SMARTPHONE USE FOR LANGUAGE LEARNING: A QUALITATIVE STUDY OF TECHNOLOGY USE BY ARABIC SPEAKING STUDENTS IN AN SFI CLASSROOM SETTING

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Abstract

Using smartphones in a classroom setting for educational purposes is quite popular in the world in general and in Sweden in particular. This study explores the use of smartphones in the language-learning classroom. A qualitative approach was used to understand how Arabic-speaking students use smartphones to learn Swedish as an additional language. Classroom observation and interviews with students and teachers were used for data collection. The study draws on mobile learning, technological affordances and a sociocultural perspective on learning to shape an understanding of the findings of the study. The study found that students use smartphones in the classroom as an educational facilitator through mixed learning activities to learn Swedish. The students use smartphones to translate vocabulary words, construct sentences, and advance their knowledge in grammar.

Keywords

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1 Introduction

Smartphones have recently had a tremendous impact on individuals' communication (Jackson et al., 2017) and student learning (O'Bannon & Thomas, 2014). Smartphones user's numbers are expanding at a rapid pace. According ot Staistsa (2018), more than half the world now uses a smartphone. Interestingly, by 2019 smatphone user population may pass five billion marks by 2019 (Staistsa, 2018).

Indeed, technologies are indispensable for learners in the digital age. The vast technological environment that surrounds individuals has created a generation of digital natives (Prensky, 2001). This generation is different from past generations in terms of thinking and processing information (Alsadoon,2012). To meet the digital natives' needs and interests and accommodate their digital skills, educational institutions have integrated technology into classrooms (Alsadoon, 2012). Moreover, educators incorporate technologies including mobile learning into their classrooms (Hariry, 2015). Mobile learning (or m-learning) supports the learning process by the use of portable devices such as smartphones and laptops. To Sandberg et al. (2011), m-learning deals with "the acquisition of knowledge through a mobile device" (p. 1335).

Smartphones have been widely used among learners. Learner' usage of smartphones includes taking a photo, recording audio, sending and receiving texts, photos and audio recordings, reading texts, communicating with other through access the social media, and learning an additional language (Mahdi, 2018). Because of these significant features, many educators tend to allow students to use smartphones in the classroom (Christensen & Knezek, 2017).

As technology was and still is an essential part of our daily life, so has smartphone technology in language learning practices. Learning a new language for an adult is not an easy mission, as newcomers to new societyneed not only learn the language, they also need to learn the culture, the system and the way people interact socially. In this complicated process newcomers need educational tools to facilitate Swedish language learning for them. As smartphones include many language learning apps and offer multi functionality, students can use them in and outside the classroom. The question is, how do Arabic-speaking students use smartphone technology in a Swedish language learning classroom setting? Which activities are they applying by the use of this technology?

Previous researchers studied smartphone technology in classroom settings from a different lens. For instance, researchers (e.g., O'Bannon, et al., 2017; Ott, 2017, Rahimi & Miri, 2014) explored use of smartphones technology in classroom is it a tool of learning or distraction. Others (e.g., Rahimi & Miri ,2014; Mehdipour and Zerehkaf,2013) examined the impact

of smartphones technology on learning practices inside the classroom, besides the perceptions of students and teachers regarding this technology as well. Our study will fill the gap of using smartphone technology inside the classroom for second language learning. The study will focus on how Arabic speaking students use smartphone technology in Swedish language learning in the classroom setting.

1.1 Purpose and Significance

The purpose of our study is to investigate how students are using smartphones as a tool for learning Swedish as an additional language in the classroom. The study also aims to understand teachers' and students' perceptions on the use of smartphones in the language learning classroom. These students are immigrants who cannot easily communicate with Swedish native speakers. Ideally, they need to learn Swedish for many purposes to build better understanding and communication skills, as well as intercultural exchange (Esser, 2006; Stone, 2004).

This study will add to the growing body of research focusing on the use of digital technologies in language learning. Specifically, the study will address how smartphones are being used for language learning and how students and teachers perceive the use of smartphones in a language-learning classroom. The study contributes to the field of mobile learning by exploring the use of smartphones as a learning tool in classroom settings. In our study, a classroom setting is understood as "learning facilities including state of the furniture and learning location take place. The location may be a classroom, a computer lab, a science lab, an office or any place where learning occurs" (Amirul et al, 2013, p. 5).

