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**THE RELATIONSHIP BETWEEN ADOLESCENT STUDENTS AND THEIR  
SMARTPHONES. THE PERSPECTIVE OF A NOVICE TEACHER.**

Bachelor's thesis

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Tartu 2019

## **Abstract**

**The relationship between adolescent students and their smartphones. The perspective of a novice teacher.** Smartphones are very popular devices, and are very widespread among adolescents. The way adolescents behave with and toward their smartphones suggests that the bond between them is stronger than a person would normally have toward an object. According to the author, there are no earlier studies conducted in Estonia that attempt to analyse the essence of the relationship between adolescent students and their smartphones. This study researches and analyses what kind of relationship adolescents have developed with their smartphones and how it affects their behaviour in class.

Keywords: smartphone, relationship, adolescents, students

## **Resümee**

**Noorte õpilaste suhe nende nutitelefoniidega. Algaja õpetaja vaatepunkt.** Nutitelefoniid on väga populaarsed seadmed, mis on noorte seas väga laialt levinud. Noorte käitumisviis oma nutitelefoniide suhtes ja koos nutitelefoniiga annab põhjust oletada, et side nende ja nutitelefoniide vahel on tugevam, kui tavapärase inimese ja elutu objekti vaheline side. Autorile teadaolevalt ei ole Eestis varasemalt läbi viidud uuringuid, mis püüavad analüüsida noorte õpilaste ning nende nutitelefoniide vahelise suhte olemust. Selles töös on uuritud ning analüüsitud, milline suhe on välja kujunenud noortel nende nutitelefoniidega ja kuidas see suhe mõjutab õpilaste käitumist klassis.

Võtmesõnad: nutitelefoni, suhe, noored, õpilased

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## Introduction

Smartphones are very popular devices in today's society and culture. In 2014, 58 percent of children in Estonia aged 6-14 owned a smartphone, but in only three years this has increased to 77 percent (Nutiseadmete kasutajate turvateadlikkuse ja ..., 2017). In 2017, about 90 percent of 12- to 14-year-old students owned a smartphone (Nutiseadmete kasutajate turvateadlikkuse ja ..., 2017). About 6 children in ten can use their smartphone without any restrictions, and even if there are restrictions on time, there are very few (if any) rules and prohibitions about what they can do with it (Nutiseadmete kasutajate turvateadlikkuse ja ..., 2017).

A smartphone is not only a device for receiving and making calls or sending text messages. There are hundreds of different apps available for almost anything: fitness, gaming, socialization, language learning, shopping, reading, etc. If a child who owns a smartphone has internet access, then he or she likely has access to all these features and applications as well.

In 2010, about 60 percent of children in Europe used internet almost daily and in Estonia, internet usage was above average – 4 in 5 children aged 9 to 16 used it daily (Livingstone et al, 2010). Since the year 2012, the most popular way for accessing the internet was no longer a computer but a mobile device, such as a smartphone or a tablet (Being young in Europe today - digital world, 2019). It is possible, that the shift to mobile devices is the reason why the internet usage has increased so rapidly over the years. According to EU Kids Online report (Sukk, M., Soo, K., 2018), 97 percent of 9-17-year old children use internet daily, and the most popular device is smartphone: 86 percent of them use it at least once a day.

Based on these statistics, it is clear, that smartphones (and internet) play an important role in adolescents' lives. For 12-14-year-olds, the most popular activities involving smartphones are listening to music and/or watching videos, using social networking sites, but they also use it for schoolwork and research (search engines, e-school etc.) (Nutiseadmete kasutajate turvateadlikkuse ja ..., 2017).

Also, adolescents in this age group are relatively free to decide which applications they download to their phone (Nutiseadmete kasutajate turvateadlikkuse ja ..., 2017). It can

be argued that since parents don't exert much control or attention to this part of their children's lives, the smartphone may also be thought of as their "personal space".

There is an abundance of articles on internet about addiction to smart devices, and how adolescents spend too much of their time with smartphones. Some schools in Estonia have set up "smart-free areas" (NUTIVABA ala II ja III..., 2017). The subject, or "problem" of smartphones is very actual because despite the "smart-free areas", using smartphones during class may still be a problem in some schools. Smartphone usage by students might be a bigger issue for novice teachers. They struggle with discipline in the classroom more than experienced teachers (Okas et al., 2016).

