gabrial 2009: 27). Moreover, Gabrial (2009: 28-29) points out that this ‘newness’ is later replaced and further developed by the discovery of parchment, papyrus and finally paper which were used to keep records. Afterwards, the bird feather was replaced by metal ink pens which was again replaced by fountain pens, ballpoint pens, metal-tipped pens and the wooden pencil with an eraser included. Consequently, each new innovation was considered as a ‘new’ medium during that respective time. Due to these developments in the area of writing technology, the need to store and distribute information increases steadily, according to Gabrial (2009: 30). Hence, *“mechanical printing technologies”* were used to *“mass-produce information efficiently”* (ibid: 30). Gabrial (2009: 30) continues by stating that especially the invention of the printing press and moveable type played a vital part in contributing to the development of technology. In the 19th and 20th century further electrical writing technologies appeared and positively influenced the work in business

offices. In the 1980s the internet was introduced and electronic communication, including electronic-mail delivery, was made possible (ibid: 30-35).

Consequently, it can be said that every time technology radically changed can be described as a paradigm shift in history. Every new innovation that emerges nowadays might provide the basis for another phenomenon in the future. Thus, Gabrial (2009: 36) concludes that *"[j]ust as centuries ago when 'new' media such as reeds and papyrus communicated human knowledge and culture, so, too, do today's 'new' media of electronic bits and bytes"*. Nevertheless, it is not apparently clear to us when the new medium is further developed into something else 'new'. Only by looking back, the gradual progress within the realm of technology becomes visible. Sholle (2002: 9) further reinforces this by saying that *"[…] there is no clear moment at which a technology is something radically new, nor is there a definite point where a new technology eradicates previous technologies"*.

Taking a different perspective, new media can also be viewed as an *"ideological connotation"* increasingly used by today's society (Lister et al 2009: 11). The newness of new media has the strong connotation of being something better or more special. Lister et al. (2009: 11) put it that *"[t]he 'new' is 'the cutting edge', the 'avant-garde', the place for forward-thinking people to be […]"*. In other words, people feel socially superior to, or are even considered as more prestigious by others when being up-to-date with the newest medium and technology. For instance, people purchase a new tablet and consequently believe that other electronic devices which they previously had *"such as a personal computer, a television, or a smartphone"* are suddenly perceived as old (Natale 2016: 587). Hence, as soon as *"a new medium becomes socially available it is necessarily placed in relation to a culture's older media forms […]"* (Lister et al. 2009: 67). Consequently, the old medium is often regarded as poor and outdated, while the new one is seen as better and more powerful. This is culturally driven and, simultaneously, shows the symbolic value of technology to today's society.

Lister et al. (2009: 67) further argue that society's reaction can also be interpreted as anxiety about the loss of the old, familiar medium that is replaced by something unusual new. For instance, people initially feared that the invention of the telephone would intrude into the family's domestic privacy. Anxiety was also expressed with the

prevalence of e-books, which was assumed to cause the decline of the old medium, the book. These concerns are to some extend justified since nowadays in public transport, such as in the underground, where *"everybody is gazing into their smartphone screens, a person reading a paper book may attract more attention than anyone else"* (Natale 2016: 589). Thus, it becomes apparent that new media is a social construct and considered differently by today's society. Some argue that a new medium is, simply put, the opposite of the old medium, which means that *"computers, smartphones, or e-books"* are defined as new media while *"books, newspapers, cinema, radio, and television"* are regarded as the counterpart (Natale 2016: 589-599).

On the contrary, researchers argue that old media do not really get replaced, but rather supported and supplemented by the new innovation (Friedman 2008, Ballatore & Natale 2015). This is supported by an example given by Friedman L. & Friedman H. (2008: 2) as they state that *"[…] the New York Times is available at newsstands as well as at their Internet site. New items at NYTimes.com are updated throughout the day and readers are encouraged to comment in real time. Columnists often have their own blogs on the site as well"*. Hence, old and new media usually work hand in hand to further aid and promote each other. The only distinction is seen within the endless possibilities of human interaction which distinguish new media from old media. Consequently, Dizard (1997: 11) points out:

> *The old and the new both offer information and entertainment resources to large audiences [...]. The difference is that the new media can expand the range of resources to new dimensions; for example, they can provide on-line interactive links between the consumer and the information provider. […] The new media is increasingly interactive, allowing consumers to choose what information and entertainment resources they want, when they want it, and in what form.*

Even though new media often appears to be a social construct, it cannot simply be defined as a straight-forward extension of the old or 'outdated' medium. Not only in people's daily life but also in institutional places, such as in schools, the interplay between old and new media play a crucial role and will be discussed in the following chapter.

2.3. Computer-assisted language learning (=CALL)[1]

The use of digital media in the language classroom is generally known as computer-assisted language learning (CALL). A fairly old definition is given by Levy, who defines CALL as *"the search for and study of applications of the computer in language teaching and learning"* (Levy 1997: 1). More recently, Beatty (2010: 7) adds that CALL is *"any process in which a learner uses a computer and, as a result, improves his or her language"*. In this study, CALL not only refers to the use of computers, but also includes the usage of other technologies in a classroom such as smartphones, tablets or smartboards. Thus, for the study present, CALL means "learners learning language in any context with, through, and around computer technologies" (Egbert 2005: 4).

It is important to point out that CALL is highly diverse and, consequently, offers multiple benefits for the students learning outcome. However, it also poses some challenges to the teachers. Diversity can not only be seen in the variation of teaching methods, it is also present in the *"environments in which CALL is used, […] in the pedagogies employed, […]"* and finally *"in the users of CALL"* (Stockwell 2012: 1). Thus, there are various possibilities for the implementation of technologies into the language classroom. A major benefit of modern CALL is that it is no longer restricted to one computer room within a school, but can take place almost everywhere (Stockwell 2012: 71). Due to new media technologies such as laptops, tablets and smartboards, it is possible to access learning apps or the internet in every class and even outside school. A CALL-lesson can therefore work in various ways and different environments.

[1] Some parts of this chapter have been adapted from a literature review that was written by the author in a course at university

2.3.1. Potentials of CALL

In a new approach called *"blended classroom"*, traditional face-to-face teaching is mixed with online learning materials and practices (Pape et. al 2012: 18). Moreover, Pape et. al. (2012: 18) point out that digital materials and tools are provided by the teacher *"to enhance, extend, and transform the learning process"* of the students. Thus, students have access to new resources and tools that should improve and help them in their individual learning process (ibid: 19). Pepe et. al. (2012: 19) argue that effective blended teaching takes place through:

- Classroom teaching resources (class notes, slideshows, or videos) that teachers post online for students to review after class or at home
- Online assessments that students can use as a self-check
- Online collaborative areas where students can continue classroom discussions or group projects after class
- Homework help through synchronous chat

In a similar approach called *"flipped classroom"* not only are the *"definitions of homework and classroom practice"* changed but it also makes learning more personal for both, students and teachers (Pape et. al 2012: 19). For instance, teachers produce a video that delivers the content which they would usually teach in class while students watch it at home and prepare themselves for the next lesson (ibid: 19). Therefore, students can *"use their classroom time to actively engage with other students and their teachers to think critically and apply knowledge to real-world problems, group projects, lab work, or class discussions"* (Pape et al. 2012: 19). This hybrid approach provides vital benefits. Due to a technology-enhanced lesson students have the possibility to work and learn at home at their own speed. If they have not clearly understood the content of a topic, they can simply pause the video and re-watch it as often as they want to. Moreover, the opportunity to repeat the lesson several times results in a reduction of learning stress and anxiety (Dina & Ciornei 2012: 250). Since students prepare themselves in advance, the limited classroom time can effectively be used for learning and teachers can help students with the issues they have encountered in the online lesson at home (Pape et al. 2012: 19). Pepe et al (2012: 19) further state that in both blended and flipped classroom teachers can use web tools,

materials and resources to offer new learning experiences for individual learning styles. Thus, students have several opportunities to approach a certain topic, explore different learning styles and discover which method works best for them (ibid: 19). Simultaneously, students *"develop visual and multimedia literacy"* and acquire *"self-directed, self-motivated learning experiences"* (ibid: 22).

Nevertheless, a flipped classroom offers great benefits for teachers, too. Videos, for instance, can be a useful tool to explain grammar in varying ways. Once these videos are created, they can be used for several classes or exchanged with other teachers. That means that teachers do not necessarily have to produce all their videos on their own. They can use materials created from other teachers available on various platforms, such as YouTube Education (for English language learning) or Sr. Jordan (for Spanish language learning)[2], to provide students a range of variety (Muldrow 2013: 29). This is also highlighted by Stockwell (2012: 53) who points out that *"CALL materials can easily be shared and updated"* which consequently, facilitates the development of materials. In Muldrow's article (2013: 29) teachers share their experiences of using the flipped classroom. A teacher called Pam Benton points out that *"it was really important not to rely on one source"* and that *"students want a variety of presentation styles"*. Moreover, she adds that *"[t]hey [students] loved Sr. Jordan, but if we used three of those videos in a row they would turn off"* (Muldrow 2013: 29).

Furthermore, in language teaching in particular the actual use of the target language is of great importance and should be as much as possible. Therefore, a big advantage is that the material provided to the students online is completely in the target language and fits the level of the learners. In a traditional lecture, teachers could possibly fall back on their first language when talking to the students or explaining a difficult topic. Henry Chen, teacher of Moreau Catholic High School in Hayward, CA, confirms that *"doing reading comprehension online is great because I can use the target language almost 100%"* (Muldrow 2013: 30). She highlights specific words in the reading comprehension which students might not be familiar with, thereby showing them that they can still be able to understand the meaning of the passages without translating

[2] YouTube (www.youtube.com/education), Sr. Jordan (www.senorjordan.com)

the unknown words (Muldrow 2013: 30). According to Dina & Ciornei (2012: 250), this approach enables students to actively engage in activities outside the classroom in the target language which results in an improvement of their reading and writing skills.

The inclusion of new media technologies in the language classroom not only offers great influence on students' learning success but also provides various new ways of interaction between students among themselves or between students and teachers. Nowadays, one popular form of interaction is through social networking sites such as Facebook or Twitter (Stockwell 2012: 77). In this way, social networks contribute to language learning as students can interact with other students or native speakers all over the world. A big advantage is that students can decide with whom they want to interact and which topic they would like to discuss, or which picture or video they would like to share with them (ibid: 77). Consequently, learners *"can, to a degree, tailor the input that they receive, making it more relevant to their individual needs"* (ibid: 77). Dina & Ciornei (2012: 250) further emphasize the usefulness of social media networks since it offers shy or hesitant learners the possibility to participate in discussions or information exchanges and, simultaneously, provide them with more time and space to think about their arguments. Hence, by building up more self-confidence, students' linguistic skills improve and their attitude towards learning changes (Dina & Cironei 2012: 250). In addition, blogs are a valuable language learning environment for students, since they can produce a written text in the target language that is read by a wider authentic audience rather than just assessed by the teacher (Stockwell 2012: 77).

2.3.2. Why Smartboards, Tablets and Smartphones in the English classroom?

2.3.2.1. Smartboards

Recently, interactive whiteboards, also known as smartboards, have gradually become a vital part in a language learning classroom. The interactive whiteboard is regularly called smartboard since one of the leading trading company is called 'SMART Technologies'. But what is it and what makes it so special? In general, an interactive white board is

> *[…] an interactive display that comprises three pieces of equipment: a computer, a projector, and a display panel, which is a large free-standing or wall-mounted touch-sensitive screen. The projector displays the image of the computer screen on the screen, which is easily viewable by all students in the classroom* (Golonka et. al. 2014: 72).

Chebchoub (2011: 240) points out several reasons for the usefulness of a Smartboard in a language classroom:

- Audio-visual aids that facilitate second language acquisition are readily available to the instructor.
- The variety of pen colours and line shapes make the material presentation appealing to learners.
- The internet, a valuable source of activities, is readily available.
- All types of activities can be incorporated in the Smartboard.
- A myriad of software programs can be used in the Smartboard (Microsoft, PowerPoint, Excel, etc.)
- Lessons and activities can be saved and re-used at later times.
- Smartboard activities cater for different types of learners (Chebchoub 2011: 240).

Thus, the integration of a Smartboard brings valuable benefits for the students' learning progress the teachers' lesson preparation and promotes interaction between students and teachers (Golonka et. al. 2014: 72). Chebchoub (2011: 241) found that due to the use of smartboards, "students' level of attentiveness and interest during the

lesson" improved greatly. Orr (2008) supports this by saying that the Smartboard brought a *"wow"* effect into the classroom since digital technology is appreciated by students. Students also have the opportunity to actively participate and interact with the whole class by playing around with the applications seen on the screen (Orr 2008). For instance, students can drag and drop words, texts passages or pictures in front of the class when using the pen and directly working at the smartboard, but also from their seat while connected with another portable device (Orr 2008). The following figure, provided by the 'Smart Technology' homepage, depicts the Smartboard in use and visualizes the interactional possibilities that this technology provides:

https://home.smarttech.com/ (4 June 2017)
Figure 1: Use of Smartboard in classroom

A study conducted by the Health and Education Research Group, Faculty of Education and University of New Brunswick investigated the benefits of smartboard application technology in elementary schools by taking the teachers' and students' perspectives into consideration. The results show that

> *[a]ll educators reported strong agreement regarding the benefits of using SMART Board technology in the classroom, and that interactive whiteboard technology should be part of an overall framework for better practices in an inclusionary educational system. Similarly, participants strongly agreed that their capacity to teach had been enhanced through the use of SMART Board technology and students were more engaged in the learning process when such technology was integrated in instructional activities* (Health and Education Research Group, Faculty of Education, University of New Brunswick 2007: 17).

Teachers have the possibility to create materials by themselves or register at ‘SMART Exchange’ where teachers all over the world can upload and exchange their developed materials for free. Figure 2 shows an example for a grammar lesson with the aim of practicing or revising the difference between adjective and adverb with younger students. Each monkey depicts either an adjective or adverb. The students’ task is to drag and drop the monkeys into the respective tree house thereby deciding whether the word (e.g. helpful, curiously, confident or calmly) on the monkey’s sign is an adverb or adjective. Due to the appealing design, students might be more engaged in the activity. Orr (2008) argues that the application of a smartboard can be highly beneficial since it allows *“for productive whole class teaching by providing a visually engaging presentation tool”*. In other words, students can either be connected with another portable device to the smartboard and accomplish the activity individually, or one student after the other can drag and drop the words directly on the smartboard in front of the class (Orr 2008).

http://exchange.smarttech.com/search.html?q=Adjective+adverb&region=de_DE&region=de_AT&region=en_US#page=1 (5 June 2017)

Figure 2: Example of grammar activity for smartboards

2.3.2.2. Tablets

Not only Smartboards but also tablets can be easily implemented into the language learning classroom and have recently become a part in the classroom

environment. The following figure (taken from the *Apple* homepage) shows that iPads can create new learning opportunities in every subject:

https://www.apple.com/ca/education/ (4 June 2017).
Figure 3: Tablets in the classroom

Numerous research agreed that the usage of tablets within the classroom enhance students' learning outcome and facilitate their learning process (Ifenthaler & Schweinbenz 2016, Tay 2016, Golonka et al. 2014). Furthermore, a study (Tay 2016: 6) reports that students' attitude towards the use of tablets in the classroom is highly positive. Students of a lower secondary school claimed that the variety of apps and techniques available on a tablet positively influenced their interest in the subject (Tay 2016: 6). Moreover, the fact that students can also use the tablet and different apps outside the classroom on their own tablet leads to a facilitated access to learning materials since they can use it wherever and whenever they want to (Tay 2016: 6). Thus, *"the convenient access to information and resources"* enables students *"to learn more or learn more deeply beyond class"* (ibid: 6).

Consequently, a supporting tool for students' language learning process outside school is 'Moodle' which is a platform for course management and online learning (Brandl 2005: 17). According to Brandl (2005: 17), *"Moodle has great potential for supporting conventional classroom instruction, for example, to do additional work outside of class"*. Even though 'Moodle' was not particularly designed for second language teaching, it offers a myriad of learning tools which can be useful in the English classroom (Nozawa 2011: 291). Additionally, it helps teachers to organize their teaching materials and improve their communication

with students (Nozawa 2011: 291). Teachers can easily set up a course on Moodle which all students have access to. In the following figure, Brandl (2015: 17) depicts an example of a possible course setup. Teachers can upload specific tasks, assignments, quizzes and *"set deadlines or timeframes when assignments must be completed, and restrict access to learning tasks once the deadline has passed"* (Brandl 2015: 17-18). As shown in Figure 4, a calendar is provided to the students where they can look up all the assignments with the respective deadlines (ibid: 18). Another feature that is particularly useful for language learning is the *"glossary module"* (ibid: 18). This tool can be beneficial for vocabulary learning since teachers, individually or together with the students, can create *"text-, course-, or site-specific"* dictionaries. If students are doing reading activities on 'Moodle' they can easily make use of these dictionaries which improves their understanding of authentic texts or resources (ibid: 18).

Brandl, Klaus. 2005. "Are you ready to 'Moodle'?" see Bibliography (5 June 2017)

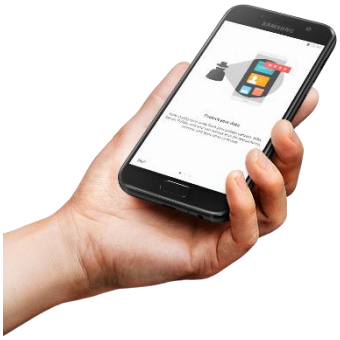
Figure 4: Example of Moodle course setup

In general, students can access the ‘Moodle’ platform from their laptop, tablet or even smartphone to look up the grades or scores they have achieved on their previous assignments (Brandl 2015: 18) and also to interact with their teacher or colleagues (ibid: 20). For instance, the category ‘Chats’ (see Figure 4) enables students to communicate with each other if they encounter a problem during their homework (ibid: 20). Hence, Nozawa (2015: 294) states that the ‘Moodle’ platform can be advantageous for learning a second language since it enhances *“student-student interaction and teacher-student interaction”*, it helps students to find *“a real audience to interact with”* and fosters their independence.

2.3.2.3. Smartphones

Due to several learning apps or quizzes available for the smartphone, it has become an attractive device for the classroom. Nevertheless, the usage of smartphones has to be regarded more critically since the bias exist that students could get easily distracted by using the phone to text friends or check social media pages instead of using it for academic purpose. Consequently, in many schools, teachers do not accept a smartphone during class at all (Grinols & Rajesh 2014:89). However, Grinols & Rajesh (ibid: 89) point out that *“developing opportunities where smartphones are tools to encourage learning may find more acceptance than attempts to ban phones from the classroom”*. For instance, Williams & Pence (2011: 684) suggest to clearly define *“technology-on”* and *“technology-off”* times during the lesson to raise students’ awareness when technology might be appropriate and when it should not be used. Grinols & Rajesh (2014: 92) further point out that using smartphones in the classroom works particularly well in a flipped classroom where students prepare themselves for the upcoming lesson at home whereas the time during class is used for practice and applications. Thereby, phones can be used effectively to work on these activities (ibid: 92). Another significant benefit of a smartphone is that it can not only be used for texting and picture taking, but it can also be

defined as the *"computer in the palm of the user's hand"* (Grinols & Rajesh 2014: 90).



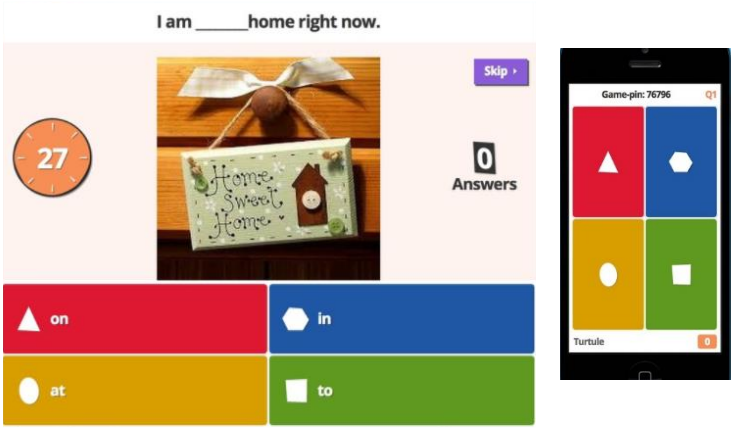
http://www.samsung.com/at/smartphones/galaxy-a5-2017-a520/SM-A520FZBAATO/
(4 June 2017)

Figure 5: Smartphone

As seen in Figure 3, smartphones are getting slimmer and lighter. Consequently, students carry their phone with them nearly all the time, which implies that they could also access educational content at any time.

A tool that is commonly used in the English classroom is called 'Kahoot!'[3]. It allows teachers to create "*game-based quizzes"* for a specific topic in which students play against each other (Johns 2015: 90). Due to clear instructions on the 'Kahoot!' homepage, the quiz design is simple and quick. Students receive a PIN with which they can enter in the game and, subsequently, create their own nickname (ibid: 90). In order to take part in the quiz, portable devices such as smartphones or tablets and internet access are a prerequisite. This tool provides a great number of exercises for the English lesson such as *"filling the gaps, completing sentences with the appropriate verb form, matching forms, or choosing the correct option in multiple choice exercises"* (Zarzycka-Piskorz 2016: 32). Figure 6 depicts a question in the quiz which can be helpful for practicing the use of preposition in the English lesson.

[3] (https://getkahoot.com)



http://techtipsforteachers.weebly.com/blog/game-based-learning-with-kahoot (5 June 2017)

Figure 6: Kahoot! quiz

Students choose the correct preposition by selecting the appropriate sign on their smartphone. The time limit is set by the teacher and *"can be between 5 to 120 seconds for each prompt and question"* (Johns 2015: 90). After each question, the scores of the top responders are pointed out which are kept *"according to accuracy and response time"* (Johns 2015: 90). At the end of the game, the five top responders are displayed with the overall score (ibid: 90). In a study, Zarzycka-Piskorz (2016: 32) found that the use of the 'Kahoot!' game is highly appreciated by students. They experience a *"genuine sense of fun and competition"* during the game (Zarzycka-Piskorz 2016: 32). She further argues that students' intrinsic motivation is increased in online games due to *"the perspective of winning and/or getting a reward"* (Zarzycka-Piskorz 2016: 32). In general, goals and rewards are crucial factors that positively influences students' motivation (see Chapter 3). Consequently, online games such as 'Kahoot!' can be implemented into the language classroom to achieve objectives and introduce, revise or consolidate the language content (Zarzycka-Piskorz 2016: 33-34).