1.2 Research Question

This study will add to previous research in the field of mobile learning in order to enrich the research field about the concept of mobile learning. In order to build knowledge that contributes to the above aspects, we will address the following research question:

How are smartphones being used for language learning in a classroom setting?

Our study focuses on the use of smartphones in an SFI (Swedish for Immigrants) classroom from both teachers' and students` point of view. The study has been applied on a sample of Arabic speaking students who study SFI classes. SFI classes are offered to immigrant students whose Swedish language level is basic (Rosén & Bagga-Gupta, 2013). These classes are free of charge for eligible students (Rosén & Bagga-Gupta, 2013).

1.3 Outline of the thesis

This paper´s outline will be as the following: the first chapter includes an introduction to the topic, the purpose of the study, the research question, and end with the related works part. The second chapter presents the theoretical framework for the studym which draws on key concepts

of mobile learning, the interrelation between digital technology and language learning, and technological affordances. The third chapter is the methodology, which describes the study approach and design, data collection methods, data analysis, and ethical cosndierations. The fourth chapter outlines the result of this study based on the data collected from a number of interviews and observations. The fifth chapter focuses on the dissection of this study´s results based on both previous studies and technological affordances. In that chapter we follow the discussion with study limitations, directions for future research, and close the thesis with a conclusion.

2 Theoretical framework

The theoretical framework in our study draws on key concepts of mobile learning, digital technology and language learning, and technological affordances. These constructs share a common understanding that technology can foster meaningful learning and supportive teaching.

2.1 Mobile Learning

Mobile learning or what researchers call "learning with handheld devices" (Hockly, 2013, p. 80) can be defined as a type of learning that takes places with the help of mobile devices. Mobile devices are small electronic technologies which individuals can use wherever they go, such as smartphones, mp3 players, iPods, digital dictionaries, and ebook readers (Stockwell, 2010). This oversimplified definition has been studied by scholars in great detail. For example, many scholars (e.g., Kukulska-Hulme, 2009; Mostakhdemin-Hosseini & Tuimala, 2005) view mobile learning as the evolution of e-learning, which refers to electronic technologies that provide educators and students to educational materials and contents in and outside of classrooms. In essence, this definition highlights role of technologies in education. This is supported by Traxler (2005, p.262), who define mobile learning as "any educational provision where the sole or dominant technologies are handheld or palmtop devices." In this definition, mobile learning is conceptualized in terms of devices and technologies only.

However, mobile learning should be viewed and understood in terms of the mobility of learners, mobility of devices, and the context of learning (Kukulska-Hulme, 2009; Traxler, 2007). The use of mobile learning such as smartphones varies from one academic context to another, and from one situation to another (Kétyi, 2013). These contexts and situations include formal settings such as classrooms and informal ones such as homes, outside parks, libraries and even cafes (Kukulska-Hulme, 2009). Indeed, technology has changed the process of learning by changing the setting of learning, in the sense that students can create educational spaces anywhere and anytime by carrying their mobile devices.

2.2 Digital Technology and Language Learning

Language and technology have been connected since humans started writing. Writing practices which enable individuals to connect in a clear and continuous mode (Chun, Kern & Smith, 2016). A relationship between technology and learning was proposed where they are not only connected and interrelated, but many researchers suggested that technology is a part of language learning (Kukulska-Hulme 2009; Kukulska-Hulme et al., 2007; Säljö, 2010; Traxler, 2009). According to Säljö (2010), technology is accessible to most students since many schools

and universities provide mobile devices such as iPad and laptops to their students—that is, these digital technologies are affordable. Also, these technologies are easy for use in and outside of classrooms (Montgomery, 2014). In fact, these technologies including smartphones "increase the capacity of human cognitive functions" (Säljö, 2010, p. 61).

Moreover, these digital technologies can foster interactions in the classroom. To have a better understanding for these interactions, the researchers will refer in the discussion to the concept of sociocultural perspective, which has been used by many researchers (Kukulska Hulme, 2009; Säljö, 2010) to clarify the effect of social behaviors on language learning process (Lantolf & Johnson, 2007). Lantolf & Johnson (2007) presented an argument regarding sociocultural perspective saying, "the argument is not that social activity influences cognition, but that social activity is the process through which human cognition is formed" (p. 878).