The aim of this research is to understand the relationship or bond that 12-14-year-olds have developed with their phone (from the perspective of a novice teacher), because understanding this relationship has a key role in being able to solve different smartphone-related issues that may arise during lessons. The research questions the author is attempting to answer in this thesis are:

what kind of relationship have 12-to-14-year-old students developed with their smartphones;

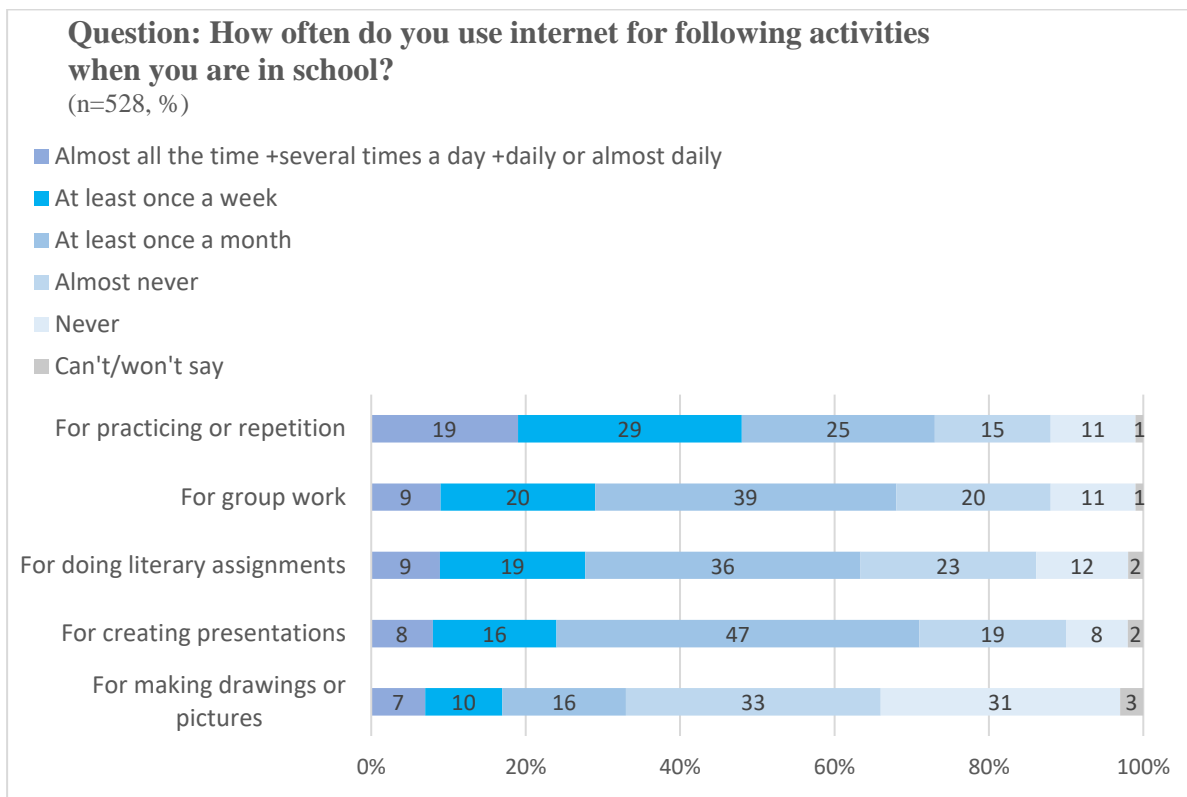
how does this relationship affect their behaviour during class?

## **1. Background of the study**

The author works in Vaimastvere School, which is a small basic school with about 68 students. There is also a students' home in close proximity to the school, providing housing for students who either live far from the school, or who have a complicated family background. 2018/2019 is the author's first year working as a teacher. The author teaches mathematics to grades 6, 7 and 8 (the age group is roughly 12-to-14-year-old students). As a novice teacher, the author occasionally struggles with establishing discipline in the classroom. One of the main issues that arises is the use of smartphones during lessons.

The author, born after the 1990s, would consider herself a “naturalized digital”, having not quite grown up with technology, but being heavily engaged with both technology and new media (Hoffmann, Lutz & Meckel, 2014). The generation that the author works with, however, falls under the category of “digital natives”, having grown up with technology since young age (Prensky, 2001). They possess several traits that Prensky (2001) uses for characterizing “digital natives”: they like to multi-task, they prefer visually presented information to reading, and they prefer games to serious work. Another thing to note is that for schoolwork during lessons, the students prefer their smartphones to other technological devices and gadgets.

The rapid increase in internet usage and its popularity has also given reason to add implementing digital technology for both learning and teaching purposes as one of Estonian lifelong learning strategies (Eesti elukestva õppe strateegia 2020, 2014). Using different digital devices in school is gaining popularity. Below is figure 1, which shows different internet activities done in schools and how frequently they are done.



**Figure 1.** Internet activities in school among 13-17-year-olds (Sukk, M., Soo, K., 2018, p 21).

In the author's personal experience, the two most often used activities given in this chart are usually done using smartphones.

### **1.1 The impact of digital media and smartphones**

Digital media and digitalization have become such an integrated part of society's structure, that they are almost an inseparable part of both children's lives and their daily activities (Sørensen, 2010). Adolescents' everyday life no longer takes place in only physical room, but is now divided between physical and virtual rooms (Sørensen, 2010).

In Estonia, the rise in children's internet usage via smartphones since the year Sørensen's work was published in 2010, has been from 31 percent to 86 percent. The author believes that hence, the virtual room has gained an even more important part in young people's everyday lives. But it wouldn't be entirely correct to say that this increase in use of smartphones is the reason for the shift of adolescents' daily life and culture.