2.3.3. Some drawbacks

Having considered the multiple benefits that come with CALL, there are certain drawbacks which need to be carefully reviewed as well. One essential prerequisite for the efficient usage of new media technologies in a classroom are the respective skills and competences of teachers in that area since *"part of lesson development depends on the teacher alone, on the way they use Internet resources"* (Dina & Ciornei 2013: 251). Similarly, according to Magenheim & Meister (2011: 39) it is inevitable that teachers constantly stay up-to-date and acquire basic technological competencies to fully exploit the benefits of new media technologies.

Moreover, Stockwell (2012: 12) states that *"the starting point for CALL should always be the learners"*. In this respect, it is the teachers' responsibility to get an overview of the individual learners and their prior experience with technologies, their expectations and goals (ibid: 12). Teachers need to monitor their students regarding the use of technology in their free time since it influences their attitude towards digital media in the EFL classroom (ibid: 12). Due to the unlimited and varied ways of implementing technologies in the language classroom, teachers have the task of carefully selecting the appropriate materials for their students' needs, abilities and aims. Otherwise students would be overwhelmed and distracted by the myriad materials provided on the internet. Hence, teachers need to reflect on each individual classroom and provide the appropriate guidance that is needed.

Lastly, the financial aspect of CALL is also often considered as a burden not only by schools but also by the parents. For the successful implementation of CALL, schools initially need to ensure the equipment of sufficient computers, laptops, tablets or smartboards. This is connected with high costs for the acquisition but also for preventative maintenance. Even though schools usually receive special prices, acquisition is still expensive. Depending on size and model, a smarboard costs around €3,000 (SMART technology 2015). Moreover, the Federal Ministry of Education started to gradually provide tablets in specific schools. However, in the great majority of Austrian schools it is the parents' duty to equip their children with technology since

the concept of *"bring your own device"* is still predominantly used (Federal Ministry of Education 2017). At the moment, the common Apple iPad for students costs €384 (Edustore 2017). Nevertheless, some families do not have the financial resources to equip their children with their own smartphone, tablet or laptop and students will consequently feel disadvantaged. In this respect, it would be again the teacher's task to divide students into small working groups when working with tablets or laptops and ask them to share the required device.

To sum up, the enormous potential of CALL cannot be denied. It is proven that the benefits of technologies used in the EFL classroom are highly diverse, ranging from new ways of interaction and communication, authentic learning environment and learner individualization to a reduction of anxiety and learning stress as well as improvement of students' learning outcomes. Nevertheless, it is the school's as well as the teacher's responsibility to successfully implement media technologies into the L2 classroom by providing sufficient devices, acquiring professional knowledge on the appropriate usage and finally adjusting their know-how to each and every classroom situation.

2.4. New Media in Austrian schools

Having defined the multifaceted concept of new media, it is necessary to outline the current situation of new media technology usage in Austria as the present empirical study was conducted in three different Austrian schools. As previously highlighted, the enormous and gradual development of new media technologies not only influences people's everyday life, but requires important adjustments in the education system as well. Consequently, it is the school's responsibility to prepare young students for this technology-driven life and include new media in the classroom setting. Since the education system recently started to adjust school life to this technology driven shift, it is important to point out that this thesis depicts the present and actual situation in Austria which will probably change further within the next years.

According to Hattie (2013: 261), the digital media usage supports students' engagement and positive attitude towards studying and school. Thus, during recent years, numerous studies have been conducted to learn out about children's and adolescents' habit of using new technologies in their everyday life and their attitude towards digital media usage in the classroom. A study in upper Austria (Education Group 2015) shows that almost 80% of students between 11 and 18 years in upper Austria own a smartphone. Additionally, almost 30% of those polled wish to apply smartphones and tablets more often within an educational context (Education Group 2015). Nowadays, there is already a growing tendency to make use of new media technologies in the Austrian classroom. In addition to computers, projectors and books, in some schools the integration of tablets, whiteboards and smartphones in the classroom gradually becomes part of everyday school life. Moreover, the Federal Ministry of Education Austria has already taken measures for the increasing importance of media education which are basically defined in the 'Grunderlass Medienerziehung' (2012):

> *Angesichts der Herausforderung durch die elektronischen Medien muss sich die Schule verstärkt dem Auftrag stellen, an der Heranbildung kommunikationsfähiger und urteilsfähiger Menschen mitzuwirken, die Kreativität und die Freude an eigenen Schöpfungen anzuregen und sich im Sinne des Unterrichtsprinzips „Medienerziehung" um eine Förderung der Orientierung des Einzelnen in der Gesellschaft und der konstruktiv-kritischen Haltung gegenüber vermittelten Erfahrungen zu bemühen* (Grunderlass Medienerziehung BMUKK 2012).

This regulation is also noted in curriculum. The curriculum of the 'Neue Mittelschule' (NMS) (BGB1. II Nr. 113/2016), for instance, further points out:

> *Den Schülerinnen und Schülern sind relevante Erfahrungsräume zu eröffnen und geeignete Methoden für eine gezielte Auswahl aus computergestützten Informations- und Wissensquellen zur Verfügung zu stellen* (BGB1. II Nr. 113/2016).

The aim is not only to give students the opportunity to work with digital equipment but to guide them to a safe but also critical usage of new media technologies. Nevertheless, the extent and quality of media usage varies from school to school.

While some schools are already well equipped and regularly integrate a smartphone or a tablet into the lesson, others do not use them sufficiently and still prohibit phones in the classroom (Babnik et. al 2013: 3). Stockwell (2012: 5) points out that, even if the technical equipment were available at a school, some teachers still refuse to work with new media technologies within a classroom, *"not because of a lack of knowledge, but rather because they have strong views about what should or should not be taught using technology"*.

Therefore, the Federal Ministry of Education is currently developing several concepts to ensure the acquisition of digital competencies in every classroom in Austria in future. For instance, 'eEducation Austria' (2016) is an initiative of the Federal Ministry of Education with the aim of bringing digital education into every classroom in Austria, starting at elementary school until the A-levels (Matura). Due to this inititaive, teachers in Austria interested in digital education can register at the eEducation network. They are given the opportunity to take part in international and national projects or seminars to improve and promote digital education within their own school (Waba 2017). Moreover, through this network, teachers can exchange with others and might receive valuable input to make their school fit for new media usage in every classroom. The overall aim of all activities, provided by eEducation Austria, is to ensure a meaningful didactic use of digital media in all subjects as well as the improvement of students' competences (eEducation Austria 2016).

Additionally, the Federal Ministry of Education (2017) is constantly working on further developments and improvements for the future which will be pointed out in the following chapter.

2.4.1. School 4.0 – Let's get digital[4]

The Federal Ministry of Education proposed a new concept, called 'School 4.0 Let's get digital' which concerns student's entire school career. The strategy behind this concept is that all students in Austria are given chance to acquire digital competencies

[4] The information in the following chapter is taken from the Federal Ministry of Education homepage (2017) if not explicitly stated otherwise.

and learn to critically engage with digital content in every school grade. Thereby, the focus is on the acquisition of media competencies, critical usage of information and data, internet security as well as know-how about technology, coding and problem solving. According to the Federal Ministry of Education, the gradual implementation of this concept will start in the school year 2017/18, piloting in selected schools. The strategy is organized around four pillars which are defined as the following:

Pillar 1: Basic digital education starting in primary school
Pillar 2: Digital skills for educators
Pillar 3: Infrastructure and IT equipment
Pillar 4: Digital learning tools

The first area emphasizes the early implementation of media education in a pupil's education. Therefore, media literacy and a playful usage of technology will take place already in primary school. The major focus is on the third and fourth grade. At the end of primary school, students should be able to apply their first and basic digital competencies. After lower secondary education, students should be able to deal with standard programmes and have a basic computer knowledge. The teaching of these competences will be introduced in a compulsory class called 'basic digital education' extending for 2 to 4 lessons per week, starting from the 5th to the 8th school year.

Furthermore, the competences that students will acquire within this compulsory class are depicted in a separate, new curriculum which will already be used for the pilot in specific schools in school year 2017/18. Mag. Waba, who works at the IT-Didactics and Digital Media Department of the Federal Ministry of Education provided the pilot version of the new curriculum for the support of this thesis. The competencies are divided into eight categories, namely

- Social aspects of media change and digitalization,
- information data and media competence,
- operating system and standard applications,
- media design,
- digital communication and social media,
- safety,
- technical problem solving and computational thinking (Federal Ministry of Education 2017, translated).

Each of these areas include different descriptors. An example of these descriptors from the category ‘digital communication and social media’ reads:

> *Schülerinnen und Schüler*
> - *kennen verschiedene digitale Kommunikationswerkzeuge,*
> - *beschreiben Kommunikationsbedürfnisse und entsprechen Anforderungen an digitale Kommunikationswerkzeuge,*
> - *wählen zielgerichtet geeignete digital Technologien für konkrete Kommunikationsszenarien aus und berücksichtigen bei der Auswahl die Interessen der Anbieter von Social Media, den Einfluss von Social Media auf ihre Wahrnehmung der Welt und Art und Umfang der Daten, die durch die Nutzung entstehe* (Federal Ministry of Education 2017: 6).

Apart from the new class, students have the opportunity to check their newly acquired skills in an application called ‘digi.check’ (which will be explained in Chapter 2.4.3.) and receive feedback and a certificate for every single level. The specific skills which students, in all kinds of schools, should be able to master throughout the years are based on the ‘digi.komp’ model (see Chapter 2.4.2.). The second area concerns the digital competences of the teachers. Starting in schoolyear 2017/18, there will be compulsory portfolios which should be used by new teachers within the first few years in their career. The portfolio consists of the various components new teachers have to accomplish in order to be able to successfully pass on their knowledge to the students. More precisely, at the beginning of their teaching career, teachers’ digital competencies will be analysed with the help of ‘digi.check’. Afterwards, new teachers have to complete a modular course within the first three years of their education dealing with digital teaching methodologies. Next to the course, they will regularly reflect on their own teaching experiences. Moreover, teaching professionals with longer teaching experience can participate in this modular course voluntarily to build up their media knowledge. A modern infrastructure and functional IT equipment are the main interest in the third pillar since it is a vital prerequisite for a digital education. The overall goal is to provide WIFI or internet access in every classroom by 2020/21. A long-term aim for the future is to equip 5th grade students with tablets and 8th grade students with laptops. However, for the first few years the concept ‘Bring your own device’ will be further reinforced. Lastly, the fourth area deals with the digital study

tools which will be made available for teachers. Innovative apps or games for tablets, smartphones or smartboards and other useful teaching materials can be discovered and effectively implemented in the classroom. The so-called ‘Eduthek’ is the platform where teachers not only find those tools, but are also given the opportunity to look at different scenarios that provide various possibilities to incorporate them into the classroom. As previously mentioned, this strategy will initially be implemented during the school year 2017/18. Also, the introduction of the new subject starts with a piloting in selected schools which are part of the ‘eEducation network’. The following chapter will go into detail and present the concept of ‘digi.komp’ and ‘digi.check’.

2.4.2. digi.komp

The idea behind the platform ‘digi.komp’ is to determine and visualize the specific competences a student has to acquire by certain ages. The information in this chapter is taken from the ‘digi.komp’ homepage (Digi.komp 2016) if not explicitly stated otherwise. The competences are divided into four stages, namely ‘digi.komp4’, ‘digi.komp8’, ‘digi.komp9’ and ‘digi.komp12’, referring to the same grouping system such as defined in the education standards (D4, E8 etc.). To put it differently, each signals which competencies students should have developed by the end of elementary school (‘digi.komp4’), grammar school or ‘Neue Mittelschule’ (‘digi.komp8’), polytechnic institute (‘digi.komp9’) or higher education (‘digi.komp12’).

In a personal interview with Mag. Waba (2017), he pointed out that the concept ‘digi.komp’ is already used in various schools and that the areas with the respective descriptors will be slightly revised in the near future. Thus, this study presents the current application of the concept. In each ‘digi.komp’ model the following four areas are taken under consideration:

1. Information technology, humans and society
2. Information systems
3. Applications
4. Concepts

Since the focus of the empirical study is on 13 to 14 -year olds, a closer look is taken at the competences of ‘digi.komp8’. In the first area ‘information technology, humans and society’, students learn how to use digital media without harm to themselves or other people. Thus, it is vital that students critically reflect on their usage of new media technologies and know the basic rights and duties in the digital world, for instance the safe storage of their personal data. According to the competence model 2013, examples of the precise competencies are as follows:

> *Ich weiß, dass ich im Internet Spuren hinterlasse und grundsätzlich identifizierbar bin und weiß mich entsprechend zu verhalten.*
> *Ich kann zwischen Datenschutz und Datensicherung unterscheiden* (Kompetenzmodell 2013).

In addition, the ability to work quickly and efficiently with digital technologies are defined in the second area ‘information systems’. It also includes the know-how of usual hardware components of a computer system and about the correct usage of the technologies available for the students in the particular school. Two examples of the descriptors in this area reads:

> *Ich kann die wichtigsten Komponenten richtig zusammenschließen und Verbindungsfehler identifizieren (Tastatur, Maus, Drucker, USB-Geräte).*
> *Ich kann zwischen lokalen und globalen Netzwerken unterscheiden und sie zum Datenaustausch nutzen* (Kompetenzmodell 2013).

The category ‘applications’ focuses on the students’ ability to successfully use common digital applications such as image, audio or text processing in order to express their opinion and to produce creative content. Furthermore, efficient work with spreadsheets and conscious usage of communication services, for instance e-mail etiquette, are of great importance within this category. According to the competence model, the following competences are listed, among others:

> *Ich kann digitale Texte, Bilder, Audio- und Videodaten in aktuellen Formaten mit verschiedenen Geräten und Anwendungen nutzen und gestalten.*
> *Ich kann Tabellen formatieren.*
> *Ich kann E-Mails und Foren zum Informationsaustausch, zur Diskussion und Zusammenarbeit nutzen* (Kompetenzmodell 2013).

Within the fourth area ‘concepts’, competences concerning the basics of coding and decoding are gained. Students learn to understand the functional principle behind basic programs which will help them to critically question automatically processed content within a program or the internet. Moreover, students will learn to take responsibility for their own actions or content when using a digital medium. Thus, competences are defined as follows:

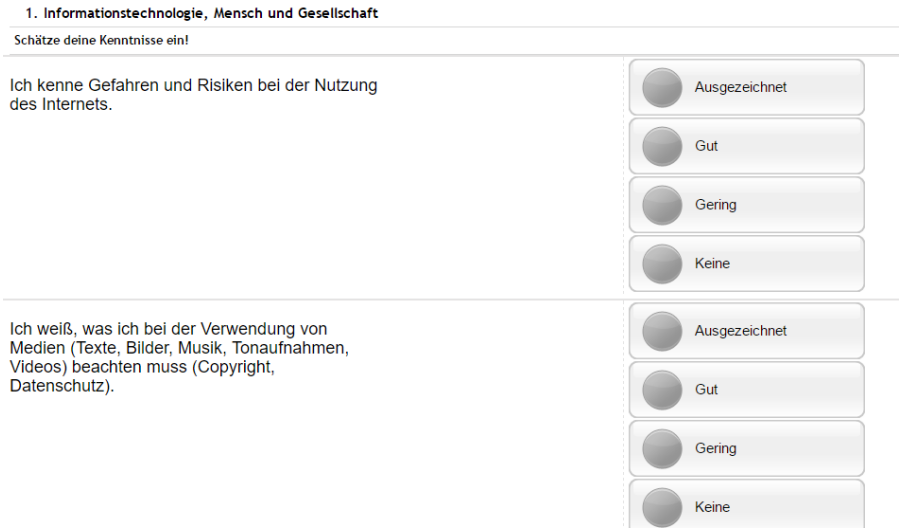
> *Ich kann einige Informationen aus dem Alltag kodieren und dekodieren*
> *Ich kann eindeutige Handlungsanleitungen (Algorithmen) nachvollziehen und ausführen* (Kompetenzmodell 2013).

2.4.3. digi.check[5]

‘Digi.check’ is another concept that is linked to the ‘digi.komp’ model since it provides students with feedback about their competences acquired in each ‘digi.komp’ level. This means that for each ‘digi.komp’ niveau, the appropriate ‘digi.check’ is offered in order to reflect on one’s own results. Moreover, teachers can also easily check their students’ competences and can, according to the results, implement necessary measures for their future teaching.

The ‘digi.check8’, for instance, consists of three parts which complement each other. First, students reflect on their own digital competences by answering reflection questions that refer to the ‘digi.komp8’ competence model. Examples (digi.check onlinetest 2017) of such reflection questions are pointed out in Figure 1 where students need to evaluate their knowledge in the area ‘information technology, humans and society’

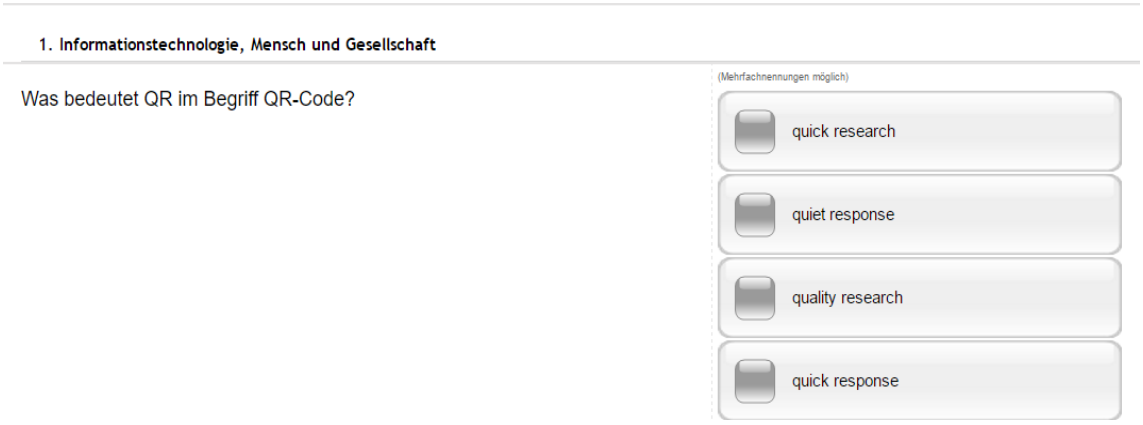
[5] Information are taken from the digi.komp homepage (Digi.komp 2016) if not explicitly mentioned otherwise.



http://digikomp.at/praxis/portale/digitale-kompetenzen/digikomp8nms-ahs-unterstufe/digicheck8/in-application-testung.html (13 April 2017).

Figure 7: Example reflection question 'digi.komp8'

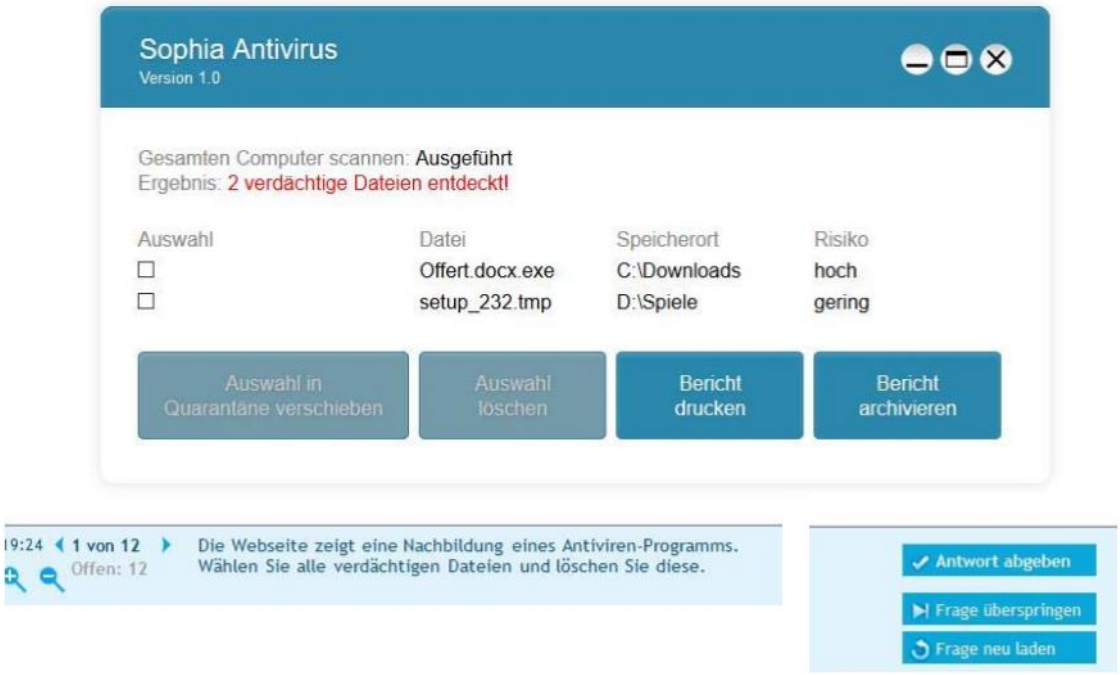
This is followed by an online quiz in which students prove their knowledge by answering theoretical questions (digi.check onlinetest 2017) such as the following:



http://digikomp.at/praxis/portale/digitale-kompetenzen/digikomp8nms-ahs-unterstufe/digicheck8/in-application-testung.html (13 April 2017).