2.3 Technological Affordances

'Technological affordances' is a term highlighted by Ian Hutchby (2001) in relation to the "modern technologies and the possible functions users use these technologies for and its impact on learning practices" (p. 443). In order to explore how technology is an embedded part of language learning, we are here introducing the term affordances. Affordances can be defined as the possible uses for an object. It does not only depend on the object or the technology, but it also depends on the interactions between the user and the technology he or she uses (Boyle & Cook, 2004). Gaver (1991) also defined affordances as "properties of the world that are compatible with and relevant for people's interactions" (p. 79). To Norman (1988), affordances are "the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used" (p. 9).

Gaver (1991, p. 80) discussed the term of affordances as "perceptual information" for technology. He also differentiated affordances into four types: perceptible, false, hidden and correct rejection. "If there is no information available for an existing affordance, it is hidden and must be inferred from other evidence. If information suggests a nonexistent affordance, a false affordance exists upon which people may mistakenly try to act" (p. 80).

 Gaver also stated "distinguishing affordances from perceptual information about them is useful in understanding ease of use. Common examples of affordances refer to perceptible affordances, in which there is perceptual information available for an existing affordance" (p. 80). In our study, perceptible affordances are the uses for smartphone technology by students for language learning activities.

What is important with affordances of smartphones is the way learners "perceived" affordances for the smartphone in learning practices, according to Norman (2008, p. 19). In this case students perceive these affordances in different uses depending on language learning activities (Norman, 1999).

The developments in technology throughout the last decade have improved the functions and features of smartphones. The affordances of smartphones have led to "social and cultural" changes including the way learners perceive their learning (Hutchby, 2001). The affordances of technologies allow learners to have a variety of learning outcomes (Chun, Kern & Smith, 2016). Smartphones with improved features and functions are designed to fulfill the learners' needs to bring about specific learning outcomes (Parsons et al., 2016). Parsons et al. (2016) stated, "what distinguished smartphones are that they have more to do with the way a device is used than the features of the device itself" (p. 44).

This study has drawn on the affordances of smartphones in order to understand how smartphones are being used in a language classroom. Affordances include features such as cameras and recording applications, and functions including the interactions between students and smartphone.

3 Related research

This chapter explores literature related to the use of smartphones in language learning. It is divided into three main sections. It starts with smartphones as learning tools. Then, we will examine how mobile learning impacts learning practices. The third section focuses on learners' and teachers' perspectives about using smartphones as a language learning facilitator. Finally, we identify gaps in the literature and argue that the dissertation study we propose will fill a research need in the field.

3.1 Smartphones in Classroom: Learning Tools or Distraction

There has been debate on the issue of using smartphones in the classroom, specifically about whether it has a positive impact on learning in the classroom or is a tool of distraction. Ott (2017), in his study about the use of smartphones at schools, found that in the classroom students are using smartphones as a learning tool. He used textual analysis and questionnaires and examined the data through four analytical theories: historical materialism, boundary crossing, beliefs, and infrastructure. The findings showed that smartphones are learning tools as students use their smartphones inside the classroom to facilitate learning tasks. Additionally, the study showed that both teachers and students tried to control the role of smartphones as a learning tool inside the classroom. Teachers allowed students to use their phones during class time for educational purposes, but some students took short breaks through other functions of their phones inside the classroom (Ott, 2017, pp. 71-77). From the perspective of students, they used their smartphones for school tasks, but it is complicated to keep the use of smartphones solely on schoolwork activities (Ott, 2017).

Examining the same debate about the impact of smartphones on the learning process, several researchers conducted another study, which answers the question of why students use their personal smartphones inside the school. Ott et al., (2017) used a survey distributed to over 200 students from two upper secondary schools in the west of Sweden. After conducting the survey, interviews for four focus groups were condcuted (Ott et al., 2017). This study reflects student's perspectives about using their own smartphones in the classroom, which means that the study did not include any results about how smartphones are used in school practice. The results of the study showed that students use their smartphones in school for learning and personal use by using different apps including social media (Ott et al., 2017).