Buckingham (2007) argues, that although contemporary children's culture is changing in relation to technological developments, it would be erroneous to see it as the main cause – political, economic and social changes have an impact as well. Livingstone (2009) points out, that childhood itself is changing, and parent-child relations along with it. She brings out that these social and cultural shifts could lead young people to the media, causing them to embrace it as a specific and valued opportunity for both, communication and the freedom to express themselves.

Turkle (2011) argues that a telephone is a paradoxical machine: on the one hand, it allows children greater freedoms, but on the other, it hinders it by keeping them accessible to their parents at all times. She describes how connectivity offers opportunities to adolescents to experiment with identity and creates a sense of free space for them (Turkle, 2011).

It can be said that phones are redefining notions of "space": Castells, Fernández-Ardèvol, Qiu & Sey (2007) suggest that the space of the interaction in the case of mobile

communication is defined entirely within the flows of communication. It frees people from a place-based context and allows them to concentrate more on the communication itself (Castells et al., 2007). Peoples', especially the teenagers' use of media makes the meanings of both "public space" and "personal space" quite ambiguous: a (smart)phone enables them to have private conversations in places which are considered to be public, and also to communicate publicly with a larger group of people from the privacy of their homes (Livingstone, 2005).

However, this is not the only reason for smartphones' popularity among the young. Rafaeli, Raban and Kalman (2005) suggest, that personalisation and humanization are endowing the computer and network with the "self" and mind, thus making it more attractive and captivating. As technology evolves, devices such as smartphones, for example, become more personalised and interactive. With an interactive device, it is easy to think of it as a sort of companion, or even an extension of yourself. Turkle (2011) calls attention the possible depth of feeling that some adolescents have for their phones:

"Teenagers tell me they sleep with their cell phone, and even when it isn't on their person, when it has been banished to the school locker, for instance, they know when their phone is vibrating. The technology has become like a phantom limb, it is so much a part of them." (Turkle, 2011, p. 16-17)

The author found a study conducted in Finland by Oksman and Rautiainen (2002), which investigates young people's relationship with mobile phones, the predecessors of smartphones. The mobile phone was adopted by teenagers quite quickly and was used as a useful object in everyday life, but was also regarded as a tool for creating and maintaining their social networks (Oksman and Rautiainen, 2002).

What the author finds interesting is how the children referred to their mobile phones in everyday life – they used the words *känny* or *kännykkä*, which signifies an extension of the hand (Oksman and Rautiainen, 2002). The author believes that this term gives the phone more meaning and importance than a simple tool would receive from its owner. This interesting phenomena might be explained to some extent by McLuhan (1964), who presents an argument that "men at once become fascinated by any extension of themselves in any material other than themselves" (McLuhan, 1964, p. 45).

## 2. Methodology

The goal of this study is to understand the relationship that adolescent students have developed with their smartphones. Qualitative method was chosen, because it enables the author to gain information about the research subjects' subjective feelings and experiences (Õunapuu, 2014).

The methodology chosen for this thesis is grounded theory, which allows the author to be simultaneously involved in data collection and analysis from the beginning of the project (Charmaz, 2006). The interview questions and theoretical background for this study were composed in accordance with the findings during the observation period.

Because the interviews were conducted in Estonian, but this study is in English, the passages from the interviews which are brought out will be translated by the author in order to increase intelligibility and coherency for the reader.

### 2.1 Sample

The sample chosen for this study is a convenience sample, meaning that the research subjects were easily accessible (Õunapuu, 2014). The sample consists of the author's students, from grades 6 to 8, a total of twenty-nine students. Twelve students are in 6<sup>th</sup> grade, 8 students are in 7<sup>th</sup> grade and 9 students are in 8<sup>th</sup> grade. In the beginning of the observation period the number was somewhat bigger, but two students transferred to another school within the schoolyear.

The sample was observed for four months. After this period, they were all asked whether they would agree to take part in group interviews. Written permissions were asked from their parents as well (see appendix 1). Out of twenty-nine students, ten returned signed permission papers.

These students were divided into three groups, so that each group represented a different class. One student was ill at the time when the group interview was conducted for

their class, and because of this, every group had three members. For the interview questions, please see appendix 2.

To protect the students' privacy, their ages and gender will not be mentioned; in the result and discussion, every participant will be referred to as a he. The names are replaced with letters in alphabetical order and are not related to the participants' initials. The formed groups are shown in table 1 (below) and are listed in the same order that the interviews were conducted.

**Table 1.** Group interview data.

	<i>Grade</i>	<i>Members</i>	<i>Participants</i>
<i>Group 1</i>	7	3	A, B, C
<i>Group 2</i>	6	3	D, E, F
<i>Group 3</i>	8	3	G, H, I

## 2.2 Data collection

For collecting data, the researcher used research method triangulation, which increases validity (Creswell & Miller, 2000). The instruments used in this study are direct observations and group interviews. The researcher was a novice teacher and as such could successfully be in the role of participant-observer in the classroom.