Figure 8: Example theory question digi.komp8

Finally, students are asked to solve practical tasks dealing with the computer system, office applications as well as safe use of the web. An example that can come up is depicted in Figure 3, where students have to detect a dangerous document in an antivirus program and carry out the correct measure to solve this problem. The question for this task is "*Die Webseite zeigt eine Nachbildung eines Antiviren-Programms. Wählen Sie alle verdächtigen Dateien und löschen sie diese*" (digi.komp8 demotest 2017).



https://admin.digicheck.at/ (15 Mai 2017)

Figure 9: Example question 'digi.check8'

After answering the questions, students receive an evaluation sheet with their answers on it. Moreover, for the incorrect answers, a possible solution is provided to them.

It becomes apparent that the Federal Ministry of Education has already developed several new concepts to improve media literacy in Austrian schools. Nevertheless, due to the ever-growing digital media trend, the school system has the responsibility to continiously stay up-to-date and investigate new strategies in order to prepare and support students for this technology-driven world.

3. Motivation

The following chapter will deal with the multifaceted concept of motivation and draws its attention to the various theories used to assess learners' motivation. First, the term motivation will be discussed and the general cognitive motivational theories will be reviewed. This is followed by an explanation of the socio-educational model which is used to measure students' motivational and attitudinal disposition concerning second language learning.

3.1. Defining Motivation

Motivation is a term that regularly comes up in our daily lives. Everyone has a specific theory in mind of what motivation is and what it means to them. Students tell each other that they are totally motivated for the upcoming weekend, teachers complain to each other that students were not motivated at all during their class today and keep asking themselves what they could to motivate them. However, what does it really mean to be motivated or demotivated?

Dörnyei & Ushioda (2011: 2) point out that the term motivation originates from the Latin verb *"movere"* and means *"to move"*. Consequently, the question *"what moves a person to make certain choices, to engage in action, to expend effort and persist in action"* is inevitable for explaining and researching motivation (ibid: 2). The answer to this question is, nevertheless, not clear-cut since *"[m]otivation is, without question, the most complex and challenging issue facing teachers today"* (Scheidecker & Freeman 1999: 116). One has to keep in mind that it is impossible to precisely define what moves a person to take certain actions as we are not able to look into somebody's mind. Researchers have developed numerous theories so far to explain students' motivation, each of them adding valuable aspects to the complex term but none of can provide an ultimate definition and theory for it. This is often demonstrated with the help of a famous Indian fable in which blind men discover and feel an elephant for the first time:

> *One man holds the tail and says that an elephant is like a broom. Another holds a leg and says that an elephant is like a tree trunk. Others say an elephant is like a big pillow, a big hose, or a spear. Each blind man has an accurate portrayal from his specific vantage point but not the whole picture* (Williams K. & Williams C.)

In other words, numerous different approaches on how to measure human's motivation exist. Motivation is, therefore, rather seen as an "umbrella-term involving a wide range of different factors" than one simple construct (Dörnyei 2001: 9). Even though there is no definite explanation of this phenomenon, it plays a crucial role in second and foreign language learning (Gardner 1985: 142). Dörnyei (2001: 5) argues that *"learners with sufficient motivation can achieve a working knowledge of an L2, regardless of their language aptitude […]"*. However, he further claims that *"[w]ithout sufficient motivation […] even the brightest learners are unlikely to persist long enough to attain any really useful language"* (ibid: 5). Following this, Dörnyei (2001: 9) points out that motivational psychologists try to reduce the number of possible variables that determine human behavior and identify only a limited number of key motives which are most important to define human's actions in the L2 field. Recently, there are still different motivational approaches, but each presenting its own *"most-important motives"* to closer investigate motivation (ibid: 9). What is, according to Dörnyei & Ushioda (2011: 4ff.), quite similar for most researchers is that human's motivation, in general, determines *"the choice of a particular action, the persistence with it, the effort expended on it"*. In other words, *why*, *how long* and *how hard* people are actively involved in an activity [original emphasis] (ibid: 4ff.)

Consequently, it can be said that in an educational context there is not one perfect solution and no clear answer for the question how to improve students' motivation in a classroom. Since various theories and approaches are developed thus far, teachers should become aware of some of them and try out one or the other and, consequently, find which one works best for each individual classroom. In the following chapter, four contemporary motivation theories are chosen that attempts to describe different concepts of motivation with a focus on second or foreign language acquisition, namely

the expectancy-value theory, goal theory, self-determination theory and the socio-educational model.

3.2. Motivational theories

Due to the complexity of the topic, the following motivational theories are selected to provide an overview on how motivation can be defined to meet the research aim of this study. First, the expectancy-value theory, the goal theory and the self-determination theory will be explained. They belong to the cognitive theories of motivation, focus on the *"mental structures, beliefs and information-processing mechanisms"* and are responsible for human behaviour and action (Dörnyei & Ushioda 2011: 12). In other words, motivation is assumed to be located within humans. Additionally, human perceptions and cognitions are mostly influenced by numerous factors which are socially or environmentally caused (ibid: 13). All in all, this shapes humans' behaviour and actions (ibid: 13).

Apart from the general motivational theories, the motivation to learn a second or foreign language will be explained with Gardner's socio-educational model. The theories of L2 motivation have become an independent research field and cannot solely be explained by the general motivation theories (Dörnyei & Ushioda 2011: 39).

3.2.1. Expectancy-value theory

First, the expectancy-value theory measures the learners' motivation to perform a certain task. Two important factors are responsible for the performance of a task, namely the students' expectancy of success and how much they value this achievement (Dörnyei & Ushioda 2011: 13ff.). Moreover, the rewards for completing a task and the respective value of it are also crucial factors (ibid: 13ff.). Without a positive expectation towards a task and an incentive value to it, students will lose their motivation.

Atkinson and Raynor (1974: 13) agree that success and the attached incentive value are vital factors affecting individual's motivation. However, they add two further dimensions to this framework. In their achievement motivation theory, the *"need for achievement"* and the *"fear of failure"* are vital components that influence students' motivation (Atkinson & Raynor 1974: 13). Here, the individual's own need for achievement is more important than the extrinsic reward of the task since the learners are intensively involved in the task. In case of failure, they persist and move on (Dörnyei & Ushioda 2011: 14). On the contrary, if the learner's sole incentive is to avoid a negative outcome instead of achieving a positive one, this is defined as *"fear of failure"* and negatively influences one's behaviour (ibid: 14). Thus, achievement motivation is seen as *"the sum of need for achievement, the probability of success and the incentive value of successful task fulfilment, minus the sum of fear of failure, the incentive to avoid failure and the probability of failure"* (Dörnyei & Ushioda 2011: 14).

Another concept that goes along with the expectancy-value theory is based on the attribution theory by Bernhard Weiner (1986). This theory suggests that *"causal attributions one makes of past successes and failures […] have consequences on future achievements strivings"* (Dörnyei & Ushioda 2011: 15). Hence, students' motivation in a classroom can be described by considering an attributional perspective. According to Graham (1994, quoted in Dörnyei & Ushioda 2011: 15), attributions which most commonly occur in school settings are: *"ability, effort, task difficulty, luck, mood, family background, help or hindrance from others"*. However, ability and effort are the most dominant causes in western school environments (Dörnyei & Ushioda 2011: 15). Furthermore, students' future achievement depends on the reason for failing in the past. Stability and controllability play a crucial role here. If leaners did not achieve their goal due to stable and controllable factors, for instance their low ability (e.g. 'I am not intelligent enough'), positive performances in the future will be hindered. On the contrary, if unstable and controllable factors such as insufficient preparation for a test caused a student's failure, their future achievements will not be impeded (Dörnyei & Ushioda 2011: 15).

Besides the attributional process, another view to explain motivation within the expectancy-value theory is determined by Albert Bandura (1977). In his self-efficacy theory, he claims that instead of referring to past events, students make judgements of their own abilities to accomplish a certain task at the very moment (Bandura: 1977: 183). To put it differently, people's sense of self-efficacy influences the choice of activity as well as the effort students will put into a task. According to Bandura (1977: 183), the strength of people's belief in their own capabilities is pivotal for the initial decision whether to cope with a specific activity or not. Students with a low sense of self-efficacy will only do the things which they believe they are capable of. If learners encounter difficult tasks, they perceive them as *"threatening situations"* and consequently avoid them (Bandura 1977: 194). Instead of concentrating on the task itself, they persist on their personal inabilities which hinder them to perform successfully (Dörnyei & Ushioda 2011: 16). Due to lack of faith in their abilities, students will easily give up (ibid: 16). Bandura (2001: 10) finally reinforce that *"unless people believe that they can produce desired results and forestall detrimental ones by their actions, they have little incentive to act or to persevere in face of difficulties"*.

In contrast, people with a strong sense of self-efficacy handle such a threatening situation with a confident attitude (Dörnyei & Ushioda 2011: 16). They do not perceive it as a personal threat, but rather as an exciting challenge which helps them to successfully concentrate on the task. Consequently, Bandura (2001: 10) argues that students should be *"rooted in the core belief that one has the power to produce effects by one's actions"*. Nevertheless, it is important to point out that the degree of self-efficiency is not directly related with the actual abilities and competences of a student since their beliefs are a *"product of a complex process of self-persuasion that is based on cognitive processing of diverse sources"* (Dörnyei & Ushida 2011: 16). Those influencing sources can be, for instance, the opinion of other people, received feedback or past experiences (ibid: 16).

To sum up, learners' expectancies and values can be influenced by various factors. According to the different concepts within the expectancy-value framework, students' need for achievement, positive attributions to past events or a high level of self-

efficiency affect students' motivation positively. Nevertheless, the question arises what a student actually tries to achieve or, in other words, what his or her impetus for a motivated action is. The expectancy-value theories are consequently complemented by goal theories that will focus on students' possible reasons for achievement and effort in the following chapter.

3.2.2. Goal theories

The focus in goal theories is on the students' personal goals or outcomes which they wish to achieve with a certain action. Dörnyei and Ushioda (2011: 22) point out that the goal theory expands the expectancy-value theory since goals or personal visions of students influence their motivation in the present. Therefore, the goal theory is divided into three main areas, namely the *"goal-setting, goal-orientation, goal content and multiplicity"* (Dörnyei & Ushioda 2011: 20).

To begin with, the goal-setting theory was originally developed by Locke and Latham (1990) and applied within a workplace context. However, it also fits in an educational context and focuses on the various conceptions of the students' future. Their future vision of themselves guide their motivation to, initially, aim for proximal goals which further help them to pursue their personal distal goals (Dörnyei & Ushioda 2011: 21). Since language learning is considered as a long-term process with the distal goal of mastering the new language, defining proximal sub-goals, such as *"taking tests, passing exams, satisfying learning contracts"* might have a positive effect on a learners' motivation (Dörnyei & Ushioda 2011: 21). Thus, students must first achieve sub-goals in order to get closer to their distal goals. Furthermore, the proximal sub-goals not only function as a stimulus for students, they *"can also serve as an important vehicle in the development of the students' self-efficacy"*, according to Dörnyei and Ushioda (2011: 21ff).

The goal-orientation theory was, in contrast to the goal-setting theory, originally developed for an educational context. Ames (1992: 261) compares two types of goal constructs, namely mastery orientation and performance orientation. The respective

goals for each orientation differ due to people's personal interpretation of success and reasons for involving in an achievement activity (ibid: 262). The central goal that is pursued within a mastery orientation is *"one's own improvement and growth"* and the notion that one's effort will result in success (Dörnyei & Ushioda 2011: 22). Thereby, learners are eager to develop new skills, improve their competences, reflect on their own work and show willingness to learn (Ames 1992: 262). In contrast, Ames (1992: 262) points out that the goal of students with performance orientation is to demonstrate one's ability and try to perform better than others. Moreover, learning is only seen as a way to achieve certain goals and to surpass normative defined standards (ibid: 262). Consequently, public recognition is also of central importance (Dörnyei & Ushioda 2011: 22). Ames (1992: 262) further argues that people with performance goals determine their self-worth according to their ability to perform. However, in case of failure, this could lead to personal issues or a detrimental effect on a learner's self-worth.

Moreover, a student's goals are not only concerned with educational accomplishments, but also focus on various other content. A study conducted by Wentzel (2000) points out the multiplicity of goals that can be found in a classroom setting, both academic but also social. Wentzel (2000: 106) states that a students' main focus behind an action is not only to achieve an academic outcome but also, for instance, to pursue social relationship goals. Thus, not only to *"meet a specific standard of achievement"* but also to *"gain approval from others, to establish personal relationship with teachers or peers, or to cooperate with classmates"* might be possible desires for students (Wentzel 2000: 106). Baumeister and Leary (1995: 500) argue that the reason for students to pursue social goals emerges from *"the need to belong"* to social groups. Thus, this need is aimed to be met through goal-directed activities (ibid: 500). Consequently, students *"show tendencies to seek out interpersonal contacts and cultivate possible relationships, at least until they have reached a minimum level of social contact and relatedness"* (ibid: 500). Wentzel (2000: 108) adds that the classroom is perceived as a socially supportive environment if the need for belongingness is met. Hence, learners aim to value the goals which are set in this context. Additionally, if the student develops *"a sense of relatedness to their teachers"*

he or she is likely to pursue *"social goals to behave appropriately but also task-related goals to learn and achieve"* (Wentzel 2000: 108). Thus, Wentzel (ibid: 108) suggests concentrating on learners' social as well as emotional needs first in order to improve students' motivation.

To conclude, because of the different goal theories, valuable insight into the students' individual impetus and desire can be gained. It is vital to consider that not only academic goals but also multiple social goals are important to students that might influence their academic achievements.

3.2.3. Self-determination theory (SDT)

The cognitive theory to determine motivation is the self-determination theory by Deci and Ryan (1985). Here, a distinction between intrinsic, extrinsic and amotivation motivation is made. In a study, Ciampa (2013: 82) found out that students are highly motivated to work with tablets and smartphones in a classroom. They are deeply involved and engaged in an activity, thereby disappearing into their own, digital world. Csiskszentimaihalyi (1975) defines this moment as *"flow"* which is *"a state in which a person is completely immersed in an activity and experiences a flow of awareness"* (Deci 1992: 45). This concept goes along with intrinsic motivation which deals with *"behavior performed for its own sake in order to experience pleasure and satisfaction, such as the joys of doing a particular activity or satisfying one's curiosity"* (Dörnyei & Ushioda 2011: 23).

In Vallerand's (1997: 285) hierarchical model of intrinsic and extrinsic motivation, three different subtypes of intrinsic motivation are pointed out, namely *"knowledge, accomplishments, stimulation"*. Dörnyei & Ushioda (2011: 23) defines them as follows:

- to learn (engaging in an activity for the pleasure and satisfaction of understanding something new, satisfying one's curiosity and exploring the world);
- towards achievement (engaging in an activity for the satisfaction of surpassing oneself, coping with challenges and accomplishing or creating something);

- to experience stimulation (engaging in an activity to experience pleasant sensations).

Extrinsic motivation, on the other hand, involves performances that expect some kind of reward as a consequence or to try to avoid punishment (Eccles & Wigfield 2002: 112). Parents often promise a specific reward for a good grade at school, which motivates students extrinsically. Nevertheless, Dörnyei & Ushioda 2011: 24) points out that extrinsic motivation can undermine intrinsic motivation since *"students will lose their natural intrinsic interest in an activity if they have to do it to meet some extrinsic requirements"*. On the contrary, the self-determination theory suggests that extrinsic motivation should not be seen as something negative. According to Dörnyei (2001: 10), *"human motives can be placed on a continuum between self-determined (intrinsic) and controlled (extrinsic) forms of motivation"* depending *"on how internalised these extrinsic goals are"* (Dörnyei & Ushioda 2011: 24). In other words, when extrinsic motivation turns out to be internalised and attuned with the learners' values, this may further lead to intrinsic motivation (ibid: 24). However, within the third type of motivation, amotivation, students do not show any kind of motivation at all (Dörnyei & Ushioda 2011: 23).

Vallerland (1997: 285) differentiates three different types of extrinsic motivation: External, introjected, identified and integrated regulation. First, in external regulation motivation comes solely from external sources and is therefore the least self-determined form. For instance, the praise of teachers or parental punishments are an important stimulus here (Dörnyei & Ushioda 2011: 24). Next, introjected regulation deals with rules (e.g. rules against violence at school) which are imposed by society or school and accepted by students. Learners' behaviour conforms to the norms since they do not want to feel guilty or disappoint others (ibid: 24).

The third type of extrinsic motivation is called identified regulation since the learner can identify with an activity and greatly values it. Thus, the learner sees the usefulness behind his or her action, for instance the prerequisite to learn English to pursue a hobby or interest (ibid: 24). Moreover, Dörnyei & Ushioda (2011: 24) add a fourth type, namely integrated regulation which is *"the most developmentally advanced form of*

extrinsic motivation". This type involves behaviour that is *"fully assimilated with the individual's other values, needs and identity"* (ibid: 24). Furthermore, Dörnyei & Ushioda (2011: 25) argue that people's self-determination highly depends on the degree social environments supports three vital human needs, which are autonomy (i.e. to what degree people experience themselves as the origin of their behaviour), competence (i.e. to what degree learners experience a sense of accomplishment) and relatedness (i.e. to what degree students establish a connection to others or social groups). Finally, it becomes apparent that similar to Bandura's self-efficiency theory (1977) and Wentzel's social perspective towards goals (2000), the SDT also highlights the important influence of social processes in shaping students' motivation (ibid: 25).

3.2.4. Social-educational model

The last theory that is relevant for this study is mainly concerned with the motivation of second language acquisition. Since the quantitative study will be carried out in three different English classes in lower secondary schools, this model is used to find out if the usage of new media helps students in the acquisition of the English language.

The socio-educational model, developed by Robert Gardner, points out two essential features that play an important role in language learning: the cultural and the educational context (Gardner 2010: 85). Gardner started his research around 1960 with his colleagues and the model has been revised and developed various times. In the theoretical model published in 1979, Gardner (1985: 10) states that motivation towards learning a second language depends on three key variables, namely *"effort plus desire to achieve the goal of learning the language plus favourable attitudes toward learning the language"*. The attitude towards the second language is, in comparison to other subjects such as Math or History, highly crucial for the acquisition of the new language. Students have to deal with materials from another culture and are required to somehow include it into one's behavioural repertoire (Gardner 1985: 6). However, it is important to point out that one variable alone does not lead to motivation. In other words, if a student has a positive attitude toward learning a

language but the necessary motivational intensity is rather low, there is no motivated organism (ibid: 11). The question arises what exactly is meant by attitude towards learning the second language. Therefore, Gardner (2010: 88) introduces the various constructs that play a significant role in defining second language motivation.

The first construct of *"integrativeness"* means a *"genuine interest in learning the second language for the purpose of communicating with members of the other language community"* (ibid: 88). This includes not only the attitude towards the foreign language itself, but also the interest in other cultural groups and the attitude towards English speaking people in general (ibid: 88).

Moreover, the students' *"attitude towards the learning situation"* in a classroom is another construct that influences students' general interest in learning the second language (Gardner 2010: 89). There are several factors which might lead to a great atmosphere in the classroom and consequently affects a learner's mood and interest to study. This could be, for instance: the teacher, the course itself, the materials used or the colleagues (ibid: 89). Gardner (2010: 89) puts the focus on the students' perception of the teacher and the course and states that the interplay of these two constitutes the overall attitude towards a learning situation.

Thirdly, according to Gardner (2010: 89) the construct 'motivation' includes the individual's effort and intensity to reach a certain goal as well as the desire to learn a language. A lot of effort can be noticed when students persistently seek to learn the language, consistently do their homework or eagerly do extra work (ibid: 89). Moreover, the enjoyment of learning the language is also a crucial factor. Whether students have fun or perceive learning English as a pleasant task influences their motivation to learn (ibid: 89). Summarized, Gardner (2010: 91) claims that *"individuals can be said to be integratively motivated if they are motivated to learn the second language, have a desire or willingness to identify with the other language community, and tend to evaluate the learning situation positively"*. Thus, the interplay of *"integrativeness, attitude towards the learning situation, and motivation"* determine students' motivation (ibid: 91). On the other hand, Gardner (2010: 90) argues that there are other factors that might be a support for students' motivation, namely that

construct ‘instrumentality’. Instrumental factors, such as rewards, might influence students’ motivation, however, the support is not *“direct or consistent”* (ibid: 90) as in integrative motivation. According to Gardner (2010: 90), *“relatively little research has been devoted to examining instrumental motivation any further probably because there could be any number of instrumental reasons for learning another language”*. Nevertheless, the socio-educational model reveals that there are, indeed, other factors that might influence students’ achievement in second language learning apart from their own integrative motivation (ibid: 92).

3.3. Motivation research

Having considered the various motivational theories, it becomes clear that researching motivation is not a straightforward task. Dörnyei & Ushioda (2011: 197) point out three issues that go hand in hand with motivation research. First, they (ibid: 197) claim that *“[m]otivation is abstract and not directly observable*” since it is hardly noticeable from outside and therefore subjective inferences from indirect indices have to be made. Nevertheless, Dörnyei and Ushioda (ibid: 197) stress the importance of keeping the subjectivity level to a minimum. When doing research, one has to keep in mind that *“[m]otivation is a multidimensional construct*” (Dörnyei & Ushioda 2011: 197). Thus, results of a limited number of questionnaire items only present a small segment of a much bigger and complex psychological construct (ibid: 197). The fact that “*motivation is inconstant and dynamic*” infers that motivation cannot be seen as a permanent condition since it changes dynamically (Dörnyei & Ushioda 2011: 197). Hence, a one-time examination has to be treated cautiously because people’s progress and different influencing factors, such as environment or individual differences, might change over time (ibid: 197).

An important aspect to consider when researching motivation is to select a suitable research method and instrument. Dörnyei & Ushioda (2011: 201) claim that there is *“no ‘best’ method for researching motivation […]”*, it solely depends on the type of data researchers want to gather through it. In second language motivation research, survey

studies are consistently used to assess students' attitude and motivation towards the L2 and to compare the results of learners from different *"geographical, sociocultural and institutional contexts"* (ibid: 213). Furthermore, since motivation is such a broad-based construct, Dörnyei & Ushioda (2011: 198) argue that *"the starting point in any research in this area is the clarification of how 'L2 motivation' will be conceptualised in the particular study […]"*. Thus, for this thesis elements of all mentioned motivation theories will be incorporated and adjusted due to the limited scope of the study. The variables which were tested, with the help of a quantitative questionnaire, include aspects of effort, attitude, motives and goals. Moreover, the learner differences as well as the social background play a significant role in the present study. According to which criteria these theories were selected will be outlined in the subsequent section which presents the empirical part of this diploma thesis.