3.2 The Impact of Smartphone on Language Learning

Mobile learning is a new way of learning which allows students to create learning settings wherever and whenever they want. With the advent of mobile learning, educational systems are changing. This is supported by a study conducted by Rahimi and Miri (2014) that defines mobile learning as an educational system which supports continuous access to the learning process (Rahimi & Miri, 2014).

Mobile learning can and does make a positive difference on how students learn (Hariry, 2015). When used the right way, mobile technology has the potential to help students learn more and comprehend that knowledge (Bachore, 2015). Another study explored how mobile phones are being used through the educational process. The study focused on outlining the advantages of m-learning that positively impacted the learning process and the challenges of m-learning (Mehdipour & Zerehkaf, 2013). M-learning is considered to be beneficial in learning practices for many reasons: available to use at anytime and anywhere, easy to use for students during lectures and beneficially consuming (Mehdipour and Zerehkaf, 2013, p. 99).

Mobile technology is an integral part of language learning. Jalilifar and Amir (2014) proved that students use mobile technology more than any other technology when they practice language learning in the classroom. Jalilifar and Amir (2014) investigated major mobile wireless technologies, in particular wireless apps for language teaching and learning practices. The study used a mix of qualitative and quantitative methods to collect and analyse data about the pedagogical implications of integration of mobile technologies in language-related practices (Jalilifar & Amir, 2014). The participants in the study come from different backgrounds and cultures. The results revealed that students receiving e-mail vocabulary lessons had learned more than their counterparts on paper or the Web. Nearly all the participants supported having the Photo Study system on their smartphones. Almost half the participants also had a similar opinion that they had studied collaboratively, as they spoke English with their peers and played some roles while learning vocabulary items which led to more integration with others (Jalilifar & Amir, 2014, p. 121).

Smartphone technology is beneficial for learners and teachers in the classroom. O'Bannon et al. (2017) in their study showed that both teachers and students agreed upon the usefulness of smartphone use for learning purposes in the classroom. The used a survey and the results of the study showed that most students and teachers supported the use of smartphones inside the classroom, and those who did not support it were uncertain about it and were not refusing it totally (O'Bannon et al, 2017, p. 130). The study also found that functions of the smartphone as a learning tool were numerous. According to the teachers, students could use their phones to send and receive emails and text messages, have access to the internet, use the calendar and even modify certain texts. Students supported the perspective of teachers as well. According to the study, students agreed upon the usefulness of smartphones for learning purposes inside the classroom. Moreover, both students and teachers in O'Bannon et al., (2017) agreed that using

smartphones is beneficial for school tasks, but teachers were concerned about students' potential for inappropriate use of the internet.

3.3 Learners and teachers' perspectives about using smartphones as a language learning facilitator

Smartphone use in learning practices are a debate for researchers. The focus remains on learners and teachers perspectives, as a study by (Baker, Lusk, & Neuhauser, 2012) found that students and staff agreed upon the appropriateness for the use of smartphones and other electronic devices inside the classroom. But, this agreement differed by the gender of the user, as male students were more open than female students to using their cell phones and other electronic devices inside the classroom. Female students believed in having limitations on how students should use their mobile phones inside the classroom. Female students agreed the usage of mobile phone could be a source of distraction (Baker, Lusk, & Neuhauser, 2012, pp. 279-286).

Many researchers have studied the usage of smartphones on achieving a better educational process due to the fact that mobiles are considered as an integral part of language learning and can offer a wide range of different applications with various techniques for teaching and learning (Bradly et al., 2017). Numerous teachers have reported that they are using mobile technology in their classrooms, either through their own instruction or by allowing students to use it to complete assignments (Bachore, 2015). Smartphones allow teachers and learners to interact seamlessly with each other, in both formal and informal learning contexts. For example, a teacher can encourage students to create a personal visual story about their daily routine. In addition, camera phones provide a great way to ask learners to 'notice' grammar around them. Teachers can encourage students to take photos of street signs, menus, advertisements, or other examples of written foreign language that they see around them (Hariry, 2015).