The observations were done and documented from September to December. For documenting her findings, the author used the diary method, permitting her to examine and report both events and experiences in their natural and spontaneous context (Bolger, Davis & Rafaeli, 2002). The diary entries were regularly discussed and analysed by the author and her supervisor.

In January, the author re-analysed the diary entries and consulted with the supervisor about emerging themes in the collected data, which were then used as a basis for compiling

the questions for group interviews. It was decided that for the purpose of this research, a semi-structured interview would be the most suitable form, as it more open and can be altered according to the situation if necessary (Õunapuu, 2014). The interview questions are included in appendix.

In order to increase the validity of this research, the interview questions were examined by an expert. The expert was the supervisor of the current thesis, who also verified that the questions were in accordance with the aim and research questions of this thesis.

Before the interviews, the participants were acquainted with the aim of the research, and were asked whether it was okay to record them. They were also informed that the information they provide is confidential and will only be used for the purpose of this research.

The interviews were built up like conversations and we sat in a circle-like shape; the sitting position was freely chosen by the students. The shortest interview was seventeen minutes and the longest was twenty minutes long. The interviews were conducted between 21<sup>st</sup> of February and 18<sup>th</sup> of April.

### **2.3 Data analysis**

Data analysis was an ongoing process since the second half of September, when the first diary entries were created about observations made in class. The author wrote about events, students' behaviour and attitudes regarding smartphones and also about her own reactions and opinions to these events.

When the first interview was conducted, the author began transcribing. After all three interviews were done and transcribed, the result was a total of thirty nine pages of data. The next task was finding the relevant info from the transcriptions and coding it. The relevant parts were words, phrases, sentences. In some cases, the behaviour and activity of the interviewees was also meaningful.

The coding process was done manually. In table 2 there is an example of how a code was created from a meaningful unit (or part of text):

**Table 2.** Forming a code from a meaningful unit.

<b>Meaningful unit</b>	<b>Code</b>
<i>See ongi see, et teed, mis tahad. Nagu sihuke vaba tunne.</i>	Feel of being in control
<i>See nagu ajab küll veits närvi, kui sa nagu üritad suhelda ja siis keegi lihtsalt on kogu aeg telefonis, nagu ei tule välja sealt.</i>	Feeling jealous of a smartphone

When the coding was done for all three interviews, subcategories were composed by codes that were similar in meaning. Table 3 shows how the subcategories were formed.

**Table 3.** Forming subcategories from codes.

<b>Code</b>	<b>Subcategory</b>
<i>Feeling jealous of a smartphone</i>	Negative feelings toward smartphones
<i>Feeling annoyed by smartphone</i>	
<i>Perceived as a danger to your privacy</i>	
<i>Important enough to fight for</i>	Attachment to smartphones
<i>Wish to keep the smartphone close and safe</i>	
<i>A means for finding comfort</i>	

The subcategories similar in content and meaning were then joined under main categories, an example of which can be seen below in table 4.

**Table 4.** Formation of main categories.

<b>Subcategories</b>	<b>Main category</b>
<i>Negative feelings toward smartphones</i>	Array of feelings toward smartphones
<i>Positive feelings related to smartphones</i>	
<i>Feelings of attachment toward smartphones</i>	

### **3. Results and discussion**

The purpose of this thesis was to understand the relationship that adolescents have developed with their smartphones and how this relationship affects the respective students' behaviour in class. The results will be presented in accordance with the research questions. Two main categories emerged for the first research question: array of feelings toward smartphones and smartphone as a supportive device. For the second research question, there were also two main categories formed: positive effects on behaviour and negative effects on behaviour.

This part of the thesis will be written in first person narrative, as the interview results and analysis are intertwined with the authors notes, observations and diary entries.

#### **3.1 The relationship that 12-14-year-olds have developed with their smartphones**

##### **3.1.1 Array of feelings toward smartphones.**

During my observations I often noticed how the students turn to their smartphones when they are upset or sad. If the previous lesson had been a stressful one for the children, I was sure to encounter more phone-related issues during my own lesson. I had the impression that they wanted to be on their own in order to calm themselves.

*Today I had a little confrontation with a boy in 7<sup>th</sup> grade because he didn't want to participate in class work. (...) he chose to put his earphones on and use his phone instead. I kept telling him to put his phone away and this upset him. He chose to walk away from the classroom. When I looked behind the door about twenty minutes later, he was sitting in the corridor and playing/chatting on his phone. I've got a feeling that the issue here was mostly about the fact that he wanted to be left alone. His phone just happened to be the "place" where he felt most comfortable. (26.09. excerpt from the diary).*

I wasn't able to interview this boy, but several interviewees told me that when they are upset, they sometimes want to spend their time with their phone, and that it gives them a feeling of privacy and freedom, which makes them feel better.

*... Well, I too am more like by myself there. When I don't want to be around all sorts of people. I plug in (my) earphones in and put music on, then (it's like) can't hear, can't see anyone. (G)*

An interviewee also described how he uses his smartphone for avoiding unpleasant situations and conversations by pretending to be immersed in it, thus successfully creating a "personal space" for himself where others don't wish or dare to intrude. In this sense, his smartphone is something that he can rely on for protection; it provides him with a sense of security, almost as if it were "sheltering" him.