4. Empirical study

In the following research project, I want to ascertain whether the use of new media, such as tablets, whiteboards or smartphones, in the Austrian English classroom positively influences students' motivation and willingness to learn. The overall aim of this study is to examine motivating factors of today's new media technologies and how these have an impact on students' learning behavior. Therefore, this project investigates whether the length of time, the extent of new media usage or social background affect students' attitude towards digital media in the language classroom and their motivation to learn.

4.1. General description

Having introduced the various motivation theories which play a crucial part for this study, it is obvious that motivation is a broad-based construct. Thus, elements of all previously mentioned motivation theories will be incorporated in and adjusted for this diploma thesis. The following model briefly summarizes the influential factors relevant for this study:

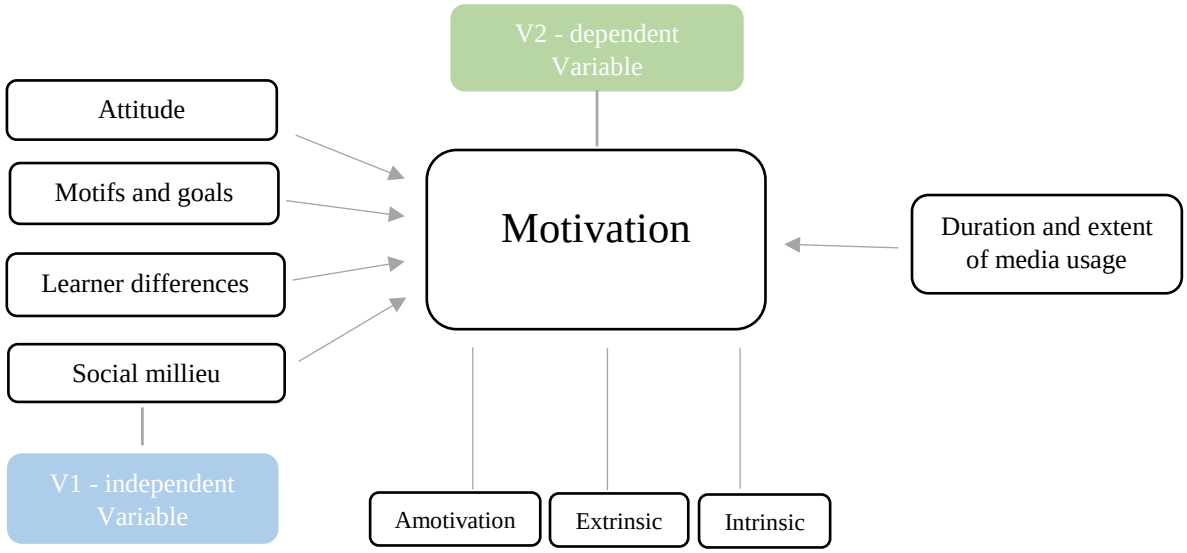


Figure 10: Model of motivation theories

4.1.1. Research questions

Due to the increasing importance of new media technologies in people's everyday lives, digital media has also become a crucial part in the education area. More and more innovations incorporate the recent technology trend in every classroom and make use of the advantages media technologies bring. As previously pointed out, it is said that "students' level of attentiveness and interest during the lesson" is greatly improved when including new media technologies, such as tablets, smartphones and smartboards into the classroom. Most research concentrates on the teachers' perspective of working and preparing a lesson with digital media technologies. Therefore, the focus of this study is to examine the students' perspective with the aim of finding out if new media technologies indeed have an influence on students' motivation to study and on their attitude towards the subject. If so, what exactly motivates students to work with new media technologies in the classroom? Is it simply the enjoyment of working with it, or do students believe that the technology usage will improve their language skills and thus, impact on their future career? In consideration of these questions, the following research question with the further questions for this diploma thesis emerged:

- How do new media technologies affect students' motivation and willingness to learn a language?
- How does duration and extent of media usage influence students' motivation to use new media technologies in the classroom?
- Does the duration and extent of new media usage influence students' attitude towards language learning?

Since there is no sufficient research done so far to answer these questions, the empirical part of this study will investigate those aspects. The hypothesis which can be inferred from the research questions, and the research procedure will be explained in the following chapter.

4.1.2. Hypothesis

In order to find out if digital media technologies indeed have a positive influence towards students' learning process and motivation it is important to focus on the different aspects which might influence a student. Therefore, various influential factors are investigated: students' intrinsic motivation, their parental influence, instrumental orientation and interest in foreign culture.

Thus, the following hypotheses are used for the empirical study:

H1: Students with a positive attitude towards new media technologies are more motivated to study English.

H2: The longer and the more intensely students use new media in the classroom, the more they are motivated to work with them.

H3: Students who already use new media for a longer period and more frequently in the classroom are more motivated to learn English.

4.1.3. Schools and participants

The study was conducted in three different schools in Lower Austria. In order to ensure comparability across participants, the schools were selected according to the same school type, state and age group. Nevertheless, a prerequisite for the selection of the schools was that the amount of media usage within these schools varies to assess the potential influence new media has on students' attitude and motivation towards language learning and towards the integration of new media in the classroom. A study conducted in upper Austria (Education Group 2015) shows that the majority of students between 11 and 18 years old would like to apply the computer more often within the classroom. However, they indicated that their teacher mostly implements the smartphone and the smartboard into the lesson (Education Group 2015). Inspired by the results, I chose to conduct the study in an NMS with a focus on students in the 8th school grade, between 13 and 14 years old. Therefore, the directors from the NMS

Gars/Kamp, the NMS Mödling and the NMS Mary Ward St. Pölten were contacted and immediately agreed to participate in the study. In each school, two classes were polled to receive a wider number of responses. Before handing out the questionnaire, students were informed about the procedure and the various items they could expect. Moreover, they were told that participating in the survey is voluntary and anonymous to avoid ethical issues.

4.2. Methodology

A quantitative method was used for this study by collecting data in the form of a paper-pen questionnaire given to different learners. The reason for conducting a quantitative instead of a qualitative research was that the focus of this study lies on assessing students' motivation, and thereby, the learners' communalities and differences in motivation rather than the individual characteristics of each student (Dörnyei & Ushioda 2011: 202). Moreover, *"a quantitative enquiry is systematic, rigorous, focused and tightly controlled, involving precise measurement and producing reliable and replicable data that is generalizable to other contexts"* (2011: 3). Hence, a questionnaire was considered to be the most appropriate instrument to reach the intended target group.

4.2.1. Questionnaire design

The questionnaire aims to reveal background information on the participating students, such as their age, gender, birth place, mother tongue, self-assessment concerning how good they think they are at school and information on their parent's origin and occupation. Moreover, the attitude towards new media technologies with a focus on tablets, smartboards and smartphones will be investigated and finally the students' attitude and motivation towards learn English will be surveyed. For the construction of the questionnaire pre-fabricated questionnaires were used for inspiration and adapted for the aim of this study. For part 1 and part 2 of the

questionnaire, item construction regarding the learner differences and learners' social background was inspired by standardized BIFI (2013) and PISA (2015) questionnaires. In part 3, students' preferred usage of new media technologies in their free-time is examined. The fourth part deals with the students' usage of new media technology during class-time involving their attitude towards the respective medium. For this part, the items are designed by the author. Since *"no battery can be used mechanically (i.e. without making considerable adjustments in contexts other than where it was developed"* (Dörnyei & Ushioda 2011: 265) the final part, regarding students' motivation for English learning, is taken from 'The Attitude Motivation Test Battery' (AMTB) by Gardner (2004) whereas items were translated into the target language, adapted to the limited scope of the study and completed with some items from the L2 motivation questionnaire used by Taguchi et al. (2009). The construction of the five different parts of the questionnaire was done under closer consideration. Moreover, it is important to note that the items were translated into the target language, German. The German version is attached in the appendix.

4.2.1.1. Part 1 & 2: Learner differences and social background

Part 1 of the questionnaire focuses on the differences and similarities between the individual learners. The item design is slightly based on the standardization questionnaire designed by BIFIE (2013, 2015), though small adaptations are made for the sake of understanding. Here, most of the items are constructed in the form of multiple-choice answers where students are required to tick the correct option or add their correct answer as shown in the following item:

Where are you born?

- ☐ Austria
- ☐ Other country: _____

Moreover, students' gender, age, birth place and mother tongue are asked. Another item was developed to investigate students' self-assessment concerning how well

they perform at school. Participants can evaluate themselves on a scale ranging from 1 (which means very good) to 5 (very bad).

In the second part, items concerning students' parents were designed. Learners have to indicate the occupation and birth place of their father and mother. If mother or father are not currently employed, students were asked to state the last job their mother or father did. Furthermore, pupils have to state their parent's highest degree of education by ticking the correct option. The possible options are, beginning with the lowest degree of education: compulsory school, final apprenticeship examination, craftsman's examination, school without A-level (e.g. commercial school), school with A-level (e.g. grammar school), nursing school, university degree and teacher training college.

4.2.1.2. Part 3: students' usage of new media technologies in leisure time

The third part of the questionnaire investigates the students' media equipment at home as well as their free-time usage of new media technologies. The first two items are concerned with the media equipment students have available at home. Students should indicate if they have internet access at home (item 10) and how many digital devices the whole family together possesses (item 11). Therefore, ten different options are provided from which students can choose, namely: *computer/laptop, TV, smartphone, tablet/iPad, radio, mp3 player/iPod, games console, eBook reader, digital camera, none*. Subsequently, they are specifically asked how many smartphones they have altogether at home (including their parents and siblings). It was pointed out to the students that phones only with a touch display should be counted. Following this, pupils should indicate if they possess their own smartphone (item 13). If they do so, they should answer the next items. Otherwise, since the subsequent items deal with activities done with this medium, they should skip ahead to the item number indicated:

Do you have an own smartphone?

- ☐ Yes
- ☐ No → If *No:* skip item 14,15 and 16. Move on to item number 17.

In the next item (14) students should fill out their age when they got their first smartphone. Following this, the students' favourite free time activity with a smartphone is investigated (item15). They can choose between the following several activities and mark the ones they prefer with a cross:

YouTube, sending messages or pictures, searching for information, online communities (such as Facebook, Instagram or Snapchat), watching movies or videos, listening to music, playing online games in person, playing online games with others, downloading apps, writing Emails, searching information for school or homework, publishing pictures (on Facebook, Instagram or Snapchat), making or editing pictures, downloading music, writing or reading blogs.

Moreover, the participants should indicate how often they do the respective activities with their smartphone (item 16). For this item students can choose on a scale from *rarely/never, once a month, one a week, several times a week* or *every day*. The mean value of this item will point out what young students most likely and usually do with their smartphone. Students are asked the same items for their usage of tablet (item 17-21) and computer/laptop (item 22-26).

4.2.1.3. Part 4: Media usage in classroom

This part explores the usage of tablets, smartboards and smartphones in the classroom. First, students have to indicate whether they have ever used a tablet in an English lesson (item 25). If they have never used a tablet during class time before, they should skip the following questions. Students who claimed that they have worked with a tablet during their English lesson should state how often they use it (item 28). They can choose to tick *in every English lesson, several times per week, once per week, once per month* or *on rare occasions*. Furthermore, the duration of media usage

is asked. In other words, item 29 investigates how long students have worked with the tablet in the classroom with the choices *since this school year* or *longer than one year* with a cross. Subsequently, students should indicate for what purpose they use the tablet in school (item 30). The options are: *learning vocabulary, playing games, doing quizzes, studying new content* and *using learning apps*. The final part consists of 11 statements where students should state their attitude towards the tablet usage in the classroom (item 31). Therefore, a 5 point Likert scale was created in which students can decide how much they agree with each statement by ticking the correct box on a scale from *strongly agree* (4) to *strongly disagree* (0). The self-designed statement for this item are translated as follows:

I enjoy working with tablets.
I am more attentive when working with tablets in the classroom.
I also use a tablet in my free-time.
It is unnecessary to use tablets in the classroom.
I prefer working with a tablet instead of the schoolbook.
Working with a tablet could be useful for my future career or for getting a good job.
The English lesson is more fun when we are allowed to use tablets.
I can easily remember new content (vocabulary, grammar) when working with a tablet.
I would like to use the tablet more often in the classroom.
Due to the usage of tablets in the classroom, I think I made process in English language learning.

The same items (27-31) are used to investigate students' usage of smartboard (item 32-36) and smartphones in the classroom (item 37-41). Moreover, the statements are asked to discover students' attitude towards smartboards and smartphones.

4.2.1.4. Part 5: Students' motivation for English learning

The fifth part is based mainly on 'The Attitude Motivation Test Battery' (AMTB) by Garner (2004). It is important to have in mind what motivation really means. As previously mentioned, *"what moves a person to make certain choices, to engage in action, to expend effort and persist in action"* (Dörnyei & Ushioda 2011: 2) determines people's motivation. The aim of the AMTB is to determine specific factors or variables

that might influence students' motivation. As mentioned in the literature review, the constructs are: 'Integrativeness', 'Attitude towards the learning situation' and 'Motivation'. Including all variables that were tested within the respective construct would expand the scope of the questionnaire, therefore, always two variables which best fit to the target group were chosen. The items were designed in the form of a 5-point Likert scale ranging from 'strongly disagree (0)' to 'strongly agree (4)'. Moreover, positively and negatively worded items were used in order to overcome the *"acquiescence bias"* which means that some people rather tend to agree than disagree with items when they are actually in doubt (Dörnyei 2010: 9). Thus, the negatively keyed item should work as a distractor.

Integrativeness:

The importance of social and cultural aspects of the English language play a vital part in the construct 'Integrativeness'. The variables to test students' attitude are divided into three sub-categories, namely 'integrative orientation', 'attitude towards English speaking people' and 'interest in foreign languages'.

For defining 'integrative orientation', Gardner (2010: 116) points out that *"the purpose of this scale is not to identify any one of the individual reasons, but rather assess the extent to which the social aspects of English communication are seen as important to the individual".* Thus, the following statements are chosen:

Studying English is important because it will allow me to meet and converse with more and varied people.
Studying English is important because it will enable me to better understand and appreciate the English way of life.

As the name of the next sub-category already implies 'Attitude towards English speaking people' refers to people whose first language is English (Gardner 2010: 117). No clear indication of a specific cultural community such as U.S.A. or Great Britain is given since the focus is on *"attitudes towards English speaking communities in general"* (ibid: 117). The statements chosen reads:

I wish I could have many native English speaking friends.
I would like to know more native English speakers.

Finally, ‘Interest in foreign languages’ deals with the *“general interest in or tolerance to other groups in general but focused on the issue of language”* (Gardner 2010: 117). This sub-category consists of both positively- and keyed items. Consequently, one positive and one negative item was integrated into the questionnaire:

I enjoy meeting people who speak foreign languages.
I really have no interest in foreign languages.

Gardner (2010: 118) highlights the importance of using all three scales instead of choosing just one since “*the socio-educational model treats them as three measures which as a unit provide a reasonable measure of Integrativeness”*. Furthermore, two statements were included which are inspired from Taguchi’s motivation questionnaire (2009). The items concern students’ cultural interests and were included since they might be of more relevance for 13 or 14-year-old students:

In my free-time I enjoy reading English books.
In my free-time I enjoy watching English series or movies.

Thus, in order to calculate ‘Integrativeness’ those four scales were taken into consideration.

Attitude towards the learning situation:

Gardner (2010: 119) argues that pupils’ attitude towards the learning situation and their evaluation of their language teachers or the course itself might have a potential influence on students’ motivation. Therefore, statements regarding ‘English teacher evaluation’ and ‘English course evaluation’ are formulated. For ‘English teacher evaluation’ both a positive and negative item was chosen *“to assess the degree of positive attitude toward the language teacher”* (ibid: 119). The items are as follows:

My English teacher is a great source of inspiration to me.
I don’t think that my English teacher is very good.

The items used for ‘English course evaluation’ measure the students’ attitude towards the English class in general (ibid: 119). Again, both a positive and a negative item were used:

I enjoy the activities of our English class much more than those of my other classes.
My English class is really a waste of time.

In order to receive insight into the students' attitudes toward the learning situation, the items of 'English teacher evaluation' and 'English course evaluation' need to be aggregated (Gardner 2010: 121).

Motivation:

As pointed out in the socio-educational model (see Chapter 3.2.4.) the focus to assess motivation is narrowed down to three aspects, namely 'Motivational intensity', 'Desire to learn English' and 'Attitudes toward learning English' which means *"how much the individual enjoys learning the language"* (Gardner 2010: 121). 'Motivational intensity' describes *"how much the individual wants to learn the language"* (Gardner 2010: 121) and is tested with the following positive and negative item:

I really work hard to learn English.
I put off my English homework as much as possible.

'Desire to learn English' defines *"how much the individual wants to learn the language"* (ibid: 121) and is also assessed with a positive and negative item, which reads:

I wish I were fluent in English.
To be honest, I really have no desire to learn English.

'Attitudes toward learning English' means *"how much the individual enjoys learning the language"* (ibid: 121) and is assessed with positively and negatively worded items. They are the following:

Learning English is really great.
I hate English.

Gardner (2010: 12) argues that the aggregation of all three scales is necessary to assess students' overall motivation to learn English.

Instrumentality:

Nevertheless, students' motivation can be measured not only by integrative motives but can also depend on an *"instrumental orientation"* (Gardner 2010: 127). Several practical reasons such as getting rewards for good grades, getting a job or pleasing parents might be influential to students' motivation (ibid: 127). The reasons can be

highly diverse and multifaceted, however for this study the most accurate regarding students' age were selected which are as follows:

Studying English is important because I will need it for my career.
Studying English is important because it will be useful in getting a good job.

Moreover, the following two items were again added from Taguchi's (2009:91) motivation questionnaire:

Studying English is important to me in order to attain a good grade.
The things I want to do in the future require me to use English.

Lastly, in the ATMB one additional measure was used, namely 'Parental encouragement' which indicates how students perceive that their parents encourage and support them in language learning (Gardner 2010: 128). Thus, a high score here shows that learners think their parents are encouraging in their learning process (ibid: 128). To this end, the following items are used for the questionnaire:

My parents feel that it is very important for me to learn English
My parents try to help me to learn English
My parents encourage me to practice my English as much as possible

Moreover, Taguchi (2009: 93) integrated the parental influence into the motivation questionnaire. Due to completeness, the following to items were also added:

My parents encourage me to study English.
I have to study English because if I don't do it my parents will be disappointed with me.

All items were randomized and included in the latter part of the questionnaire. Since all students within the different schools had to answer the same questions, the questionnaire ensures a high reliability.

4.2.2. Administration of the study

After constructing the questionnaire, a pilot with some tutoring students aged 14 was done in order to assess comprehensibility and to eventually edit the questionnaire. Subsequently, slight modifications were done to make the questionnaire more

appropriate for the specific target age. The questionnaire was sent to the ‘Landesschulrat Niederösterreich’ for confirmation. In order to avoid ethical issues, a letter to the parents was designed in which parents were informed about the content, the voluntary nature and the anonymity of the survey. They were asked to sign the letter to allow their child to take part in the survey. After some weeks, the survey took place three schools. As expected, not all students handed in the signed letter from their parents, however, 119 students participated in the study.

Having described the relevant background and the procedure of the survey one needs to consider that there are some restrictions and limitations to the research which need to be pointed out. Due to the limited scope of the study, only three schools in lower Austria took part. Since the study focuses on 13 – 14-year-old students in an NMS and their attitudes towards English learning and new media usage, results have to be treated with caution and should not be overgeneralized or be uncritically compared to other subjects, age groups, school types or countries.

4.3. Results

4.3.1. Descriptive analysis

In the first part of the questionnaire the learner differences with regards to migration background, educational self-assessment as well as the students' social background were investigated.

4.3.1.1. Social background

Overall, 119 students between 13 and 14 years- old participated in the study, 40 students (21 female, 19 male) from the NMS St. Pölten, 40 students (17 female, 23 male) from the NMS Gars am Kamp and 39 students (20 female, 19 male) from the NMS Mödling by filling out the questionnaire. By comparing the students' sex within the different schools, the p-value in Table 1 shows no significant difference *($\chi^2(df=2)=.95;p=.62$)*.

Table 1: Comparison of students' sex

Gender	Schools			
	St. Pölten	Gars	Mödling	Significance
Female	21	17	20	
Male	19	23	19	
Total	40	40	39	$\chi^2(df=2)=.95;p=.62$

Considering the students' place of birth, Table 2 shows that within all three schools the majority of students were born in Austria. However, while in the NMS Gars, no student has a different origin than Austria, in the NMS Mödling five students were born in another country (Armenia, Iraq, Poland, Syria and Hungary). Furthermore, two pupils in the NMS St. Pölten have a different place of birth than Austria (Germany, Guatemala).

Table 2: Comparison of students' birth place

Place of birth – students	Schools			
	St. Pölten	Gars	Mödling	Significance
Austria	38	40	34	
Armenia	0	0	1	
Germany	1	0	0	
Guatemala	1	0	0	
Iraq	0	0	1	
Poland	0	0	1	
Syria	0	0	1	
Hungary	0	0	1	
Total	40	40	39	$\chi^2(df=14)=14.56;p=.41$

Additionally, students were asked to assess themselves concerning how good they think they are at school on a range from 1 (very good) to 5 (very bad). Table 3 indicates that the majority of all students assess themselves as rather good or moderate students. The variance analysis shows that there is no difference in the students' self-assessment between the difference schools *(F(df=2)=.58;p=.56)*. Moreover, no difference in self-assessment is identified regarding the students' sex *(F(df=2)=.58;p=.56)*. Finally, it is shown that no significant interaction between gender and the different schools exists *(F(df=2)=.59;p=.55)*. On a whole, the variance analysis found no differences between the individual students and the different schools concerning how well students think they are at school.