Smartphone technology is complementary to other technologies, it is simply not a stand alone learning practice. The main result for research conducted in 2014, Darmi1 and Albion found that smartphone technology is a part within the existing technology. It is a vital part but at the same time all technologies work as a unit to complete learning tools. The study explored the possibilities of integrating smartphones as a learning tool to enhance language learning. Results of the study showed that, on the integration of smartphones, participants unanimously agree that these new learning tools can't replace teachers or earlier forms of technology for learning but rather that mobiles complete and support existing learning technologies (Darmi1 and Albion, 2014, p.95). Results also showed that Japan is the top country using smartphones as a learning tool, and post-secondary students contribute the largest number of participants in

most of the studies, and the most commonly used research design is quantitative research (Darmi1 & Albion, 2014, p .95).

To conclude, regarding the technological developments in the recent years mobile learning has been examined by many researchers as presented above, in different learning settings and from different lenses starting with the impact of use of smartphones in learning practices. Other researchers examined mobile learning as a modern learning system in light of the technological developments, while other studies explored the perspective of students and teachers using mobile learning. This paper, therefore, aims at shedding more light on the effect of using smartphones in Swedish language learning in SFI contexts. The findings and outcomes of this paper, consequently, may be valuable for any prospective future research in this field –M-learning in Sweden, in Europe or in any place in the world.

4 Methodology

This chapter presents our research approach and design. We also describe the research setting, participants, data collection methods and data analysis. Next, we discuss the ethical considerations.

4.1 Research approach and design

This study is based on a qualitative approach. According to Hancock et al., (2007, p. 6) qualitative research "studies behaviour in natural settings or uses people's accounts as data." The effectiveness of this approach lies in providing deep description of how people respond to a research problem or phenomenon (Marshall & Rossman, 2014). In essence, qualitative research is designed to understand peoples' feelings, experiences, emotions, thoughts, and behaviours through different techniques such as observations and interviews (Marshall & Rossman, 2014)

The study is based on a case study method. Zainal (2007, p. 1) states that the case study is "a method… [that] enables a researcher to closely examine the data within a specific context." The case study method gives a way for a researcher to concentrate on a particular side of a certain problem and thoroughly handle it within a certain time span (Yazan, 2015). This very method is deemed to be very efficient and valuable when it comes to educational research. That is, case studies help educational research in three ways: first, they give reliable and authentic results. Second, they can provide a holistic and better understanding of the case being studied. Finally, case studies are accumulative –they can be built on similar previous case studies.

The aim of this study is to further comprehend the thoughts and perspectives, as well as the experiences, of the participants (Marshall & Rossman, 2014). Thus, the focus of the study is on the use of smartphones as a learning tool in the classroom and the students' perspectives on such technology. This kind of research, hence, requires researchers to widely socialize and interact with people. One distinctive feature of this study is that both the researchers and the research subjects (Arabic SFI students) have the same cultural background. Therefore, the researchers are more aware and knowledgeable of the versatile social and cultural aspects of the context (Njie & Asimiran, 2014).

Stake (1995) differentiates between three major kinds of case studies: the intrinsic case study, the instrumental case study and the collective case study. An intrinsic case study means "a researcher examines the case for its own sake" (Zainal, 2007, p. 4). In instrumental case study is where "the researcher selects a small group of subjects in order to examine a certain

pattern of behaviour "(Zainal, 2007, p. 4). However, in a collective case study "the researcher coordinates data from several different sources, such as schools or individuals" (Zainal, 2007, p.4). Assembling the Arabic-speaking community into one SFI classroom means that this study relied on the collective type of case study. The study, furthermore, as we said earlier depended on observation so as to further understanding the subject matter. Not only did this study use the methods of observations and case studies, but it also used the interviewing method as the researchers held interviews with five SFI teachers and 10 Arabic-speaking learners. This difficulty in generalizing the results of one certain case study on other cases is considered to be a major setback of this method. Nevertheless, Zainal (2007) argues that there might not be a need to generalize, because case-studies are significant in themselves and contribute both direct relevance and deeper insight to overall perspectives.