The theme of avoiding difficult/unpleasant situations or people came up in different contexts in all of the interviews. Several students told me that if the negative experience could not be avoided (for example, they were in class and would get in trouble for leaving), they wanted to focus their attention to their smartphone instead of dealing with the situation surrounding them. The adolescents want to make themselves feel better, and for this effect, they use their smartphones for consoling themselves. A smartphone helps them get through difficult situations.

It was mentioned in the first group interview that in some cases, students turn their attention to smartphones when they see that everyone else is occupied with their phones as well. The way it was said made me think that maybe this is a way for the adolescents to feel like they are part of a group and, therefore give them a positive experience of "fitting in". They also turn to their phones when they feel neglected.

*Sometimes it's like this, that the English teacher, or just no-one will notice, and then you just are there (on your phone). Nobody notices. (E)*

*You are invisible for the teacher. For real, and then after someone says, then the teacher will start to see you. (D)*

I brought out both remarks, as D was supplementing E's statement. D spoke very animatedly about this subject. It appeared that they turned to their smartphones for comfort. This theme was discussed by other interviewees as well, but they seemed generally less

bothered by the occasional lack of attention from their teachers. It might be related to the fact that the other two groups consist of older students.

Smartphones can be a source of negative feelings as well. During the short time I've worked as a teacher, students have asked my assistance on several occasions to help them get another pupil to delete photos or videos that have been made about them without permission. They feel that their privacy has been invaded and perceive that in this way, a smartphone may be a threat to them. The second group emphasised how unpleasant it feels when photos and videoclips of them are made without them having control over it. They are also the youngest interviewees and most are not very active in social media. When they do share photos through their smartphone, the content in the photos is often about their current activity or possessions (for example, they take photos while waiting for the bus or sitting in it, and write on the photo that they will reach their destination soon; or they take photos of their books while sitting in class; one boy often send snaps that feature his scooter, a couple others send snaps about their computers, etc.) and rarely features their person.

A smartphone also causes jealousy – in the third interview, interviewees admitted to being upset when they have to compete for someone's attention with a smartphone.

*This does kinda anger (me), when you're like trying to talk, and then someone's just always on their phone. Like they don't come out from there. (I)*

In this case, the adolescents feel that they might be less important in their peers' lives than smartphones, which might lead to bigger issues in their interpersonal relationship. Another interviewee has experienced being on the other side of the same situation. He feels he can't freely use his smartphone because it vexes the people around him. He kept repeating that using smartphones during lessons isn't okay and it definitely shouldn't be done. However, his words and actions don't go together at all.

*About 15 minutes before the end of class, one boy wanted to play with his phone. I'm not sure if he thought he was being inconspicuous, or he just didn't care if I saw him play. I stood behind him and watched him play, he didn't put his phone away when I asked him. It took a few attempts on my part for him to put it away. (02.10. excerpt from the diary)*

During the interview, I got the impression that he didn't feel comfortable discussing his own perspective on things or giving his honest opinion and tried to say what he thought would be the "right answers".

Some interviewees also reported that there are occasions where they don't use their phone at all. It was brought out that when they have a fight with someone and wish to avoid that person, they avoid their smartphone as well.

*...When, for example, I have a big fight with someone. Then I just turn it (off) and throw the phone away (from me). (C)*

This is an interesting phenomenon, especially considering that they also admitted that ignoring people is very easy with a smartphone; it hints that they might be transferring their negative feelings toward a person over to their smartphone, because the phone is a way of connection between them.

During my observation period, I noticed several things that made me think that the adolescents might have developed some sort of attachment to their smartphones – a lot of them want to keep it in a place where they can see it at all times, even when they don't use it at all; some of them, when faced with a choice, would rather leave school than separate from their phone until the end of the school day (or even until the end of the current lesson). An interviewee who uses his phone during class quite often, remarked that he wouldn't give his phone to just any teacher who asked, but he isn't upset or angry when I ask him to give it to me. This suggests that trust is an important issue when it comes to giving their phones temporarily to someone. A smartphone as a special and important item is not something that they would willingly hand over to someone they don't trust.

Another interesting detail that emerged from the interviews was that nearly none of the interviewed students seemed to consider their schoolbag or locker as a suitable place for their phone, the only exception was a member of the third group who doesn't own a smartphone.

*In (my) pocket, if (I) don't have pockets, then it has to be kept on the table. (H)*

This appeared to be the most common opinion among the adolescents. The interviewees who don't use smartphones during class agreed that they also keep their phone in their pocket (as opposed to other places). It may be conjectured by their nearly unanimous

opinion, that they wish to keep their smartphone close to them and have constant assurance the device is alright.

### **3.1.2 Smartphone as a useful device.**

Several interviewees said that they find it easier to communicate via smartphone, and brought out various different reasons for this. The first group mentioned that if you want to say something, and you are afraid to say it face-to-face, then your smartphone is a very good medium. In the second group, an interviewee agreed that using a smartphone helps him by giving her time to think through his answers. He admitted that for this reason, he would prefer to talk to the teachers via messenger rather than in person.