Table 3: Comparison of students' self-assessment

Self-assessment students	Schools			
	St. Pölten	Gars	Mödling	Significance
1 (very good)	4	5	3	
2	12	15	15	
3	20	18	19	
4	4	2	2	
5 (very bad)	0	0	0	$\chi^2(df=6)=2.01;p=.92$

Table 4 shows a significant difference between the schools concerning the students' mother tongue *($\chi^2(df=22)=47.32;p=.00$)*. Whereas in Gars and St. Pölten the majority of students' state that their mother tongue is German, the classes in Mödling display a variety of mother tongues.

Table 4: Comparison of students' mother tongue

Students' mother tongue	**Schools**			
	St. Pölten	Gars	Mödling	Significance
German	33	39	23	
Arabic	0	0	2	
Armenian	0	0	1	
Bosnian	0	0	1	
Bulgarian	1	0	0	
Chinese	1	0	0	
Croatian	0	0	4	
Polish	0	0	1	
Serbian	0	0	4	
Slovakian	0	1	0	
Turkish	5	0	1	
Hungarian	0	0	2	
Total	40	40	39	$\chi^2(df=22)=47.32;p=.00$

As illustrated in Tables 5 and 6, a comparison of the students' parents within the test schools shows differences in the parents' birth place. A significant difference exists in both, the mothers' *($\chi^2(df=32)=53.34;p=.01$)* and fathers' *($\chi^2(df=32)=47.35;p=.04$)* place of birth within the three test groups. In Gars 37 mothers and 36 fathers were born in Austria and in St. Pölten 33 mothers and 31 fathers also originate from Austria. However, in Mödling only 22 mothers and 24 fathers have an Austrian background which means that almost 44% of the students' mothers and 38% of the fathers have a migration background.

Table 5: Comparison of birth place of students' mother

Birth place - mother	Schools			
	St. Pölten	Gars	Mödling	Significance
Austria	33	37	22	
Armenia	0	0	1	
Australia	0	1	0	
Bosnia	0	0	4	
Bulgaria	1	0	0	
China	1	0	0	
Iraq	0	0	1	
Croatia	0	0	2	
Netherlands	1	0	0	
Pakistan	0	1	0	
Poland	0	0	1	
Switzerland	0	0	1	
Serbia	0	0	2	
Slovakia	0	1	0	
Syria	0	0	1	
Turkey	4	0	1	
Hungary	0	0	3	
Total	40	40	39	$\chi^2(df=32)=53.34;p=.01$

Table 6: Comparison of birth place of students' father

Birth place - father	Schools			
	St. Pölten	Gars	Mödling	Significance
Austria	31	36	24	
Armenia	0	0	1	
Bosnia	0	0	4	
Bulgaria	1	0	0	
China	1	0	0	
Germany	0	0	1	
Iraq	0	0	1	
Kosovo	1	0	0	
Croatia	0	1	1	
Pakistan	0	0	1	
Poland	0	1	1	
Swiss	0	0	2	
Slovakia	0	1	0	
Syria	0	0	1	
Turkey	6	0	1	
Hungary	0	0	1	
Total	40	39	39	$\chi^2(df=32)=47.35;p=.04$

Looking at Table 7, the p-value indicates that a significant difference within the test group is seen with respect to the occupation of students' mothers

($\chi^2(df=10)=17.54;p=.06$). In comparison to the other schools, the most mothers with a leading position are found in the NMS Mödling, whereas the NMS Gars has the highest number of mothers who are self-employed.

Table 7: Comparison of mothers' occupation

Occupation - mother	**Schools**			
	St. Pölten	Gars	Mödling	Significance
Employer	28	20	21	
Laborer	7	12	10	
Leading position	1	0	6	
Self-employed	3	5	1	
Unemployed	1	2	0	
Total	40	39	38	$\chi^2(df=10)=17.54;p=.06$

When considering the profession of the students' fathers in Table 8 for each school, it becomes apparent that there are not as significant differences as found within the comparison of the mothers *($\chi^2(df=10)=11.48;p=.32$)*.

Table 8: Comparison of fathers' occupation

Occupation – father	**Schools**			
	St. Pölten	Gars	Mödling	Significance
Employer	7	18	15	
Laborer	20	12	15	
Leading position	7	7	6	
Self-employed	3	2	2	
Unemployed	0	1	1	
Total	37	40	39	$\chi^2(df=10)=11.48;p=.32$

With regards to the education of fathers, Table 9 shows that no significant difference can be spotted between the fathers of the different test groups *($\chi^2(df=16)=21.87;p=.15$)*. Even though many students do not know their father's degree of education, results indicate that in each school most students ticked the option on the questionnaire that his or her father graduated with an A-level (Matura).

Table 9: Comparison of fathers' education

Education - father	Schools			
	St. Pölten	Gars	Mödling	Significance
Compulsory school	2	9	0	
Apprenticeship diploma	6	6	4	
Craftsman's examination	2	2	2	
School without A-levels	4	3	3	
School with A-levels	11	10	8	
Nursing school	0	1	1	
University or college	3	0	4	
Teacher training college	0	1	1	
I don't know	10	8	16	
Total	38	40	39	$\chi^2(df=16)=21.87;p=.15$

Similarly, when looking at the degree of education of student's mothers within the different schools, the p-value in Table 10 shows no significant difference *($\chi^2(df=16)=14.02;p=.60$)*. Again, most students did not indicate their mother's highest education, by ticking the option 'I don't know' in the questionnaire. Whereas in Mödling, 10 students claimed that their mother's highest education is the A-level (Matura), in Gars 7 students stated that their mother merely graduated from compulsory school or from a school without an A-level. The mother's highest indicated education from students in St. Pölten is an apprenticeship diploma or an A-level (Matura).

Table 10: Comparison of mothers' education

Education mother	Schools			
	St. Pölten	Gars	Mödling	Significance
Compulsory school	2	7	3	
Apprenticeship diploma	8	3	5	
Craftsman's examination	1	1	1	
School without A-levels	4	6	4	
School with A-levels	8	4	10	
Nursing school	4	2	1	
University or college	4	4	2	
Teacher training college	1	1	0	
I don't know	8	12	13	
Total	40	40	39	$\chi^2(df=16)=14.02;p=.60$

4.3.1.2. Students' media usage in leisure time

When looking at Table 11, it becomes obvious that all students in each school have internet access at home. Thus, no p-value can be calculated.

Table 11: Comparison of available internet access

Internet access	**Schools**			
	St. Pölten	Gars	Mödling	Significance
Yes	40	40	39	
No	0	0	0	
Total	40	40	39	-

Moreover, Table 12 shows that except for one student in Mödling, all students stated that they possess their own smartphone. Hence, the statistical analysis shows no difference between the test groups *($\chi^2(df=2)=2.07;p=.36$)*.

Table 12: Comparison of smartphone possession

Smartphone Possession	**Schools**			
	St. Pölten	Gars	Mödling	Significance
Yes	40	40	38	
No	0	0	1	
Total	40	40	39	$\chi^2(df=2)=2.07;p=.36$

In contrast, the comparison of students' possession of their own tablet shows significant differences between the schools in Table 13 *($\chi^2(df=2)=10.25;p=.01$)*. While in St. Pölten 67.5% of the students polled have their own tablet, it is the exact opposite in Gars. Here, only 32.5% of the students possess their own tablet. In Mödling, more than half of the students claim to have a tablet (*56.4%*).

Table 13: Comparison of tablet possession

Tablet Possession	**Schools**			
	St. Pölten	Gars	Mödling	Significance
Yes	27 (67.5%)	13 (32.5%)	22 (56.4%)	
No	13 (32.5%)	27 (67.5%)	17 (43.6%)	
Total	40 (100%)	40 (100%)	39 (100%)	$\chi^2(df=2)=10.25;p=.01$

Regarding the students' private possession of a computer or laptop, Table 14 reveals no significant difference *($\chi^2(df=2)=5.3;p=.07$)*. In each school the clear majority of students own a computer or laptop. In Gars 65% of the students, in St. Pölten 83% and in Mödling even 85% of the students who participated in the study have a computer or laptop of their own.

Table 14: Comparison of computer possession

Computer Possession	**Schools**			
	St. Pölten	Gars	Mödling	Significance
Yes	33 (83%)	26 (65%)	33 (85%)	
No	7 (17%)	14 (35%)	6 (15%)	
Total	40	40	39	$\chi^2(df=2)=5.3;p=.07$

The overall number of digital devices that students have at home is illustrated in Table 15. Male students claim to have 7.3 digital devices at home and female students report about 6.8 devices. With the help of a variance analysis it becomes obvious that no differences between the three schools concerning the degree of technical equipment at the students' homes exist *($(F(df=2)=.32;p=.73)$)*. A tendential difference lies between the students' sex *($(F(df=1)=2.86;p=.09)$)*. Therefore, it can be said that there is no significant interaction *($(F(df=2)=.04;p=.96)$)*.

Table 15: Comparison of number of digital devices

Mean value	St. Pölten		Gars		Mödling	
	Female	Male	Female	Male	Female	male
Number of digital devices	7.00	7.37	6.65	7.21	6.70	7.21

Table 16 compares the extent of media usage regarding the different digital devices and student's sex. Students had to indicate how often they use the respective device for the following activities ranging from 'rarely/never (0)' to 'once per month (1)', 'once per week (2)', 'many times per week (3)' and 'every day (4)'. Thus, the mean value for the extent of each activity was scored.

Differences concerning students' gender and the extent of media usage on a smartphone are as follows. Significant differences regarding student's sex exist in the usage of YouTube on their smartphone. Male students (*M=3.48*) use it more often

than females (*M=2.93*). Furthermore, a tendential significant difference is found regarding the extent of sending messages or pictures via Whatsapp. Females, with a mean score of 3.77, send messages slightly more often than males (*M=3.46*). Another significant difference was noticed in the extent of online community usage (Social media use, e.g. Facebook, Instagram, Snapchat). Even though both sexes use it on a regular basis, girls (*M=3.61*) use it more often than their male colleagues (*M=2.90*). Moreover, the results show a significant difference between males and females concerning the extent of usage of online games. Neither boys nor girls play online alone very often on their phones. Nevertheless, male students (*M=1.62*) play online games alone more often than female students (*M=0.67*). Results obtained provide evidence that also boys (*M=1.62*) use their phone more often for online games with others than girls (*M=0.37*) do. On the contrary, significant differences exist between the answers on how often students use their smartphone for publishing photos on social media (such as Facebook, Instagram or Snapchat). According to the results, female students (*M=2.39*) publish their pictures more often than male students (*M=1.54*). A further significant difference is seen within the use of smartphones for making and editing pictures. Females (*M=3.02*) clearly use their smartphone for this activity more often than males (*M=2.44*).

Regarding the usage of tablet, no significant difference exists between students' sex. Both female and male mostly use their tablet for YouTube, to search for information or to listen to music at least once a weak. However, the tablet is rarely used for sending messages or writing e-mails.

When considering the comparison of the extent of computer usage, Table 16 shows that similar to smartphones, significant differences between sexes are revealed in online gaming alone and with others. Again, male students claim to play online alone on a computer at least once a month (*M=1.30*) while female students use it rarely or never (*M=0.55*). This difference is the same with online gaming with others. Males (*M=1.81*) prefer playing online with others more than girls (*M=0.43*) do. A significant difference exits regarding downloading apps onto the computer. Even though both sexes claimed that they rarely download apps on their computers (they rather prefer

doing that on their other devices), it is still the boys (*M=0.89*) who do it more often than girls (*M=0.25*).

Table 16: Comparison of media usage for different activities

Mean value	Smartphone		Tablet		Computer	
	Female	Male	Female	Male	Female	Male
YouTube	2.93**	3.48**	2.40	2.75	2.07	2.47
Sending messages or pictures via Whatsapp	3.77*	3.46*	0.67	0.59	0.23	0.30
Searching for information	2.67	2.69	2.27	2.13	2.34	2.55
Using online communities (Facebook, Instagram, Snapchat)	3.61**	2.90**	1.67	0.97	0.73	1.06
Listening to music	3.46	3.28	2.13	1.97	2.23	2.34
Playing online games in person	0.67**	1.62**	0.97	1.06	0.55**	1.30**
Playing online games with others	0.37**	1.62**	0.70	1.06	0.43**	1.81**
Downloading apps	1.37	1.48	1.80	1.41	0.25**	0.89**
Writing e-mails	0.44	0.59	0.47	0.72	0.80	1.04
Searching information for school or homework	2.14	2.05	1.67	1.53	1.91	2.28
Publishing pictures (via Facebook, Instagram, Snapchat)	2.39**	1.54**	0.83	0.41	0.34	0.62
Taking and editing pictures	3.02**	2.44**	0.70	0.84	0.23	0.21
Downloading music	1.84	1.57	1.23	1.34	0.66	1.53
Writing or reading blogs	0.53	0.34	0.60	0.28	0.27	0.53

4.3.1.3. Media Usage in the English Classroom

As depicted in Table 17, a comparison of the tablet use in the English classroom shows significant differences between the three different schools ($\chi^2(df=2)=102.40;p=.00$). While in St. Pölten none of the students indicated using a tablet during the class, in Gars only a limited number of students have ever used a tablet in their English lesson. On contrary, almost all of the students in Mödling stated that they have used a tablet in their English lessons.

Table 17: Comparison of tablet usage in English classroom

Usage of tablets in class	**School**			
	St. Pölten	Gars	Mödling	Significance
Yes	0	8	38	
No	40	32	1	
Total	40	40	39	$\chi^2(df=2)=87.90;p=.00$

How often students use a tablet in the classroom is demonstrated in Table 18. The respective p-value does not show significant differences between the schools ($\chi^2(df=2)=7.98;p=.02$). It becomes clear that pupils in Mödling use the tablet rarely or at least once in a month during English classes. The limited number of students who claimed to use a tablet during the lessons indicated that they also use it rarely or once a month.

Table 18: Comparison of tablet usage extent

Extent of tablet usage	**School**			
	St. Pölten	Gars	Mödling	Significance
Rare	0	3	31	
Once a month	0	5	6	
Once a week	0	0	1	
Total	0	8	38	$\chi^2(df=2)=7.98;p=.02$

Regarding how long students already work with a tablet in the English classroom, Table 19 shows a significant differences between the schools. While in Gars, the majority of students who have already used their tablets in class, have done so for already more than one year, in Mödling the majority of students just did so this year.

Table 19: Comparison of duration of tablet usage

Duration of tablet usage	School			
	St. Pölten	Gars	Mödling	Significance
Since this year	0	1	35	
Longer than one year	0	7	3	
Total	0	8	38	$\chi^2(df=1)=24.62;p=.00$

Information on whether students have already worked with a Smartboard during an English lesson is illustrated in Table 20. The p-value reveals that there are significant differences between the use of smartboards and the different schools ($\chi^2(df=2)=110.68;p=.00$). It shows that in St. Pölten no one stated that he or she has ever worked with a smartboard in class. On the contrary, students in Gars and Mödling almost similarly indicated that they have already worked with a smartboard in English lessons.

Table 20: Comparison of usage of smartboards

Usage of smartboards in class	School			
	St. Pölten	Gars	Mödling	Significance
Yes	0	38	39	
No	40	2	0	
Total	40	40	39	$\chi^2(df=2)=110.68;p=.00$

When considering the different extent of smartboard implementation in Table 21, significant differences can be spotted among the test groups ($\chi^2(df=3)=14.66;p=.00$). The great majority of students (*73.4%*) in Mödling indicated that they use the smartboard in every English lesson, whereas only 35.9% of the students in Gars claimed that they work with the smartboard so often. Still, the majority of the students in Gars reported using the smartboard several times a week (*48.7%*).

Table 21: Comparison of extent of smartboard usage

Extent of smartboard usage	School			
	St. Pölten	Gars	Mödling	Significance
Rare	0	0	0	
Once a month	0	1 (2.6%)	1 (2.6%)	
Once a week	0	5 (12.8%)	0	
Several times per week	0	19 (48.7%)	9 (23.1%)	
In every English lesson	0	14 (35.9%)	29 (73.4%)	
Total	0	39	39	$\chi^2(df=3)=14.66;p=.00$

When comparing the schools according to how long they are already working with the smartboard in the classroom, significant differences exist, as noted in Table 22 *($\chi^2(df=1)=77.00;p=.00$)*. All students in Mödling indicated that they have already used the Smartboard for longer than one year. The exact opposite is found in Gars where students just started to work with a smartboard since the beginning of this school year.

Table 22: Comparison of smartboard usage duration

Duration of smartboard usage	School			
	St. Pölten	Gars	Mödling	Significance
Since this year	0	38	0	
Longer than one year	0	0	39	
Total	0	38	39	$\chi^2(df=1)=77.00;p=.00$

Table 23 summarizes the findings of the use of smartphones in the classroom. Here, significant differences can be obviously be seen between the three different schools *($\chi^2(df=2)=51.14;p=.00$)*. In St. Pölten, the distribution concerning the usage of smartphones during the lesson is almost equal. While 22 of 40 students claim to use their smartphone within class, 18 students agreed that they have used their smartphone for academic purposes during the English lesson. In Gars, only 1 student have used a smartphone in class. In contrast, 82% of the students in Mödling have already used a mobile phone during class time.

Table 23: Comparison of smartphone usage in class

Usage of smartphones in class	School			
	St. Pölten	Gars	Mödling	Significance
Yes	18	1	32	
No	22	39	7	
Total	40	40	39	$\chi^2(df=2)=51.14;p=.00$

According to Table 24, no significant differences exist regarding the degree of smartphone usage in the classroom *($\chi^2(df=4)=4.2;p=.38$)*. The broad majority of pupils who use a smartphone during class do so rarely. Only a limited and almost equal number of students in St. Pölten and Mödling claimed to use their mobile phones once in a month in class time. Just one student in Mödling indicated integrating his or her smartphone once in a week into the classroom.

Table 24: Comparison of smartphone usage extent

Extent of smartphone usage	School			
	St. Pölten	Gars	Mödling	Signifikanzen
Rare	11	1	26	
Once a month	7	0	5	
Once a week	0	0	1	
Several times per week	0	0	0	
In every English lesson	0	0	0	
Total	0	0	0	$\chi^2(df=4)=4.2;p=.38$

In consideration of the item regarding how long students already use their smartphone during class time, differences between the schools can be highlighted *($\chi^2(df=2)=10.57;p=.01$)*. While in Mödling 93.8% of the students have used their smartphone for longer than one year, in St. Pölten only 66.7% indicated doing so. There, also 33.3% of the students reported using the mobile phone in class since the beginning of this school year.

Table 25: Comparison of smartphone usage duration

Duration of smartphone usage	School			
	St. Pölten	Gars	Mödling	Significance
Since this year	6 (33.3%)	1 (100%)	2 (6.2&)	
Longer than one year	12 (66.7%)	0	30 (93.8%)	
Total	18 (100%)	1 (100%)	32 (100%)	$\chi^2(df=2)=10.57;p=.01$

In the following part, the students' motivation to use new media technologies in the classroom is measured. As previously pointed out, different items were created to assess the students' attitude towards tablet, smartboard and smartphone usage in class. Nevertheless, 6 out of 11 items were taken into consideration for the analysis. For each item the mean value was scored, the higher the mean value, the more students are motivated. The aggregation of the following six items, therefore, represents students' motivation to use new media in school:

I enjoy working with tablets/smartboards/smartphones.
I am more attentive when working with tablets/smartboards/smartphones in the classroom.
I can easily remember new content (vocabulary, grammar) when working with a tablet/smartboard/smartphone.
I am more motivated during the lesson when working with a tablet/smartboard/smartphone.
I would like to use the tablet/smartboard/smartphone more often in the classroom.
Due to the usage of tablets/smartboards/smartphones in the classroom, I think I made progress in English language learning.

Table 26 investigates if there is a difference between students' motivation concerning tablet, smartphone and smartboard usage in class among the different schools. In order to compare students' attitude toward each medium, pupils from St. Pölten and Gars are pooled together since their technology usage in class is rather low. Thus, two school types are compared:

- Mödling is the school that uses a lot of media technologies in school, whereas
- Neither St. Pölten and Gars do not use them sufficiently.

As Table 26 reveals, there is a significant difference between the schools and students' motivation to use a smartphone in class (*p=.01*).

Table 26: Influence of school type and gender on students' motivation to use new media

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sumo f Squares	df	Mean Square	F	Sig.	Partial Eta-square
School	Motivation Tablet	.94	1	.936	.98	.33	.03
	Motivation Smartphone	5.31	1	5.31	9.05	**.01**	.23
	Motivation Smartboard	4.82	1	4.82	1.91	.18	.06
Sex	Motivation Tablet	1.78	1	1.78	1.87	.18	.06
	Motivation Smartphone	1.53	1	1.53	2.62	.12	.08
	Motivation Smartboard	.25	1	.25	.10	.75	.00
School * Sex	Motivation Tablet	.61	1	.61	.64	.43	.02
	Motivation Smartphone	.77	1	.77	1.30	.26	.04
	Motivation Smartboard	.61	1	.61	.24	.63	.01
Error	Motivation Tablet	29.48	31	.95			
	Motivation Smartphone	18.19	31	.59			
	Motivation Smartboard	78.39	31	2.53			
Total	Motivation Tablet	255.78	35				
	Motivation Smartphone	323.61	35				
	Motivation Smartboard	387.42	35				

Hence, when looking at Table 27, the mean value shows that students in Mödling (*M = 3.09*) are more motivated to use smartphones in class than students in St. Pölten and Gars (*M = 1.38*). Since students in Mödling indicated that they have already worked with smartphones already longer than one year, this shows that students who use smartphones more often and regularly in class, are more motivated to work with especially the smartphone. No significant difference is seen regarding tablet and smartboard motivation. However, Table 27 shows that the mean value of students' motivation is always to some degree higher than in the other school type. Moreover, no difference in motivation between students' sex exists.