4.2 Research setting

This study was implemented at one SFI classroom at Lernia in Gothenburg city. We chose one class at Lernia, which has the highest number of Arabic-speaking students (10 students). In the beginning the researchers made a visit and talked to the class teacher and students. The researchers provided the participants with adequate information and explanation about different issues related to the study, such as the aim of the study, the importance of voluntary participation, data collection, and ethical consideration. Both the students and the teacher welcomed the idea and agreed to participate in the study, and to be a part in both the observation and interviews. The participants were friendly and helpful, so the researchers did not provide them consent forms to sign as word of mouth was enough from the researchers' point of view. Next, the researchers got on the schedule for Swedish lessons from the teacher to start their study in the classroom.

4.3 Students and Teachers' Basic Profile

The sample consisted of 10 Arabic-speaking male and female students who came from different Arab countries with varied age groups (between 20-40 years old) and educational backgrounds. This sample is based on convenience sampling, which is usually used in pilot study and relies on data collection from participants who are conveniently available to take part in the tsudy (Etikan et al., 2016). The students were learning the Swedish language at an SFI class and belong to (D) level, which it is the highest level at the SFI school. At this level, the language tasks become more difficult, the students start to learn acadmic writing, read longer texts, and learn a lot of unfamiliar words from the texts. Some of the students were high school students and younger, while others were teachers with education degrees. The teachers are native speakers of Swedish from different age groups between (40-56). Their working experiences as SFI teachers varied between 10-15 years. The teachers have a background of teaching experiences with Arabic-speaking students at language learning schools, or teachers teaching Swedish as a second language for new arrival students.

4.4 Data Collection

The data collection of this study is based on a two-phase process with a pilot study followed by a phase of extensive observations and interviews, in order to gather adequate and sufficient information. In this study, the researchers used interviews with a number of Arabic-speaking students and teachers in the SFI class and direct observation in an SFI classroom.

4.4.1 Pilot study

The process of studying a small sample, in order to test aspects such as data collection instruments, sample recruitment strategies and research protocol, before implementing the larger study is referred to as a pilot study (Hassan et al., 2006). A pilot study is considered an essential stage of the research project as it helps identify any potential problems that might come out before executing the main study. A pilot study, moreover, can familiarize researchers with the steps and procedures of the study. That is, researchers can choose the best methods of data collection (Hassan et al., 2006). For this study, the pilot study implemented in the SFI classroom which participants first agreed to be part of the study and which in turn allowed the researchers to observe the class teacher and students in the classroom. The results of this pilot study, therefore, were efficient in giving the researchers an image of how, why, and when the SFI students use their smartphones in the classroom. Based on these results, the researchers chose both class observation and interviews as methods of the data collection for this study. Furthermore, the pilot study gave the researchers an idea or showed a part of the teachers' perspective regarding students' use of smartphones as a language-learning tool in the classroom. The pilot study also showed that the main study would also be efficient if the same procedures and methods were used.

The pilot study helped the researchers to realize that the students used their smartphones in language learning activities such as translation, writing, reading, and grammar tasks. In addition, the students considered the smartphones as the bridge of communication between them and both teacher and their classmates—a belief that helped in creating a warm learning environment. Based on the data from the pilot study, the researchers designed the interview questions. After consultation, the researchers chose to use semi-structured interviews with both students and teachers. Regarding the students' interviews, the following questions were proposed: How often do students use smartphones during class? What are the activities in which students use their smartphones in the classroom? How effective are smartphones from the students' perspective? How have the students' experiences been with using these smartphones as a tool of Swedish language learning? How long do students spend on using their smartphones during a lesson? Do students think that using smartphones help them learning Swedish language easier and faster?

The pilot study contributed to the data collection as it provided the researchers with clear data. The pilot study, moreover, revealed and maintained that the predetermined questions were essential to the study and very important to ask: How often do teachers encourage students to use smartphones during lessons? Do teachers think that student use of smartphones in the classroom is positive or negative? Why? How effective are smartphones as a tool for language learning from the teacher point of view? Do you as a teacheryou're your smartphone to interact with your students?

4.4.2 Observation

In this study, observation was used as a data collection technique. Marshall and Rossman (1989, p. 79, as cited by Kawulich, 2005) characterized observation as "the systematic description of events, behaviors, and artifacts in the social setting chosen for study". Observation is a qualitative strategy that helps scholars know the perspectives of the study populations (Kawulich, 2005). Observation also helps researchers to fill in the gaps between concept and practice (Kawulich, 2005). In order to observe Arab students, we needed to gather information and data of growth in a natural setting. An SFI classroom is a familiar place where teachers are teaching the Swedish language as a second language, in order to help students to become involved in Swedish society. In a classroom, students learn the four skills of a language including listening, speaking, writing and reading. Such an environment offers a rich storage of facilities and data to that analyst skilled in gleaning it from the environment that surrounds those learners (Kawulich, 2005).