The third group, which consists of the oldest students, discussed how communicating via smartphones and internet might affect their relationship with peers more than the other two groups. One student brought out how it makes talking to people easier for him, because no-one can see his emotions and vice versa. Another understood this in the literal sense and agreed that if a person is on the other side of the Earth, then it would be the only means to connect with that person.

A smartphone is useful as a device that provides entertainment and diversion as well. When bored, adolescents turn to their phones for different activities. For example, H's favourite pastime during the school day is watching YouTube videos. There was a period when he tried to convince me to look at the videos that he liked during class. He is also very interested in playing games, but he admitted that when he is at home, he prefers to play on his computer and doesn't use his phone at all. He is not the only one who does this – it appears that for those students who use their phones primarily for entertainment, a smartphone is more like an alternative device and will be set aside if a better or more convenient device is available. This tendency came out when I asked my interviewees whether there are times when they completely avoid using their phones.

*Yes, when I am home, at home I have a computer and an Xbox. (A)*

*Well, sometimes I go outside and I don't feel like taking it along there, you know. (B)*

Computer and TV were both mentioned several times as devices for entertainment, which are preferred to smartphones when the adolescents are free to choose their own activity (in school, they don't have a choice, as they obviously can't take a PC or a TV along with them).

Smartphone's different functions are also used almost daily by the interviewees. The first two groups said that they use the phone for checking the time. They don't want to use the classical clock which is on the wall and prefer their phone screen instead, because the numbers there are digital and therefore easier to understand. The members of the third group admitted to using the calculator function a lot during class. They prefer their phone over the actual calculator, even though they struggle with doing the more complex operations there. One reason behind this preference might be the multifunctionality of their phones – they can do the necessary classwork and simultaneously attend to their social life.

I purposefully didn't set any boundaries to the students about using their smartphones during the interviews. The result was interesting, as each group had at least one member who did use their phone while we were talking. In the first group, the members seemed almost like they were competing for my attention: one showed odd photos and memes, the other made sure that I saw his interesting phone case and knew the story that goes along with it, the third participant discussed about some messenger group conversations that were out of the ordinary. I got an impression that these activities were an attempt – perhaps an unconscious one – to draw my attention. It was discussed in the second interview, how F used to send snaps via Snapchat app so often that it began to bother his peers, although she was aware that 2-3 times a day would be sufficient for “keeping a streak”; this also feels like a call for attention. In this sense, it appears that a phone might be a tool that they use when they wish to be noticed.

### **3.2 How this relationship affects students' behaviour in class**

Determining whether the effect of certain behaviour patterns is positive or negative was difficult. After some consideration, I came to the conclusion, that the polarity of the same behaviour might be different for different students, as it depends largely on the context.

### 3.2.1 Positive effects on behaviour.

One of the most positive effects is that students are more willing to work along during lessons if they can use their smartphone. In all three group interviews, the interviewees agreed that they would like it if we could use smartphones more often during class. As an answer to my question about their expectations on me in regard to using smartphones, I received an almost unanimous answer that they want to use Kahoot, Quizizz, and other media platforms with their smartphones.

*Well, Kahoot and stuff like that for repetition like that. Just random repetition. So that we'd still have to study. (D)*

The tendency in class that I have seen so far is that even the more difficult children find doing their tasks via smartphone more enjoyable and are therefore more likely to behave themselves and work along.

A student who participated in the second group interview felt so inspired by our conversation about using smartphones more often during class that he messaged me the same evening after the interview and asked that if he made a Kahoot, would I agree to use it in our next math lesson. Since then, he has created two Kahoots for my lessons, for which he independently worked through the materials in the student book in order to create an interesting Kahoot. This had an effect on his behaviour in the next class as well – he talked less and engaged more in the lesson's activities, so that he would know enough about the current subject to be able to create an adequate Kahoot about it.

The next effects mentioned in this chapter were more difficult to define. Using smartphones during class without teacher's permission is not a sign of good behaviour, but when I consider that a student with discipline issues and without any motivation to study decides to quietly entertain himself with his smartphone rather than aggravate and unsettle the entire class, then I would consider that particular behavioural change caused by smartphone positive.

*\*\*\* was late and because he didn't want to sit in the front, he took an old table and sat facing the back wall. One time when I went to check on him, I saw that his phone*

*was on the table and snapchat app was opened there. When I told him to put his phone away, he didn't do it immediately. (31.10 excerpt from the diary)*

This excerpt describes recurring behaviour of an adolescent who was very difficult to manage, and his behaviour had a very big impact on the entire class. In the first couple of months I struggled with establishing discipline in the classroom quite often. Although I prohibit the use of phones in class (unless needed for specific tasks), I often debated whether it would be better for the rest of the class to just let this individual just attend to his phone on the occasions when he seemed to be more troubled than usual.