Table 27: Influence of media usage extent on motivation regarding tablet, smartphone and smarboard usage

	School	Sex	Mean value	Standard deviation	N
Motivation Tablet	Gars + St. Pölten	female	1.39	1.34	3
		male	2.67		1
		total	1.70	1.26	4
	Mödling	female	2.44	1.07	15
		male	2.78	.81	16
		total	2.62	.94	31
Motivation Smartphone	Gars + St. Pölten	female	1.06	1.29	3
		male	2.33		1
		total	1.38	1.24	4
	Mödling	female	2.98	.80	15
		male	3.20	.62	16
		total	3.09	.71	
Motivation Smartboard	Gars + St. Pölten	female	1.39	1.21	3
		male	2.17		1
		total	1.58	1.06	4
	Mödling	female	3.19	2.25	15
		male	3.02	0.56	16
		total	3.10	1.56	31

4.3.2. Correlation between students' motivations

Table 28 demonstrates how the different types of motivation (i.e. students' own motivation to learn, their attitude towards the learning situation, their integrative orientation, family encouragement and instrumentality) correlate. Moreover, how or if the motivation to use a tablet, smartphone and smartboard correlates with the different types of motivation is also seen in the table. First, data analysis shows that the different types of motivation are correlated: Students' motivation to learn English (=Motivation) significantly correlates with a positive attitude towards the learning situation *(r=.39***), meaning that if their motivation to learn English is high, they also positively evaluate their English teacher and lesson (=Attitude learning situation). Moreover, students' own motivation also significantly correlates with integrativeness *(r=.52***) which means that students who are motivated to learn English have a

positive attitude towards English speaking people and an overall interest in foreign languages. The most significant correlation with students' motivation exists with instrumentality *(r=.69***). This means that, if students enjoy learning English they also learn English in order to attain a good grade or to get a good job in the future.

A correlation exists between students' motivation and family encouragement *(r=.19**) meaning that pupils perceive that their parents support and encourage them to learn English. When considering the item how good students are at school, it shows that there is also a significant correlation (*r=-.32***). The results confirm that if students' motivation to learn English is high, they perceive themselves as a good student. However, the motivation to learn English does not correlate with students' motivation to use a tablet, smartphone or smartboard in class.

Results display that students' attitudes toward the learning situation not only correlates with students' own motivation (*r=.39***), a significant correlation between students' perception of parental encouragement is shown (*r=.70***). Moreover, there is also a significant correlation with instrumentality (*r=.47***). Students' attitude towards the learning situation do not correlate with their motivation to use a tablet or a smartphone, however, there is a tendential correlation between students' attitudes towards the learning situation and students' motivation to use the smartboard (*r=.23**) in the lesson.

Students' high extent of integrativeness, meaning the extent to which students are interested in English culture, shows not only a significant correlation with students' own motivation (*r=.52**), there is also a significant correlation between integrativeness and instrumentality (*r=.54***). A tendential correlation is found between integrativeness and the parents' encouragement (*r=.19**). However, no correlation is seen between integrativeness and students' attitude towards the learning situation and also no correlation exists between integrativeness and the motivation to use new media in class.

The higher the scores in family encouragement, the more students perceive that parents support them in learning. Despite the significant correlation between parental encouragement and students' attitude towards the learning situation (*r=.70***), the

tendential correlation between family encouragement and students' own motivation (*r=.19**) and the tendential correlation between family encouragement and integrativeness (*r=.19**) there are also two other significant correlations: Family encouragement significantly correlates with students' instrumental orientation (=Instrumentality) (*r=.45***) and with students' motivation to use a smartboard in class (*r=.43***).

As already mentioned, students' instrumental orientation significantly correlates with their own motivation to learn (*.69***), their attitude towards the learning situation (*.54**) as well as with their perception of family encouragement (*.45***). Moreover, instrumentality also shows a tendential correlation with students' motivation to use a smartboard in class. Results obtained display another correlation between instrumentality and students' self-assessment concerning the item 'How good are you at school?'. If students have a high score in instrumental motivation, they perceive themselves as a good student (*-.21**).

Furthermore, the table shows how or if the motivation to use a tablet, smartphone or smartboard correlates with the different types of motivation: The results obtained display that the motivation to use a tablet or smartphone in class has no influence on students' motivation to learn English. However, if students are motivated to work with a tablet, they are also highly motivated to use the smartphone (*.66***) and vice-versa. Results show that students who are motivated to work with a smartphone are also highly motivated to work with the smartboard (*.43***), which means that there is a significant correlation between the motivation of smartphone usage and the motivation of smartboard usage.

Interestingly, the motivation to use a smartboard in class has a tendential influence on students' attitude towards the learning situation (*.23**). Furthermore, there is also a significant correlation between students' motivation to use the smartboard in class and the students' family encouragement (*.43***). The motivation to use a smartboard in class also tendentially correlates with instrumentality (*.25**) which means that students who are motivated to use the smartboard in class are also motivated to learn English.

Table 28: Correlations of students' motivations to learn English with the motivation to use digital media

Correlations										
		Motivation	Attitude learning situation	Integrativeness	Family encouragement	Instrumentality	Motivation Tablet	Motivation Smartphone	Motivation Smartboard	How good are you at school?
Motivation	Pearson correlation	1	.39**	,52**	.19*	.69**	.03	.13	.15	-.32**
Attitudes learning situation	Pearson correlation	.39**	1	.18	.70**	.47**	.06	.05	.23*	-.15
Integrativeness	Pearson correlation	.52**	.18	1	.19*	.54**	.01	.14	.13	-.10
Family encouragement	Pearson correlation	.19*	.70**	.19*	1	.45**	.24	.20	.43**	-.10
Instrumentality	Pearson correlation	.69**	.47**	.54**	.45**	1	.15	.18	.25*	-.21*
Motivation Tablet	Pearson correlation	.03	.06	.01	.29	.15	1	.66**	.27	.27
Motivation Smartphone	Pearson correlation	.13	.05	.14	.20	.18	.66**	1	.43**	.03
Motivation Smartboard	Pearson correlation	.15	.23*	.13	.43**	.25*	.27	.43**	1	.10
How good are you at school?	Pearson correlation	-.32**	-.15	-.10	-.10	-.21*	.27	.03	.10	1

**P<0.01 *P<0.05

4.3.3. Regression analysis

In order to examine if the motivation to learn English (dependent variable) depends on the extensive usage of digital devices in class, a regression analysis was calculated. This is a way of *"modelling the relationship between variables"* (Cohen, Manion & Morrison 2009: 537). As independent variables the frequency of media usage, the motivations (family encouragement, integrativeness, attitudes toward learning situation and instrumentality), students' sex and the different schools were added to the regression analysis. The regression equation reads as follows:

Motivation = extent tablet + extent smartboard + extent smartphone + family encouragement + integrativeness + attitudes learning situation + instrumentality + sex + school

Table 29: Model summary motivation

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.822[a]	.675	.594	.52843	.675	8.304	9	36	.000

a. Predictors: (Constant), school, family encouragement, integrativeness, sex, extent smartboard, extent tablet, extent smartphone, attitude learning situation, instrumentality

The model results in an R square of *.675*. The correlations in the regression equation are constellated as follows.

Table 30: Coefficients motivation

Coefficients[a]						
Model		Non standardized coefficients		Standardized coefficients	T	Sig.
		Regressionskoeffizient B	Standard Fehler	Beta		
1	(Constant)	-.701	.809		-.867	.392
	Extent Tablet	-.114	.181	-.069	-.627	.534
	Extent Smartboard	.282	.149	.209	1.899	.066
	Extent Smartphone	.102	.232	.058	.439	.663
	Family encouragement	-.437	.190	-.349	-2.308	.027
	Integrativeness	.087	.185	.061	.472	.640
	Attitudes learning situation	.368	.255	.200	1.447	.156
	Instrumentality	.932	.177	.827	5.259	.000
	Sex	.373	.183	.227	2.041	.049
	School	-.257	.329	-.119	-.781	.440
a. Dependent variable: Motivation						

Motivation = *-.07* x extent tablet + *.21* x extent smartboard + *.06* x extent smartphone + (-*.35**) x family encouragement + *.06* x integrativeness + *.20* x attitudes learning situation + *.82*** x instrumentality + *.23** x sex + (-*.12*) x school

Thus, results obtained indicate that the motivation to learn English does not depend on the duration and extent of media usage, but it does depend on family encouragement (*p=0.3*), instrumentality (*p=.00*) and gender (*p=.05*).

In order to examine if the motivation to use a tablet (dependent variable) depends on the motivation to study English, another regression analysis was calculated. As independent variables the motivations (family encouragement, integrativeness, attitudes toward learning situation and instrumentality), students' sex and the different schools were added to the regression analysis. The regression equation reads as follows:

Motivation tablet = Motivation + family encouragement + integrativeness + atttitudes learning situation + instrumentality + sex + school

Table 31: Model summary motivation tablet

Model summary									
				Std Error	Change Statistics				
Model	R	R-square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.450[a]	.202	.055	.97340	.202	1.375	7	38	.244

a. Predictors: (Constant), school, integrativeness, family encouragement, sex, motivation, attitudes learning situation, instrumentality

The model results in an R-square of *.202*. The correlations in the regression equation are constellated as follows.

Table 32: Coefficients motivation tablet

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.383	.991		1.395	.171
	Motivation	-.198	.297	-.174	-.668	.508
	Attitudes learning situation	-.597	.488	-.277	-1.223	.229
	Integrativeness	-.279	.329	-.167	-.848	.402
	Family encouragement	.362	.319	.253	1.136	.263
	Instrumentality	.485	.368	.400	1.317	.196
	Sex	.497	.317	.250	1.564	.126
	School	.570	.406	.218	1.404	.169

a. Dependent variable: Motivation Tablet

The regression analysis shows that no variable has a significant influence on the motivation to use a tablet.

In order to examine if the motivation to use a smartphone (dependent variable) depends on the motivation to study English, a further regression analysis was calculated. As independent variables the motivations (family encouragement, integrativeness, attitudes toward learning situation and instrumentality), students' sex

and the different schools were added to the regression analysis. The regression equation reads as follows:

Motivation smartphone = Motivation + family encouragement + integrativeness + atttitudes learning situation + instrumentality + sex + school

Table 33: Model summary motivation smartphone

Model summary									
				Std Error	Change Statistics				
Model	R	R-square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.485[a]	.235	.123	.99167	.235	2.105	7	48	.061
a. Predictors : (Constant), school, sex, instrumentality, family encouragement, integrativeness, attitudes learning situation, motivation									

The model ressults in an R square of *.235*. The correlations in the regression equation are constellated as follows.

Table 34: Coefficients motivation smartphone

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.431	.710		2.016	.049
	Motivation	-.078	.266	-.067	-.294	.770
	Attitudes learning situation	-.905	.408	-.456	-2.218	.031
	Integrativeness	.008	.267	.005	.030	.976
	Family encouragement	.486	.262	.346	1.855	.070
	Instrumentality	.287	.291	.236	.986	.329
	Sex	.219	.281	.104	.779	.440
	School	.893	.304	.421	2.941	.005
a. Dependant variable: Motivation Smartphone						

Summarized, students' attitudes towards the learning situation (*p=.03*) and the school type (*p=.01*) have a significant influence on students' motivation to use a smartphone in class.

In order to examine if the motivation to use a smartboard (dependent variable) depends on the motivation to study English, a last regression analysis was calculated. As independent variables the motivations (family encouragement, integrativeness, attitudes toward learning situation and instrumentality), students' gender and the different schools were added to the regression analysis. The regression equation reads as follows:

Motivation smartboard = Motivation + family encouragement + integrativeness + atttitudes learning situation + instrumentality + sex + school

Table 35: Model summary motivation smartboard

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.505[a]	.255	.186	1.15123	.255	3.674	7	75	.002

a. Predictors: (Constant), school, sex, family encouragement, motivation, integrativeness, attitudes learning situation, instrumentality

The model results in an R square of *.255*. The correlations in the regression equation are constellated as follows:

Table 36: Coefficients motivation smartboard

Coefficients[a]						
Modell		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.845	.782		1.080	.284
	Motivation	.246	.228	.177	1.080	.284
	Attitudes learning situation	-.669	.420	-.250	-1.594	.115
	Integrativeness	-.007	.269	-.003	-.027	.979
	Family encouragement	1.036	.281	.591	3.692	.000
	Instrumentality	-.066	.281	-.046	-.235	.815
	Sex	-.106	.284	-.042	-.373	.710
	School	.451	.260	.177	1.734	.087
a. Dependant Variable: Motivation Smartboard						

The results of the regression analysis show that family encouragement significantly influence students' motivation to use a smartboard in school (*p=.00*).

5. Discussion

In general, the results obtained show that students have a positive attitude towards new media technologies in the classroom and are therefore motivated to work with them. As correlation analysis shows, students who have a high motivation to work with tablets are also highly motivated to use a smartphone and vice versa. Furthermore, students who show a positive attitude towards the usage of smartphones also have a great attitude towards smartboards in the classroom. This shows that in general, students perceive digital media technologies as fun tools and enjoy using them in the lesson. However, the aim of the research is to investigate whether students who already use these technologies longer and more intensely in class have a more positive attitude towards their usage than students who just started to use them. In addition, the thesis aims to find out if the usage of digital technologies also has an impact on the students' motivation to learn English.

Thus, after data collection and analysis the following research questions can be answered:

- How do new media technologies affect students' motivation and willingness to learn a language?
- How does duration and extent of media usage influence students' motivation to use new media technologies in the classroom?
- Does duration and extent of new media usage influence students' attitude towards language learning?

How does media affect students' motivation and willingness to learn a language?

H1: Students with a positive attitude towards new media technologies are more motivated to study English.

When looking at the first research question 'How does new media affect students' motivation and willingness to learn a language?' we need to consider several factors. First of all, it was hypothesized (H1) that students with a positive attitude towards new media technologies are more motivated to learn English. Considering each medium that is used in the classroom, different results were demonstrated. Thereby it is

important to keep in mind that the motivation of a student cannot be seen as a whole construct, but several factors play an important role and constitute motivation.

The results show that there is a significant correlation between a student's motivation to use the smartboard in class and the students' learning motivation due to family encouragement (r=*.43***). This means that if a student has a positive attitude towards smartboard usage and is, therefore, motivated to work with it in the English lesson, they are also motivated to learn English due to their family encouragement. Whether it is that students do not want to disappoint their parents, or whether students adopt their parents' attitude that English learning is important for them, it shows that parents have an influence towards students' motivation in school. Moreover, since descriptive analysis reveals that the majority of students of the test groups claim to have an ample amount of new media technologies at home, it also implies that students' parents and families show a high affinity for digital media. Research confirms that a child's curiosity to use new media technologies depends on their family members' interaction with these digital tools (Ihmeideha & Alkhawaldeh 2017: 139). It is furthermore claimed that parents perceive technology and digital media useful for the development of their child's culture. It might be that parents, thus, also have a positive attitude towards media usage in the classroom since several studies already found that access to digital media tools at home positively influence children's academic achievement (Espinosa et al. 2010: 421). For the interpretation of the results from the current study, it could imply that since parents' attitude towards the importance of learning obviously affects students' motivation to learn English, the parents' attitude to use digital media might also influence students' attitude to work with, in this case, smartboards in the classroom. In addition, a regression analysis was carried out which also showed that family encouragement significantly influences the students' motivation to use a smartboard in school (*p=.00*).

Moreover, results show that the motivation to use a smartboard during the English lesson has a tendential influence on a student's learning motivation because of a positive attitude towards the learning situation (r=*.23**), which means a positive evaluation of the teacher or the classroom setting. Thus, if students are motivated to work with a smartboard, they are also motivated to learn English due to an inspiring

English teacher or the activities done in the classroom. Obviously, the smartboard clearly provides various features for an interactive lesson. Visuals or items seen on the smartboard can be moved, different font colours can be used or various quizzes or educational games can be played on it. In research conducted in a Math class where interactive whiteboards were also used, students state that they enjoy working with the smartboard since the pace of the lesson is speeded up and it feels more fluid (Tataroglu & Erduran 2010: 2537) Moreover, due to the implementation of the whiteboard, students show increased interest in the lesson (ibid: 2537). These students also positively evaluate their teachers as more effective since they argue that the teacher can devote more time to the actual teaching instead of cleaning the board or writing a new topic on the board (since the topic is already projected on the smartboard) (ibid: 2537). This shows that due to the smartboard usage, the whole learning situation is more positively evaluated which might result in a motivation for language learning. Hence, this can also be applied to the results of this study.

Another tendential correlation exists between students' overall motivation to work with a smartboard in class and their instrumental orientation for language learning (=instrumentality) (r=*.25**). When looking at the items used to assess instrumentality it becomes obvious that students' incentive for language learning is due to *"practical or utilitarian purposes"* (Gardner 2006: 249) and infers professional motives:

Studying English is important because I will need it for my career.
Studying English is important because it will be useful in getting a good job.
Studying English is important to me in order to attain a good grade.
The things I want to do in the future require me to use English.

Bennett et al. (2013: 530) adds that if students perceive an activity as useful for their future career, they are more motivated to accomplish it. This goes hand in hand with the previously mentioned goal-setting theory which reinforces that a students' future vision guides their motivation to pursue near future goals (such as achieving a good grade) in order to reach a long-lasting goal (e.g. getting a good job) (Dörnyei & Ushioda 2011: 21). This implies that students with a positive attitude towards the smartboard consider it as a useful tool to reach their future goals and are therefore motivated to learn. However, in comparison to the smartboard, the results obtained

indicate that the motivation to use a tablet or a smartphone in class does not influence students' motivation for language learning.

How does duration and extent of new media usage influence students' attitude towards new media in the language classroom.

H2: The longer and the more intense students use new media in the classroom, the more they are motivated to work with them.

In order to answer the second research question, namely how duration and extent of new media usage influences the students' attitude towards new media in the language classroom, the three different schools are compared. A comparison between the media usage within the different schools demonstrates that Mödling is the school that has the highest degree and longest usage of media technology.

As Table 17 shows, almost all students in Mödling claimed to have worked with a tablet in the English lesson, whereas in Gars only 8 out of 40 students stated to have used a tablet in the English class. Moreover, as noted in Table 18, students in Mödling obviously also have the highest extent of tablet usage which means that they use it more often than students in Gars. Students in St. Pölten admitted that they have never used a tablet in their English class.

Regarding the use of smartboards in the classroom, students in Gars and Mödling indicated that they use it in the language classroom (Table 21). Students in St. Pölten do not work with a smartboard at all. Nevertheless, it is noticed that the smartboard in Mödling was implemented a few years ago and is also used more often during the lesson than in Gars where it was just recently implemented (Tables 22 and 23).

Significant differences can also be seen regarding the usage of smartphones during class time. While in Mödling and in St. Pölten many students claimed to have used their smartphone during the lesson for longer than one year, in Gars only 1 out of 40 had done the same. (Table 24). A possible reason for this might be that students in the NMS Gars are supposed to leave their phones in their lockers during each lesson and have therefore no chance to make use of their phone for both private or also educational use.

Of course, the bias exists that students easily use their phone for texting or updating their social media status when smartphones are allowed in the classroom. This will, to a certain extent, be true. It seems to be the easiest thing to just ban smartphones from the classroom in order to avoid distraction and inattentiveness during the lesson. However, there is already plenty of research that emphasizes the benefits of implementing smartphones into the lesson. In her research, Bromley (2012: 340) points out that the smartphone can be especially useful for reading activities. Pupils regularly encounter vocabulary which they are not familiar with or topics within an article which they do not fully understand. Usually, students would immediately ask the teacher for the meaning of the unknown word or explanation of a topic. However, Bromley (2012: 343) suggests encouraging students to help themselves by using their smartphone to find answers to their questions. Nowadays, various online dictionaries are available in the form of apps which would ensure quick access. Bromley (2012: 343), furthermore, is not in favour of banning the mobile phone in the classroom is since it *"robs students of a richer reading experience"*. Moreover, she claims that using smartphones can be an encouraging way to motivate weaker students who would easily turn off when reading a more demanding text.

Data analysis reveals that there is a significant difference between the schools and students' motivation to use a smartphone in class (see Table 28). Since only those students who already use new media in the classroom answered the items concerning their attitude towards new media usage in the classroom, St. Pölten and Gars were pooled together and are seen as the group who rarely makes use of new media technologies. In comparison, Mödling is considered the school who intensively uses new media technologies. The mean value of students' attitude towards smartphones was calculated. The higher the mean value, the more students are motivated to use their smartphone in class.

As depicted in Table 28 the mean value shows that students in Mödling ($M = 3.09$) are more motivated to use smartphones in class than students in St. Pölten and Gars ($M = 1.38$). Since students in Mödling indicated that they work with smartphones more often and already longer than one year, this implies that students who are used to frequent smartphone usage are, indeed, more motivated to work with them. It was

hypothesized that the longer and the more intensely that students use new media in the classroom, the more they are motivated to work with them. This is true, but only to some extent since no difference regarding students' tablet and smartboard motivation is found. Furthermore, a regression analysis found that students' positive attitude towards the learning situation (*p=.03*) and the respective school (*p=.01*) have a significant influence on students' motivation to use a smartphone in class. This again shows that students who perceive their classroom and teacher as inspiring and motivating, display a higher motivation to work with smartphone. It seems that this might also be the case in Mödling.

This implies that the smartphone has gained great importance in the students' life. Descriptive analysis also indicated that students also prefer the smartphone over other technologies such as the tablet or a laptop for their leisure time activities. As seen in Table 16 the mean value for different activities with each medium (smartphone, tablet and computer) was calculated. For the majority of activities students prefer to use the smartphone instead of tablet or computer. It seems that even though a few years ago everybody wanted to have a tablet or an iPad since it was assumed to be easily portable and highly practical, it is now the smartphone which is commonly used for ordinary activities such as searching for information, listening to music or checking social media. Also, statistics (Statista 2016) confirm that worldwide tablet sales have gradually decreased since 2015, while smartphone sales are continuously increasing. It is also predicted that smartphone sales will continue to increase until 2021 whereas tablet sales will further decrease (Statista 2016). A reason for that might be that smartphones are getting bigger but slimmer and lighter, and are therefore a practical tool people can always carry with them. Moreover, since teenagers always have their smartphone at hand anyways, it might be due to practical reason that they prefer the smartphone over tablet usage in class. Nowadays, smartphones offer numerous possibilities which can be helpful for students' school life, such as organising students' time table, providing calendar functions, downloading dictionary apps or even the possibility of producing a Word document. Thus, students do not need to carry either a calendar or a dictionary in addition to all the other schoolbooks with them since everything they need is on their portable device. Clearly, when using the tablet during the lesson, they would need to carry another digital device with them.