In the classroom observation, the researchers were sitting in the back of the classroom to see the whole class actions clearly. The researchers were looking for interesting events, actions, behaviours, and details which reflect how the students use their smartphones during the Swedish lessons, and the teacher´s attitude and perspective on students' use of smartphones in the classroom. Thus, the researchers were typing the important notes and events in their laptops, while they were writing down some notes on their notebooks, such as writing questions they would ask the students or the teacher during the break or after the class.

The researchers had many informal conversations (during the break or after the class) with the students and the class teacher. For example, during the break the researchers did informal interviews, asking the students or the teacher about if they could give more details and explanations for specific events or behaviors they did during the Swedish lesson. In the class observations, moreover, the researchers used video recordings to investigate the use of smartphones as a language-learning tool. This technique was efficient in capturing the data, which were difficult to see or follow from the back of the class. For instance, the researchers made a video recording of a translation activity by the use of translation app on a student's

mobile phone. Thus, recording the video was helpful in saving the events that explain the use of smartphones, to watch it later for analysis purposes.

4.4.3 Interviews

According to Al Shanqeeti (2014, p. 39), an interview is viewed as "a valuable method for exploring the construction and negotiation of meanings in a natural setting." In addition, it is "powerful in eliciting narrative data that allows researchers to investigate people's views in greater depth." The researchers used semi-structured interviews in which some of the questions were predetermined while at the same time there was space for the researchers to explore additional responses that may not have been considered by the researchers themselves. This study used face-to-face semi-structured interviews with five SFI teachers and 10 Arabic SFI learners of immigrant background. Students and teachers were chosen based on their relativity to the subject of study, which is the use of smartphones as an instrumental tool in a Swedish language-learning classroom. After the interviews with students, the researchers transcribed the recordings and then translated them into English.

Also, they used Arabic language in interviewing the students, as Arabic is the mother tongue of both researchers and students. Further, the researchers and SFI teachers speak English as a second language allowing the interviews to be taken place in English, although both researchers can speak some Swedish. The duration of the interviews varied from student to student, and from teacher to teacher. Some students and teachers shared more information and experiences than did others. Overall, each interview lasted from 30–60 minutes.

4.5 Data Analysis

In qualitative research, analyzing the data requires the researchers to read a large amount of transcripts to find similarities and differences, afterword discovering themes and developing categories (Ping, 2008). This study used thematic analysis in order to analyse the observations and interview data. According to (Boyatzis 1998 as cited in Ibrahim, 2012, p. 4 0), thematic analysis is "a type of qualitative analysis… used to analyse classifications and present themes (patterns) that relate to the data. It illustrates the data in great detail and deals with diverse subjects via interpretations."

In order to analyse the data collected from the observations, the researchers went through different steps. First, the researchers started to read and re-read the data typed on their laptops to be familiar with it. After that the researchers started to organize the data in a meaningful and systematic way (Maguire & Delahunt, 2017). Then, the researchers tried to generate initial codes. During this step, the researchers took into consideration that the goal of the analysis process was to answer the research question, so they used theoretical/thematic analysis.

The researchers coded each chunk of data that captured something relative to the research question. The following step was when the researchers moved to examine the codes, which were tailored together into themes. The final step was organizing the codes into broader themes that seemed to "say something specific and interesting" (Maguire & Delahunt, 20017, p. 3356) about this research question.