I have noticed this shift in behaviour in several adolescents that I teach - instead of taking out their frustration or discontent on other students, they immerse themselves in their smartphones. It makes me think that they are trying to find their "personal space" where they can retreat by themselves. For the class morale, this second option is the better one.

A similar theme came out in the group interviews as well, but it was mentioned mostly in relation to teachers. The students admitted that they sometimes choose to "be" in their phones when they have a conflict with a teacher.

*Because when she starts to berate (me), then I like, take the phone and... (F)*

*Delve into that? (Me)*

*Yes (F)*

This student knows his own character well enough (he would not be able to stay polite in the case of an argument) that instead of escalating the conflict by arguing and talking back, he tries to avoid it entirely by turning his attention elsewhere. This practice appears to be working well enough, because I haven't heard any news about this student participating in any conflicts for a while now.

### **3.2.2 Negative effects on behaviour.**

There are several negative effects that smartphones have on the adolescents' behaviour in class. One of the more obvious effects is that it constantly draws their attention away from what they should be studying. The fact that the phone is usually kept on the table increases

this problem somewhat, as it provides them with easy access to their smartphones whenever the students wish to use it. The interviewees confessed that they turn to their phone when they want to socialise or console themselves, but also when they feel bored. I witnessed this phenomenon on several occasions during my observation period in every class I teach.

*I've got one child who keeps her phone on the table and checks it (mostly) only after it has vibrated. [...] Then I have two adolescents who just can't or won't stop using their phones. When one gets a message, she shows it to the other girl and vice versa. Naturally, they'll reply as soon as possible. (26.09 excerpt from the diary)*

During the interviews, the students admitted that they are aware their attention is divided between their surroundings and their smartphone. They agree that it has a negative effect on their performance in class. However, they also brought out that their behaviour depends, to some extent, on the teacher. If the student-teacher relationship is strained, it increases the students' wish to spend time with their phones. It was mentioned in two group interviews: in the first, the students admitted that they use their smartphones most actively during a certain teacher's classes (they have previously told me several times that this specific teacher is their least favourite teacher in school); in the second interview, one student confessed that she uses her phone during class in order to avoid the teacher that she has problems with.

I wrote earlier that smartphone is a useful tool for receiving attention. The magnitude of the effect of using smartphones for this purpose during class is dependent on each individual student. Some students wish to share the photos and videos that they like or believe are amusing. I have witnessed this behaviour in these students as well, who otherwise rarely use their phone in class without permission. It is not a very big issue because they mostly obey quite well when I tell them to put away their phones and continue with the subject at hand. Their behaviour patterns suggest that they wish to receive positive attention. There were similar occurrences during all of the group interviews as well.

But for the more problematic adolescents, a smartphone provides a very diverse outlet. There are several entries in my diary about the different methods they used when disrupting the lessons.

*He started to fiddle with his phone early on, played loud music, etc. When I told him to shut the phone, he didn't listen. [...] Finally, he stopped with the music (but didn't put*

*his phone down). [...] \*\*\* thought it was funny and sent a snap [to another student in the same class] with a photo of his own empty test sheet. (04.10. excerpt from the diary)*

This chain of events happened during a test, exciting and disrupting the entire class. He was one of the several new students we had this schoolyear (the mobility of students to and from this school, even within the schoolyear, is a characteristic of Vaimastvere School) and his behaviour was likely an attempt to establish himself within the pre-existing “groups”. My impression of this situation was that his “performance” in class was for the other students as much as it was for me. His behaviour since then has improved quite a bit, but is still somewhat problematic. I unfortunately couldn’t interview this student and ask his own point of view about his behaviour in relation to his smartphone. Although he originally agreed to participate in the interview (as did almost his entire class, with only one exception), he was one of the many students who did not return the permission form, saying that he had lost it.

## 4 Conclusion

The results of the study suggest that the relationship between the author’s students and their smartphones is, for the most part, indeed deeper than what a person would normally have with an inanimate object. Sørensen’s (2010) suggestion that adolescents’ daily lives are divided between physical rooms and virtual rooms was confirmed in the current study as well – every interviewee admitted to using their smart device (one of them owned a tablet and used it the same way as others use a smartphone, taking it to school with him every day) spending their time in various environments (YouTube, games, messenger, etc).

The students’ admissions that they feel more free and that the teachers cannot control their activities when they are using their smartphone coincides with Turkle’s (2011) idea, that it presents adolescents with opportunities to experiment with their identity and creates a sense that they have “free space”. This is also supported by the adolescents’ description that they use their phone when they want to be left alone. And thus, their smartphone offers them solace when they need it, and yet, as Livingstone (2005) argued, it (communication

technology) can easily be used when they wish to interact with people, even from the privacy of their homes.

Another interesting phenomenon that was observed by the author and also discussed with the research subjects during the interviews was the significant role that the student-teacher relationship played when the student was expected to consign his phone to the teacher. Although a teacher would not cause harm to the phone or “go through” the personal information stored there, the adolescents would not willingly give their smartphone to a teacher they do not have a good relationship with. This reaction suggests that smartphones are very important and precious to their owners. This idea is also supported by Turkle (2011), who argues that phones have become so much a part of teenagers and their lives that it is almost like a phantom limb.