However, descriptive analysis further shows that there is a significant difference between boys' and girls' smartphone usage for specific activities. Table 16 shows that boys use their phone for YouTube and for playing online games more often than girls. On the contrary, girls use their smartphones more often for sending messages or pictures via Whatsapp, using online communities (such as Facebook, Instagram or Snapchat), and taking and editing pictures and publishing them on social media. These results are also confirmed by the Teens, Technology & Friendship Report (Lenhart et. al. 2015) that investigates how teenagers use their smartphones to communicate and meet with friends. Indeed, social media and online games are the most common digital activities teenagers use to meet and stay in touch with friends. The report also highlights the gender difference within these activities. Girls are most likely to meet new friends vial social media such as Facebook or Instagram while boys prefer playing online games with others and thereby maintaining their friendship with others or meeting new people (ibid: 2). Moreover, online games *"play a critical role in the development and maintenance of boys' friendships"* since they feel a closer connection to their friends (Lenhart et. al. 2015: 4). For girls, on the other hand, social media is the best way for maintaining their friendships. However, what is also revealed is that girls really place importance on their social media friends since they are also more likely than boys *"to unfriend, blog or untag photos of former friends"* (Lenhart et. al. 2015: 8). Nevertheless, analysis in the current study indicates that in each school type, boys are more motivated to use the smartphone during class than girls. When looking at Table 27, it becomes clear that the mean value of male students is clearly higher than the one of female students.

Summarized, the results show that students, especially boys, who use the smartphone more often and regularly during the lesson indicated to feel more motivated to work with them. Thus, duration and extent positively influences the students' attitude towards smartphone usage.

How does duration and extent of new media usage influence students' attitude towards language learning?

H3: Students who already use new media for a longer period and more frequently in the classroom are more motivated to learn English.

The results obtained show that students are indeed motivated to work with media technologies in the lesson. However, this thesis also aims to investigate whether the extent and duration of new media usage influences the students' attitude towards language learning. It was hypothesized that students who already use new media for a longer period and also more frequently in the classroom not only have a positive attitude towards new media, but also a more positive attitude towards English learning.

However, after calculating a regression analysis, results show that students' motivation to learn English does not depend on the duration and extent of media usage. Students' motivation to learn a language significantly depends on other variables, namely family encouragement (*p=0.3*) and instrumentality (*p=.00*). To put it differently, family and goal achievement are considered as incentives for students to study English. Hence, the importance of instrumentality has several implications for language teaching. It shows that for language learning not only is the students' intrinsic motivation important, but other external factors also play a vital role. Teachers should, therefore, rely not only on students' intrinsic motivation but also consider using external incentives to enhance students' motivation. External reinforcement can be done by demonstrating to the students why learning English can be important for their future. Since the current study demonstrates that students' motivation to learn English due to instrumental purposes is high, it is implied that many students at that age might already be aware of the importance language learning has for their future. It can at least be inferred that students at this age are motivated to study English since they want to achieve a certain goal. This goal can, however, be highly diverse. It can either be that students already think about their future job or just about a good grade on the next test. Moreover, Bempechat and Shernoff (2012: 325) point out that *"many students are motivated by grades, but their interpretation of what the grades signify is often mediated though [sic] their relationship with their parents"*. This introduces the second motivating factor for students' language learning in this study, namely parental

encouragement. Research shows that students easily adopt their parents' educational attitude which influences their own attitude towards learning (ibid: 327). If students feel that their parents are not involved or interested in their learning or do not support them with homework they feel that their parents consider school as unimportant and consequently they adopt this attitude (ibid: 328). Thus, if parents highlight the importance of doing homework and frequently support their students, this has a positive influence on students' attitude towards learning (ibid: 326). Consequently, it might be assumed that parents with higher education or a job in a leading position are a greater inspiration for students. Nevertheless, this does not relate to the participants of the study since descriptive statistics (Table 7 and 8) found that the majority of students' parents are employees (mothers *59%*, fathers *34%*) or laborers (mothers *25%*, fathers *58%*) and only a limited number of parents work in a leading position (mothers *5%*, fathers *17%*).

To sum up, the results obtained indicate that students are indeed motivated to use new media technologies in school. The amount of exposure and frequency usage however, does not influence students' motivation to learn English, but it positively influences students' attitude towards smartphone usage in class. The more and the longer students work with the smartphone during class time, the more they are motivated to use them for educational purposes. It was revealed that the motivation to learn English does not depend on the frequency of media usage. However, it was shown that in general students' usage of smartboards correlates with students' motivation to learn English. If they have a positive attitude towards smartboards, they are also motivated to learn English due to their parental influence, a positive attitude towards the learning situation (teacher and classroom atmosphere) and due to the goals they want to achieve.

6. Suggestions for smartphone implementation

The results obtained in the study reveal that students who are used to smartphone usage during class have indeed a more positive attitude towards this usage than students who never or rarely used it. Also, results show that boys are more motivated to use their smartphone during class than girls. As it is proven that the implementation of smartphones can positively influence the students' learning process, teachers should really think about using students' positive attitude towards the medium for the sake of learning. Of course, the smartphone should not be used for each and every activity and clear rules and regulations have to be stated and agreed on with the students. While in some activities, students should actively use their phone to find some relevant information for a specific topic, or an explanation for difficult vocabulary, during other activities such as listening or when explaining a new grammar topic, smartphones should not be allowed to be used. Moreover, it is the teachers' task to make sure that students stay focused on the task and do not use smartphones for non-educational purposes (Graham n.d.). A teacher might consider to re-arrange the seating so that he or she can easily walk around, help students and have a better overview of the students' smartphone usage (Graham n.d.). Furthermore, teachers could choose to divide students into groups in which each student has a different task to accomplish with their smartphones (e.g. one has to search for specific information while the other has to find an appropriate definition for a specific term) which will result in one final group presentation.

Since the results obtained show that boys are still more motivated to use the smartphone in class than girls, the question arises how teachers could also raise the girls' curiosity to make use of the smartphone for an educational purpose more often. One suggestion would be to use the knowledge that girls' favourite activity on their smartphone is to use and post pictures on social media sites such as Facebook and transfer this enthusiasm into the classroom. A possibility might be to create a private group on Facebook in which all students of the class including the teacher can join. A good idea for the teacher would be to create an individual account for teaching purposes. Thus, students can be encouraged to use this group to ask questions which

they encounter during their homework or while studying for a test. Moreover, teachers could share useful and relevant learning materials or ask students to upload presentations or handouts which they have created during a group work. Another suggestion is to let students write a travel blog during an excursion or language trip which they should post into their Facebook group afterwards (Hofer 2013: 333). Stockwell (2012: 77) points out that writing a blog can be extremely beneficial for students' language learning process since blogs *"provide an authentic audience to learners when they write in the target language"*. Students can also get specific assignments which they have to carry out and subsequently share the results with their colleagues (Hofer 2013: 333). A possible task would be to let students conduct an interview with their English speaking host family (ibid: 333).

Since a study conducted by Zarzycka-Piskorz (2016) found that students enjoy using their smartphone for games and quizzes (e.g. 'Kahoot!' see Chapter 2.3.2.3), the implementation of online games might be a motivational stimuli for students. Thus, another tool which might be appealing to students is called 'Geocaching[6]'. Students are *"deciphering a map, and encountering mysterious clues along the way"* and thereby experiencing a *"high-impact lesson"* with their smartphone (Adam & Mowers 2007:40). Therefore, the teacher creates a quiz and distributes it around the school yard or in the school library for instance. The quiz consists of QR-codes[7] that students scan with their smartphones in order to read the question (Adam & Mowers 2007: 40). If students answer the question correctly, they discover a clue on their smartphone which leads them to the place where the next question is hidden (ibid: 40). Adam & Mowers (2007: 42) suggest to offer students an actual prize or treasure after answering all the questions and following the clues. The questions can be designed by the teacher themselves or chosen from already existing quizzes. Even though the design and preparation of this activity might be a lot of work for teachers, it enables students to *"really getting into the search […] while at the same time engaging important content and making authentic connections"* (ibid). Hence, similar to the use of 'Kahoot!' quizzes, 'Geocaching' might enhance students' attentiveness and

[6] www.geocaching.com
[7] QR = Quick Response

motivation since rewards are powerful stimuli for students to perform a task (Zarzycka-Piskorz 2016: 32).

Furthermore, the effectiveness of smartphone use for vocabulary acquisition is proven in a study conducted by Qun (2014). Qun (2014: 305) demonstrates that students *"are better visual learners who have grown up on using video games, computers and mobile phones to obtain new information".* Hence, a suggestion for teaching vocabulary in the English lesson is to let students work with their smartphones. An example of a smartphone-based activity is demonstrated in Figure 11. This activity is designed for students in the 4th grade of a grammar or lower secondary school aged 13 to 14 with the aim of introducing and working with new vocabulary. 'Holiday & Tourism' might be a relevant topic for learners in this grade since several units of students' course book are concerned with travelling (for instance Ireland and Australia in the course book *MORE! 4* by Gerngross et. al). For the following activities students are divided into small groups of three or four in which each learner ideally is equipped with a smartphone. At the beginning, the teacher introduces students to common pronunciation dictionaries which students can access for free on their smartphone such as 'Leo.org' and 'dict.cc'. For each dictionary, students can download an app which facilitates the application. As a warm-up activity the groups become familiarized with new vocabularies by searching each word in the puzzle as depicted in Figure 11.

28. Word search – HOLIDAYS & TOURISM

l b r o c h u r e v m p y c c
u r e c e p t i o n x n g l u
g m u s e u m l k n f n c f l
g u i a j k m i u h i j b y t
a c q o i s o j c e g q o v u
g a m m g z n a e y u e o l r
e n c l e g o s t n i l k r e
i c s q b c t m z c d a u g t
h e p z a h f k h w e o t e r
n l x h g e z o t t t s o v i
n k n i d j j r t u q c u k p
g y s p q b p r y d o v r o h
s u n b a t h e v g f u i k t
m o b o u r a y k v h d s b h
p x h b g s p e f v f i t m h

Can you find these travel words in the puzzle?

museum	tourist	culture
book	luggage	guide
sightseeing	brochure	accommodation
tour	reception	hire
coach	cancel	check in
trip	sunbathe	terminal

http://www.cambridgeenglish.org/images/vocabulary-games-and-activities.pdf (6 June 2017)

Figure 11: Smartphone vocabulary activity 1

Subsequently, students should look up definitions for each word by using their smartphone and the respective app. Both applications provide the German translation as well as the correct pronunciation. Additionally, ‘Leo.org’ offers multiple examples in which the respective word is used within a discourse. Students have to use the vocabularies and apply their gained knowledge of the words in the follow-up activity which consists of 18 sentences with missing words. Consequently, learners need to fill out the gaps with the correct vocabulary (see Figure 12).

29. Gap fill sentences – HOLIDAYS & TOURISM

These can be used with a word search, crossword, with another exercise or just on their own.

1. The national .....contains interesting objects from our history.
2. You need to .....a seat on the train to London.
3. Did you do much .....while you were in Paris?
4. We went on a guided ..... of the city.
5. We're going to the airport by .....
6. They went on a .....to the seaside.
7. Millions of .....visit France every year.
8. We looked at some holiday ..... last night.
9. You should never leave your ..... unattended
10. He collected his keys from .....
11. The trip was ..... because of the bad weather.
12. She spent the day .....on the beach.
13. I enjoy learning about the ..... of other countries.
14. Some of the information in the ..... is a little bit old.
15. Our .....was very clean and comfortable.
16. They .....a car for the weekend.
17. You should .....two hours before the flight.
18. The flight to New York leaves from ..... 1.

http://www.cambridgeenglish.org/images/vocabulary-games-and-activities.pdf (6 June 2017)

Figure 12: Smartphone vocabulary activity 2

The next activity is determined by a lexical approach to language learning which focuses on *"multi-word prefabricated chunks"* (Runjiang et. al. 2012: 2091). More specifically, collocations play a significant role in the lexical approach since *"students become more confident in English learning"* when identifying and using collocations (Runijang et. al. 2012: 2093). Thus, for the next activity students are advised to visit the online collocation dictionary 'ozdic.com' with their smartphone and search for adjectives, nouns and verbs that collocate with the noun 'holiday'. Students should note down at least five collocations such as 'enjoyable holiday', 'adventure holiday', 'to go on holiday' etc.

A ‘Kahoot!’ quiz (also see Chapter 2.3.2.3.) will round up the lesson where students are asked specific questions concerning vocabulary definitions or correct collocation usage. Figure 13 depicts the first question of the game where students have to indicate what ‘accommodation’ means by choosing the appropriate sign on their smartphones.

Designed by the author (6 June 2017)
Figure 13: Smartphone vocabulary activity 3

Thus, the discussion confirms that there are several possibilities to appropriately use the smartphone during a lesson for the sake of language learning. Nevertheless, it is still the headmasters’ choice to allow or ban smartphones in school, and also the teachers’ choice whether to accept the challenge of trying something new and incorporate the smartphone into his/her lesson.

7. Conclusion

This thesis investigated students' attitude towards the implementation of digital technologies in the English classroom and sought to find out whether the use of new media technologies influences students' motivation to learn. Moreover, the study aimed to investigate whether the frequency and duration of media usage in class has an influence on students' motivation and attitude. For this purpose, the theoretical part of the diploma thesis drew attention to the concept of 'new media' and investigates what is actually 'new' about it. Moreover, the discussion of CALL points out that the benefits of using technology in classroom for language learning far outweigh the disadvantages or possible issues that might arise.

Due to digital media in the classroom, approaches such as blended learning and flipped classroom gained of great importance. Not only does it offer students new ways of interacting with each other, but also provides teachers with new opportunities for a successful and varied lesson. To this end, the education system in Austria created the aim of ensuring internet access and media literacy in every classroom. The various innovations of the Federal Ministry of Education in Austria were pointed out and specific examples of the so-called 'digi.check' and 'digi.komp' were shown. Since the study aimed to find out how new media technologies influence students' learning motivation, the definition of motivation and the respective motivational theories important for the empirical part were presented. It became obvious that no clear-cut definition of motivation can be provided. However, several factors which play a crucial role in assessing people's motivation to learn were pointed out. After having discussed the theoretical underpinnings, the aims and objectives of the empirical study were reported. In order to found out if new media technologies affect students' motivation and if students have a positive attitude towards this usage in class, a questionnaire was designed. The questionnaire was handed out to 119 students, aged 13 to 14, in three different schools (NMS) in lower Austria.

Finally, the last part of the thesis reported on the findings. The results demonstrated that overall, students have a positive attitude towards using digital technology for language learning. Moreover, students' motivation to use a smartboard significantly

correlates with their motivation to learn. To put it differently, due to the smartboard usage, students have a more positive attitude towards their learning situation. Moreover, they feel that the smartboard might help them to reach their future goals and they believe that their parents encourage this usage as well. Results further cofirmed that the duration and extent of media usage do not have an influence on students' motivation to learn. In other words, to what extent or for how long students already work with digital media does not influence their degree of motivation. Therefore, other motivating factors contribute to the students' learning motivation such as their parental encouragement and their instrumental orientation to reach certain goals. However, duration and extent of media usage is important regarding students' attitude towards smartphone use in the English lesson. Specifically, the more and longer that students are allowed to work with a smartphone, the more they perceive it as a useful tool for the English lessons.

Nevertheless, it is again pointed out that these results should not be overgeneralized since it only represents a limited number of students. Further research could be done in the future to find out how students' motivation or attitude has changed after the successful implementation of the new curriculum and the respective 'digi.komp' and 'digi.check' tools. Consequently, it can be argued that the integration of smartphones and smartboards might be a good starting point since they can be a powerful incentive for the English lesson.

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9. Appendix

9.1. Information sheet for parents

Sehr geehrte Eltern!

Mein Name ist Sigrid Hammerl und ich bin Studentin an der Universität Wien (Lehramt Englisch und Psychologie/Philosophie). Im Moment schreibe ich an meiner Diplomarbeit, welche sich mit den Auswirkungen von neuen Medien (wie z.B. Smartphones und Tablets) auf die Lernmotivation der Schüler und Schülerinnen befasst. Im Rahmen dieser Arbeit würde ich gerne eine Untersuchung mit der Klasse Ihrer Tochter/ Ihres Sohnes durchführen. Ziel der Untersuchung ist es, herauszufinden ob der Einsatz digitaler Medien im Englischunterricht einen Einfluss auf die Lernbereitschaft der Schüler und Schülerinnen hat. Die Schüler und Schülerinnen werden einen Fragebogen bekommen, welcher in ca. 10 Minuten beantwortet werden soll. Die bei dieser Fragebogenerhebung erhobenen Daten werden lediglich in anonymisierter Form weiterverarbeitet.
Ich bitte Sie daher, den unten angeführten Abschnitt auszufüllen und Ihrem Sohn / Ihrer Tochter wieder in die Schule mitzugeben. Die Schüler und Schülerinnen leisten durch ihre Mitarbeit einen sehr wichtigen Beitrag zu meiner wissenschaftlichen Erhebung.

Bei Fragen bin ich gerne für Sie per E-Mail erreichbar.
Vielen Dank für Ihre Mithilfe!

Sigrid Hammerl
E-Mail: sigrid-hammerl@gmx.at

Ich bestätige, dass mein Kind _____ (Klasse ____) an der Erhebung zum Thema „Neue Medien im Unterricht: Der Einfluss digitaler Medien auf die Motivation und Lernbereitschaft der Schüler und Schülerinnen“ teilnehmen darf:

Ja ☐ Nein ☐

Datum, Unterschrift des/der Erziehungsberechtigten:

_____

9.2. Questionnaire

Fragebogen Medien und Motivation im Englischunterricht

Die bei dieser Fragebogenerhebung erhobenen Daten werden lediglich in anonymisierter Form weiterverarbeitet.

Teil 1: Fragen zu deiner Person

1. Geschlecht:

- ☐ männlich
- ☐ weiblich

2. Alter:

- ☐ 12
- ☐ 13
- ☐ 14
- ☐ 15
- ☐ __

3. In welchem Land bist du geboren?

- ☐ Österreich
- ☐ Anderes Land: _____

4. Was ist deine Muttersprache?

- ☐ Deutsch
- ☐ Andere Muttersprache: _____

5. Wie gut bist du in der Schule? Bist du ein/e gute/r Schüler/in? *Kreuze an wie du dich selbst einschätzt.*

Sehr gut	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Schlecht

Teil 2: Fragen zu deinen Eltern

6. Welchen Beruf übt deine Mutter aus?

Wenn deine Mutter derzeit nicht berufstätig ist, gib bitte an, was sie in ihrer letzen Arbeit gemacht hat.

_____

7. Welchen Beruf übt dein Vater aus?

Wenn dein Vater derzeit nicht berufstätig ist, gib bitte an, was er in seiner letzen Arbeit gemacht hat.

_____

8. In welchem Land sind deine Eltern geboren?

Mutter:

- ☐ Österreich:
- ☐ Anderes Land: _____

Vater:

- ☐ Österreich:
- ☐ Anderes Land: _____

9. Welche höchste Ausbildung haben deine Eltern abgeschlossen? *Kreuze jeweils nur EIN Kästchen an.*

Vater:

- ☐ Pflichtschulabschluss (Hauptschule, Polytechnische Schule)
- ☐ Lehrabschluss (z.B. Berufsschule, Handelsschule, Fachschule)
- ☐ Meisterausbildung/Meisterprüfung
- ☐ Schule ohne Matura (z.B. Handelsschule)
- ☐ Schule mit Matura (z.B. Gymnasium, HAK, HTL,…)
- ☐ Schule für Gesundheits- und Krankenpflege
- ☐ Universität/Fachhochschule (Bakk., Mag., Dr., Dipl. Ing.)
- ☐ Pädagogische Akademie oder ein Kolleg
- ☐ Weiß ich nicht

Mutter:

- ☐ Pflichtschulabschluss (Hauptschule, Polytechnische Schule)
- ☐ Lehrabschluss (z.B. Berufsschule, Handelsschule, Fachschule)
- ☐ Meisterausbildung/Meisterprüfung
- ☐ Schule ohne Matura (z.B. Handelsschule)
- ☐ Schule mit Matura (z.B. Gymnasium, HAK, HTL,…)
- ☐ Schule für Gesundheits- und Krankenpflege
- ☐ Universität/Fachhochschule (Bakk., Mag., Dr., Dipl. Ing.)
- ☐ Pädagogische Akademie oder ein Kolleg
- ☐ Weiß ich nicht

Teil 3: Verwendung von Medien

10. Hast du zu Hause Internetzugang?

- ☐ Ja
- ☐ Nein

11. Welche dieser elektronischen Geräte gibt es bei dir zu Hause?

- ☐ Computer/Laptop
- ☐ Fernseher
- ☐ Smartphone (zum Beispiel iPhone, Android-Smartphones, Windows Mobile/Phone ect.)
- ☐ Tablet-PC, iPad
- ☐ Radio
- ☐ MP3-Player, iPod
- ☐ Spielkonsole (Playstation, X-Box, Wii etc.)
- ☐ eBook-Reader
- ☐ Fotoapparat, Digitalkamera
- ☐ Keine

12. Wie viele Smartphones gibt es bei dir zu Hause? *Bitte gib an wie viele Smartphones ihr zu Hause in Gebrauch habt (inkl. Geschwister, Eltern,…).*

Wir haben ____ Smartphones zu Hause.

13. Besitzt du ein <u>eigenes</u> Smartphone?

- ☐ Ja
- ☐ Nein → Wenn *Nein:* Überspringe Frage 14,15 und 16 und mache weiter bei Frage 17.

14. Wann hast du dein erstes Smartphone bekommen?
Füge bitte das Alter ein in dem du dein erstes Smartphone bekommen hast.

Ich habe mein erstes Smartphone mit ____ Jahren bekommen.

15. Welche Aktivitäten machst du in deiner Freizeit besonders gerne auf deinem Smartphone? *Kreuze deine <u>3 wichtigsten Aktivitäten</u> an*.

- ☐ Youtube nutzen
- ☐ Nachrichten/Bilder verschicken, z.B. über Whatsapp
- ☐ Informationen suchen
- ☐ Online-Communities nutzen (z.B. Facebook, Instagram, Snapchat)
- ☐ Filme/Videos anschauen
- ☐ Musik hören
- ☐ Onlinespiele alleine spielen
- ☐ Onlinespiele mit anderen spielen
- ☐ Apps herunterladen
- ☐ E-Mail schreiben
- ☐ Informationen für die Schule oder Hausübung suchen
- ☐ Fotos veröffentlichen (z.B. über Facebook, Instagram, Snapchat)
- ☐ Fotos bearbeiten
- ☐ Musik herunterladen
- ☐ Blogs lesen / schreiben

16. Wie oft verwendest du dein Smartphone für die folgenden Aktivitäten? *Kreuze in jeder Zeile nur <u>EIN</u> Kästchen an!*

Ich…	**Jeden Tag**	**Mehrmals pro Woche**	**Einmal pro Woche**	**Einmal im Monat**	**Selten / nie**
verwende Youtube					
verschicke Nachrichten über Whatsapp					
suche Informationen im Internet					
nutze Online-Communities (z.B. Facebook, Instagram, Snapchat)					
höre Musik					
spiele online alleine					
spiele online mit anderen					
lade mir Apps herunter					
schreibe E-Mails					
suche Informationen für die Schule oder für meine Hausübung					
mache Fotos					
veröffentliche Fotos (z.B. über Facebook, Instagram, Snapchat)					
lade mir Musik herunter					
lese oder schreibe einen Blog					

17. Wie viele Tablets gibt es bei dir zu Hause?
Bitte gib an wie viele Tablets ihr zu Hause in Gebrauch habt (inkl. Geschwister, Eltern,…).
Wir haben ____ Tablets zu Hause.

18. Besitzt du ein eigenes Tablet?

- ☐ Ja
- ☐ Nein → Wenn *Nein*: Überspringe Frage 19, 20 und 21 mache weiter bei Frage 22.

19. Wann hast du dein erstes Tablet bekommen?
Füge bitte das Alter ein in dem du dein erstes Tablet bekommen hast.

Ich habe mein erstes Tablet mit _____Jahren bekommen.

20. Welche Aktivitäten machst du in deiner Freizeit besonders gerne auf deinem Tablet? *Kreuze deine 3 wichtigsten Aktivitäten an.*

- ☐ Youtube nutzen
- ☐ Nachrichten/Bilder verschicken, z.B. über Whatsapp
- ☐ Informationen suchen
- ☐ Online-Communities nutzen (z.B. Facebook, Instagram, Snapchat)
- ☐ Filme/Videos anschauen
- ☐ Musik hören
- ☐ Onlinespiele alleine spielen
- ☐ Onlinespiele mit anderen spielen
- ☐ Apps herunterladen
- ☐ E-Mail schreiben
- ☐ Informationen für die Schule oder Hausübung suchen
- ☐ Fotos veröffentlichen (z.B. über Facebook, Instagram, Snapchat)
- ☐ Fotos bearbeiten
- ☐ Musik herunterladen
- ☐ Blogs lesen / schreiben

21. Wie oft verwendest du dein Tablet für die folgenden Aktivitäten? *Kreuze in jeder Zeile nur EIN Kästchen an.*

Ich…	**Jeden Tag**	**Mehrmals pro Woche**	**Einmal pro Woche**	**Einmal im Monat**	**Selten / nie**
verwende Youtube					
verschicke Nachrichten über Whatsapp					
suche Informationen im Internet					
nutze Online-Communities (z.B. Facebook, Instagram, Snapchat)					
höre Musik					
spiele online alleine					
spiele online mit anderen					
lade mir Apps herunter					
schreibe E-Mails					
suche Informationen für die Schule oder für meine Hausübung					
mache Fotos					
veröffentliche Fotos (z.B. über Facebook, Instagram, Snapchat)					
lade mir Musik herunter					
lese oder schreibe einen Blog					

22. Wie viele Computer/Laptops gibt es bei dir zu Hause? *Bitte gib an wie viele Computer/Laptops ihr zu Hause in Gebrauch habt (inkl. Geschwister, Eltern,…).*

Wir haben _____ Computer/Laptops zu Hause.

23. Besitzt du einen eigenen Computer oder Laptop?

☐ Ja

☐ Nein → Wenn *Nein*: Überspringe Frage 24, 25 und 26 und mache weiter Frage 27.

24. Wann hast du deinen ersten Computer/Laptop bekommen?
Füge bitte das Alter ein in dem du deinen ersten Computer/Laptop bekommen hast.

Ich habe meinen ersten Computer/Laptop mit ____ Jahren bekommen.

25. Welche Aktivitäten machst du in deiner Freizeit besonders gerne auf deinem Computer/Laptop? *Kreuze deine 3 wichtigsten Aktivitäten an.*

- ☐ Youtube nutzen
- ☐ Nachrichten/Bilder verschicken, z.B. über Whatsapp
- ☐ Informationen suchen
- ☐ Online-Communities nutzen (z.B. Facebook, Instagram, Snapchat)
- ☐ Filme/Videos anschauen
- ☐ Musik hören
- ☐ Onlinespiele alleine spielen
- ☐ Onlinespiele mit anderen spielen
- ☐ Apps herunterladen
- ☐ E-Mail schreiben
- ☐ Informationen für die Schule und Hausübung suchen
- ☐ Fotos veröffentlichen (z.B. über Facebook, Instagram, Snapchat)
- ☐ Fotos bearbeiten
- ☐ Musik herunterladen
- ☐ Blogs lesen / schreiben

26. Wie oft verwendest du deinen Computer/Laptop für die folgenden Aktivitäten? *Kreuze in jeder Zeile nur EIN Kästchen an.*

Ich…	**Jeden Tag**	**Mehrmals pro Woche**	**Einmal pro Woche**	**Einmal im Monat**	**Selten / nie**
verwende Youtube					
verschicke Nachrichten über Whatsapp					
suche Informationen im Internet					
nutze Online-Communities (z.B. Facebook, Instagram, Snapchat)					
höre Musik					
spiele Online alleine					
spiele Online mit anderen					
lade mir Apps/Spiele herunter					
schreibe E-Mails					
suche Informationen für die Schule oder für meine Hausübung					
mache Fotos					
veröffentliche Fotos (z.B. über Facebook, Instagram, Snapchat)					
lade mir Musik herunter					
lese oder schreibe einen Blog					

Teil 4: Medien im Englischunterricht

27. Hast du im Englischunterricht jemals ein Tablet verwendet?

☐ Nein → Wenn du *Nein* angekreuzt hast: Würdest du gerne ein Tablet im Unterricht verwenden?

- ☐ Ja
- ☐ Nein

Jetzt überspringe Frage 28, 29, 30, 31 und mache weiter bei Frage 32.

☐ Ja → Wenn du *Ja* angekreuzt hast: Beantworte die nächsten Fragen.

28. Wie oft verwendet ihr das Tablet im Englischunterricht?

- ☐ In jeder Englischstunde
- ☐ Mehrmals pro Woche
- ☐ Einmal pro Woche
- ☐ Einmal im Monat
- ☐ Selten

29. Seit wann verwendet ihr das Tablet schon im Englischunterricht?

- ☐ Erst seit diesem Schuljahr
- ☐ Länger als ein Jahr

30. Wozu wird das Tablet im Englischunterricht verwendet?

- ☐ Vokabel lernen
- ☐ Spiele
- ☐ Quiz
- ☐ Neue Inhalte zu erlernen
- ☐ Lernapps

31. Wie findest du die Arbeit mit Tablets im Unterricht? *Kreuze in jeder Zeile nur EIN Kästchen an.*

	Trifft völlig zu	**Trifft eher zu**	**Teils-Teils**	**Trifft eher nicht zu**	**Trifft nicht zu**
Die Arbeit mit Tablets macht mir viel Spaß.					
Ich bin aufmerksamer wenn ich mit Tablets im Englischunterricht arbeiten kann.					
Ich verwende Tablets auch in meiner Freizeit.					
Tablets im Englischunterricht finde ich unnötig.					
Ich arbeite lieber mit Tablets als mit dem Schulbuch.					
Ich möchte mit Tablets arbeiten, da dies wichtig für meinen Beruf/meine Karriere sein könnte.					
Der Englischunterricht macht mir mehr Spaß wenn wir Tablets verwenden können.					
Wenn wir mit dem Tablet arbeiten, merke ich mir Inhalte leichter (z.B. Vokabel, Grammatik).					
Ich bin motiviert wenn wir mit Tablets im Unterricht arbeiten.					
Ich würde gerne mehr/öfters mit Tablets im Unterricht arbeiten.					
Ich denke, dass ich durch die Arbeit mit Tablets Fortschritte im Englisch Unterricht erzielt habe.					

32. Hast du im Englischunterricht jemals ein Smartboard/Whiteboard (=Interaktive Tafel) verwendet?

☐ Nein → Wenn du *Nein* angekreuzt hast: Würdest du es gerne im Unterricht verwenden?

☐ Ja

☐ Nein

Jetzt überspringe Frage 33, 34, 35, 36 und mache weiter bei Frage 37.

☐ Ja → Wenn du *Ja* angekreuzt hast: Beantworte die nächsten Fragen.

33. Wie oft verwendet ihr das Smartboard/Whiteboard im Englischunterricht?

☐ In jeder Englisch Stunde

☐ Mehrmals pro Woche

☐ Einmal pro Woche

☐ Einmal im Monat

☐ Selten

34. Seit wann verwendet ihr das Smartboard/Whiteboard schon im Englischunterricht?

☐ Erst seit diesem Schuljahr

☐ Länger als ein Jahr

35. Wozu wird das Smartboard/Whiteboard im Englischunterricht verwendet?

☐ Vokabel lernen

☐ Spiele

☐ Quiz

☐ Neue Inhalte zu erlernen

☐ Lernapps

36. Wie findest du die Arbeit mit Smartboards/Whiteboards? *Kreuze in jeder Zeile nur EIN Kästchen an.*

	Trifft völlig zu	**Trifft eher zu**	**Teils-Teils**	**Trifft eher nicht zu**	**Trifft nicht zu**
Die Arbeit mit Smartboards/Whiteboards macht mir viel Spaß.					
Ich bin aufmerksamer wenn ich mit Smartboards/Whiteboards im Englischunterricht arbeiten kann.					
Ich verwende Smartboards/Whiteboards auch in meiner Freizeit.					
Smartboards/Whiteboards im Englischunterricht finde ich unnötig.					
Ich arbeite lieber mit dem Smartboard/Whiteboard als mit dem Schulbuch.					
Ich möchte mit Smartboards/Whiteboards arbeiten, da dies wichtig für meinen Beruf/meine Karriere sein könnte.					
Der Englischunterricht macht mir mehr Spaß wenn wir mit Smartboards/Whiteboards arbeiten können.					
Wenn wir mit dem Smartboard/Whiteboard arbeiten, merke ich mir Inhalte leichter (z.B. Vokabel, Grammatik).					
Ich bin motiviert wenn wir mit Smartboards/Whiteboards im Unterricht arbeiten.					
Ich würde gerne mehr/öfters mit Smartboards/Whiteboards im Unterricht arbeiten.					
Ich denke, dass ich durch die Arbeit mit Smartboards/Whiteboards Fortschritte im Englisch Unterricht erzielt habe.					

37. Hast du im Englischunterricht jemals dein Smartphone verwendet? *(für schulische Zwecke, z.B. um zu lernen)*

☐ Nein → Wenn du *Nein* angekreuzt hast: Würdest du gerne ein Smartphone im Unterricht verwenden?

- ☐ Ja
- ☐ Nein

Jetzt überspringe Frage 38, 39, 40, 41 und mache weiter bei Frage 42.

☐ Ja → Wenn du *Ja* angekreuzt hast: Beantworte die nächsten Fragen.

38. Wie oft verwendet ihr das Smartphone im Englischunterricht?

- ☐ In jeder Englisch Stunde
- ☐ Mehrmals pro Woche
- ☐ Einmal pro Woche
- ☐ Einmal im Monat
- ☐ Selten

39. Seit wann verwendet ihr das Smartphone schon im Unterricht?

- ☐ Erst seit diesem Schuljahr
- ☐ Länger als ein Jahr

40. Wozu wird das Smartphone im Unterricht verwendet?

- ☐ Vokabel lernen
- ☐ Spiele
- ☐ Quiz
- ☐ Neue Inhalte zu erlernen
- ☐ Lernapps

41. Wie findest du die Arbeit mit Smartphones im Unterricht? *Kreuze in jeder Zeile nur EIN Kästchen an.*

	Trifft völlig zu	**Trifft eher zu**	**Teils-Teils**	**Trifft eher nicht zu**	**Trifft nicht zu**
Die Arbeit mit Smartphones macht mir viel Spaß.					
Ich bin aufmerksamer wenn ich mit Smartphones im Unterricht arbeiten kann.					
Ich verwende Smartphones auch in meiner Freizeit.					
Smartphones im Englischunterricht finde ich unnötig.					
Ich arbeite lieber mit Smartphones als mit dem Schulbuch.					
Ich möchte mit Smartphones arbeiten, da dies wichtig für meinen Beruf/meine Karriere sein könnte.					
Der Englischunterricht macht mir mehr Spaß wenn wir mit dem Smartphone arbeiten können.					
Wenn wir mit dem Smartphone arbeiten, merke ich mir Inhalte leichter (z.B. Vokabel, Grammatik).					
Ich bin motiviert wenn wir mit dem Smartphone im Unterricht arbeiten.					
Ich würde gerne mehr/öfters mit dem Smartphone im Unterricht arbeiten.					
Ich denke, dass ich durch die Arbeit mit Smartphones Fortschritte im Englisch Unterricht erzielt habe.					

Teil 5: Motivation und Einstellung

42. Deine Einstellung zur englischen Sprache. *Kreuze in jeder Zeile nur EIN Kästchen an das auf dich zutrifft.*

	Trifft völlig zu	**Trifft eher zu**	**Teils-Teils**	**Trifft eher nicht zu**	**Trifft nicht zu**
1. Englisch lernen macht mir sehr viel Spaß.					
2. Mein/e Englischlehrer/in motiviert mich Englisch zu lernen.					
3. Meine Eltern motivieren mich Englisch zu lernen.					
4. Ich lerne Englisch um eine gute Note zu bekommen.					
5. Ich lerne Englisch um in der Lage zu sein, mit Leuten aus anderen Ländern zu kommunizieren.					
6. Ich lerne Englisch, da es wichtig für meine Karriere ist.					
7. Bei einer Schularbeit möchte ich eine gute Note bekommen, um meine Eltern nicht zu enttäuschen.					
8. Ich schiebe meine Englisch Hausübungen oft hinaus.					
9. Ich denke, dass mein/e Lehrer/in nicht besonders gut ist.					
10. Ich finde, der Englischunterricht ist eine Zeitverschwendung.					
11. Die englische Sprache zu beherrschen ist nicht wichtig für mich.					
12. Ich hasse Englisch.					
13. Meine Eltern finden, dass Englisch wichtig für mich ist.					
14. Ich würde gerne mehr Native Speaker kennen.					
15. Ich lerne Englisch um einen guten Beruf zu bekommen.					
16. Der Englischunterricht gefällt mir besser als der Unterricht in anderen Fächern.					
17. Ich unterhalten mich gerne mit Native Speakern (=mit Leuten, deren Muttersprache Englisch ist) oder mit Menschen aus anderen Ländern.					
18. Die Kultur in englischsprachigen Ländern (wie z.B. England oder Amerika) interessiert mich.					
19. Um ehrlich zu sein, habe ich kein großes Interesse an der englischen Sprache.					
20. Meine Eltern unterstützen mich bei der Englischhausübung oder lernen mit mir für eine Schularbeit/ einen Test.					
21. Ich möchte auch nach der Schule weiterhin Englisch lernen.					
22. Mein Ziel ist es, flüssig Englisch zu sprechen					
23. In meiner Freizeit lese ich englische Bücher.					
24. In meiner Freizeit schau ich mir englische Serien / Filme an.					
25. Ich hätte gerne Freunde aus englischsprachigen Ländern.					
26. Meine Eltern ermutigen mich oft mit ihnen Englisch zu sprechen.					
27. Ich strenge mich an um Englisch zu lernen.					

Vielen Dank für Deine Mitarbeit ☺

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9.3. Abstract (English version)

Nowadays, life without digital media technologies would be impossible to imagine. Downloading apps, sending instant messages and scrolling through social media have become a crucial part in people's life. Therefore, it is inevitable that new media technologies also gradually become part of the education system. The term CALL means 'computer-assisted language learning' and offers students new and engaging ways of interacting with each other which positively influence their language learning process. Not only computers, but also the integration of tablets, smartphones and smartboards in the classroom make students more attentive during the lesson.

In Austria, nevertheless, some schools are already well equipped with digital technologies while others reject them and do not use them at all. Thus, the study seeks to compare three schools in lower Austria with different extents and durations of media technology use in the English classroom. Overall, 119 students between 13 and 14 years- old participated in the study, 40 students (21 female, 19 male) from the NMS St. Pölten, 40 students (17 female, 23 male) from the NMS Gars am Kamp and 39 students (20 female, 19 male) from the NMS Mödling. The aim is to find out whether students who use digital media technologies more frequently and for a longer time are more motivated to work with them. If these technologies, therefore, influence students' motivation to learn English is further investigated.

The results obtained displayed that students do not only enjoy working with digital media in class, but also that their attitude towards language learning is positively influenced. Specifically, the more and the longer students are allowed to use a smartphone in class, the more they perceive it as a useful tool for their English lessons. Moreover, it was revealed that due to a positive attitude towards smartboard use in English lessons, students' also show a high motivation to learn English, irrespective of duration and extent of its usage. However, the most dominant influential factors that contribute to the students' learning motivation are their parental encouragement and their instrumental orientation to reach certain goals. It could cautiously be said that students' motivation to learn does not depend on the extent

and duration of media usage, but that smartboards, in general, seem to have a positive impact on students' motivation to learn English.

9.4. Abstract (German version)

Ein Leben ohne digitale Medien wäre heutzutage unvorstellbar. Apps herunterladen, Nachrichten verschicken oder diverse Social Media Plattformen durchforsten ist mittlerweile ein wichtiger Bestandteil unserer Gesellschaft geworden. Es lässt sich somit nicht verhindern, dass diese neuen Technologien auch nach und nach einen wichtigen Bestandteil für das Bildungssystem darstellen. Der Begriff „CALL" ist eine Abkürzung im Englischen Sprachgebrauch für „Computer-Assisted Language Learning" und bedeutet „computergestütztes Sprachlernen". Die Schüler und Schülerinnen erhalten dadurch neue und spannende Möglichkeiten mit anderen Leuten zu interagieren welches das Erlernen einer neuen Sprache erheblich beeinflusst. Dazu zählt nicht nur der Einsatz von Computern, sondern auch Tablets, Smartphones und Smartboards erhöhen die Aufmerksamkeit der Schüler und Schülerinnen im Unterricht.

Der Einsatz von digitalen Medien in Österreichs Schulen variiert von Schule zu Schule. Während einige Schulen schon sehr vertraut im Umgang mit Medien im Unterricht sind, gibt es dennoch Schulen, welche den Einsatz verweigern und diese Art des Unterrichtens nur zum Teil oder gar nicht in Ihren Alltag integriert haben. Diese Studie vergleicht daher drei Schulen in Niederösterreich welche sich im Ausmaß und Dauer der der Verwendung von Medien im Unterricht unterscheiden. Insgesamt nahmen 119 Schüler im Alter von 13 und 14 Jahren an der Studie teil: 40 Schüler und Schülerinnen der NMS St. Pölten (21 Mädchen, 19 Burschen), 40 Schüler und Schülerinnen der NMS Gars am Kamp (17 Mädchen, 23 Burschen) sowie 39 Schüler und Schülerinnen der NMS Mödling (20 Mädchen, 19 Burschen). Das Ziel war es herauszufinden ob Schüler und Schülerinnen welche regelmäßig, seit längerer Zeit mit neuen Medien im Englischunterricht arbeiten, somit eine positivere Einstellung zu diesen Medien haben und somit motivierter sind sie im Unterricht zu benutzen.

Weiters wird untersucht ob diese Medien letztendlich auch die Motivation der Schüler und Schülerinnen beeinflusst, Englisch zu lernen.

Die Ergebnisse zeigen, dass Schüler und Schülerinnen nicht nur gerne mit neuen Medien im Unterricht arbeiten, sondern dass auch ihre Motivation Englisch zu lernen positiv beeinflusst wird. Es wurde festgestellt, je intensiver und länger Schüler und Schülerinnen mit Smartphones im Unterricht arbeiten, desto positiver haben sie den Einsatz des Smartphones im Englischunterricht beurteilt. Ein weiteres Ergebnis zeigt, dass Schüler und Schülerinnen welche gerne mit dem Smartboard im Unterricht arbeiten auch wirklich motivierter sind Englisch zu lernen, unabhängig davon wie lange oder wie oft sie mit dem Smartboard arbeiten. Häufigkeit und Dauer des Medieneinsatzes trägt somit nicht zur Lernmotivation bei. Andere Faktoren welche jedoch die Lernmotivation der Schüler und Schülerinnen erheblich beeinflussen, ist die Einstellung und die Unterstützung der Eltern sowie die instrumentelle Orientierung der Schüler und Schülerinnen bestimmte Ziele zu erreichen. Aus diesen Ergebnissen lässt sich schließen, dass es nicht relevant ist seit wann oder wie lange Schüler und Schülerinnen schon mit dem Smartboard arbeiten, sondern es in jedem Fall gerne genutzt wird und zur Lernmotivation der Schüler und Schülerinnen beiträgt.