The complicated and multifaceted relationship also impacts adolescents’ behaviour in class. During my observations, I witnessed numerous occasions when they chose to communicate via different apps (such as Facebook messenger, Snapchat, etc) instead of doing classwork, which supports Oksman and Rautiainen’s (2002) suggestion that the phone is used by teenagers as a tool for creating and maintaining their social networks. Although they talked about mobile phones, it can be said that smartphones provide even more opportunities for socialising with its variety of apps that are created for that specific purpose, thus making it easier to stay connected at all times.

The author wishes to point out that although negative behaviour that includes and may be magnified by smartphones was discussed in this thesis, she was not able to interview and gain knowledge about the perspective and opinion of these students, as most of them, despite originally agreeing to participate in the group interviews, didn’t bother to bring back the permission form for parents that was given to them. Further research about how smartphones affect adolescents with different behavioural and attitude problems is suggested.

During the process of writing this thesis and trying to gain knowledge about the adolescents’ own feelings and perspective, the author came to the conclusion that as a teacher, respecting the students’ devices as well as the students themselves is a solution with some practical value. It creates trust and the students are more likely to put away their smartphones during class, if it is a polite request rather than an order.

## **Acknowledgements**

The author is thankful to the research subjects for agreeing to participate in this study, to her family for supporting her studies and to Maio Vaniko, who assisted with finding relevant theoretical materials for this study.

## **Author's declaration**

*I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.*

*Date: 20.05.2019*

*Aili Prinken*

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APPENDIX 1. Permission form for parents.

Tere!

Olen Tartu Ülikooli kolmanda kursuse tudeng ning õpin matemaatika õpetajaks. Uurin bakalaureusetöö raames, milline suhe on noortel (12-14. a.) oma nutitelefonidega ning selle jaoks on mul vaja õpilasi intervjuerida. Valmis töös ei avaldata ühegi õpilase nime, kõik isikuandmed on konfidentsiaalsed ning neid ei avaldata kolmandatele osapooltele. Uurimuses osalemine on vabatahtlik ning sellest võib igal hetkel loobuda.

Palun Teie luba Teie lapse kaasamiseks sellesse uurimistöösse.

Lugupidamisega

Aili Prinken

Mina, ..... luban/ei luba oma lapsel .....  
uurimistööst osa võtta.

Kuupäev

Allkiri

## APPENDIX 2. Interview questions (Original and translated).

### Original version:

- 1) Kui vanalt said esimese telefoni?  
Kas see oli nappudega või nutitelefon?
- 2) Mulle on silma jäänud, et paljud teist eelistavad telefoni laua peal hoida. Kas sellel on mingi kindel põhjus?  
Kirjelda palun seda põhjust (kas tunned, et lihtsalt pead vahepeal telefoni kontrollima, või kas ootad sel juhul mingit kindlat sõnumit/teadet?)
- 3) Mis põhjusel sa tunni ajal telefoni kasutad?  
Millistes olukordades sa tunned, et tahaksid hoopis telefonis olla?  
Kas sa vahel veedad telefonis selle pärast ka aega, et saaksid seal nagu omaette olla? (isiklik ruum)
- 4) Kas on selliseid aegu ka, kus sa väldid telefonis kellegagi, või siis üldse inimestega suhtlemist?  
Näiteks?  
Kas on ka selliseid olukordi/hetki, millal väldid üldse telefoni kasutamist?  
Palun nimeta mõni.
- 5) Kirjelda, mida sa arvad õpetajate suhtumisest telefoni kasutamisesse.
- 6) Kuidas seda hindad – kas nende suhtumine on põhjendatud või on õpetajad liiga ranged? Põhjenda.
- 7) Miks teie meelest õpetajad ei taha vahel, et te nutitelefone kasutate?  
Kuidas ja mil moel mõjutab sinu nutitelefone kasutamine suhteid eakaaslastega?  
Õpetajatega?
- 8) Millised on sinu ootused minule seoses telefonide kasutamisega tundides?

### Translated version:

- 1) At what age did you get your first phone?  
Was it a button-phone or a smartphone?
- 2) I have noticed that a lot of you prefer to keep your phone on the table. Is it for a specific reason for this?  
Please describe it to me (is it like a compulsion or are you waiting for something certain – like a message, for example)?
- 3) For what reason are you using your phone during class?  
In which situations do you feel that you want to use your phone?  
Are there such occasions when you spend time in your phone just because you feel like you can sort of be by yourself there (personal space)?
- 4) Do you sometimes avoid communicating with someone, or even everyone via your phone?  
For example?  
Do you sometimes avoid using your phone altogether? Please name those occasions.

- 5) Describe how teachers regard the use of smartphones. What do you think about it (is the teachers' reaction justified or are they too strict)?
- 6) What do you think might be the reason for why teachers don't want you to use smartphones?
- 7) In what way and how much does your use of smartphone affect your relations with your peers?  
    With teachers?
- 8) What are your expectations to me in regard to using smartphones in class?

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