Collecting the data for analysis from the interview went through three steps: transcription, coding and organizing information in a "codebook" (DeCuir-Gunby et al., 2011). Right after each interview, the researchers listened carefully to the recorded interviews several times, in order to write down imperative notes that would summarize the information the respondents provided. Further, some outstanding quotes were considered in the process of note-taking. Deemed to be highly beneficial when it comes to qualitative data analysis, Excel was used to organize the collected data (Ose, 2016). In Excel, respondents were given numbers in columns. That is, respondent 1 in column one, so on and so forth. Questions, however, were put in the rows: question 1 in row 1 and so on. In this way the information collected during the partial transcription was organized in Excel. This, in turn, made it easier to read and compare the answers of all the respondents. This categorization of data gave a way for researchers to use coding. That is, the Excel sheet was classified according to the main themes, which later constituted a codebook (DeCuir-Gunby et al., 2011). The main topics in the codebook were scheduled with brief notes that explain what each theme in the context combined with quotes from the data. We also integrated the essences of the generated themes and created sub-themes to finalize the shape of the research results.

4.6 Ethical Considerations

In order to explore the context around the utility of how smartphones are being used in a language-learning classroom, it was significant to use what is called the study sample and the study setting. Working with the sample or in the setting should be on an ethical base. For the sake of protecting participants, their names and places were anonymous-that is, identities were replaced with pseudonyms and participants were allowed to withdraw from the study at any time without penalty. Moreover, teachers and students were given confidentiality and protected by not declaring participant identities in any material arising from the study such as conferences and theses. Regarding the photos used in the study, the researchers received permission from the students to use the photos in publishing. Finally, the researchers informed all the participants that their personal information is saved on the researchers' private laptops and that they would destroy the materials when the study is over. Due that we abstained to add the interviews and observations´ transcripts in an appendex in this paper.

5 Results

In this chapter, we address how newcomer Arabic students use smartphones in learning Swedish as an additional language at an SFI classroom? The qualitative data addresses the perspectives of the teachers and the students on the use of smartphones in a language-learning classroom. Drawing on mobile learning, digital technology and language learning, and technological affordances, we organized the findings of this study along three major themes, including: *smartphone use in the classroom, student use of smartphone in the classroom, and teachers' perspectives on the use of smartphones* in the classroom. All three themes directly addressed our research question: How are smartphones being used in a language learning classroom setting? Based on our data, we argue that students use smartphones intensively in the classroom for learning purposes through various activities beginning with translation, constructing sentences, grammar checking and supporting face-to-face communication situations.

To report the findings, we selected classroom episodes and interview transcript excerpts that are representative to describe the experiences of student and perspectives of teachers on the use of smartphones in an SFI classroom.

5.1 Smartphone Use in the Classroom

The collected data for this study showed a number of uses for smartphones in the classroom, including: the extensive use of the smartphone in the classroom, the access to social media during class time, and uses of smartphones for educational purposes.

During the classroom observations, many of the participants were using their smartphones extensively. Students used their phones often to navigate *Google Translate* or *Lexin*. This finding is supported by the students during the interview. student 1 said, *"I use my mobile phone most of the time inside the classroom."* In fact, student 3 could not imagine being in the classroom without using the smartphone, where he asserted *"I cannot handle the class without having my mobile with me."* While student 5 noted *"I barely leave my phone inside the classroom, without the assistance of my phone I will be lost."*

However, time using smartphones varied from task to task. For example, many students spent time using their smartphones more for writing grammatically correct sentences than for vocabulary and pronunciation exercises. Interestingly, they did not use their smartphones at all when the teachers were talking or explaining to them. Moreover, teachers encouraged the use of smartphones in the classroom without specifying time use. In the interview with teacher 1,

she said *"I cannot say that they [students] use it all the time or not, what I am sure of that they use it for many purposes and to facilitate many tasks."*

Second, students used smartphones to access social media platforms. Teachers provided *micro breaks* in the classrooms—in these short times, students used smartphones to browse social media during class. In these micro breaks, teachers also asked students to work on writing tasks. More specifically, in a micro break during class observation, the teacher asked students to write about the differences between Sweden and their home countries for 20 minutes. Some students used mobile applications to complete the writing task; however, others used social media such as Facebook and WhatsApp, and Instagram. In the interviews with these students, they attributed the use of smartphones for social media rather than for the educational/writing task to the fact that they felt bored in the classroom. Students added that quick breaks from a classroom lesson should be provided. On the other hand, though the teachers acknowledged the importance of allowing students off task for short times; they believed that students' use of smartphones in class for off-task behavior should be managed, because smartphones can be disruptive. In an interview with teacher 3, he said:

I trust my students but sometimes I see that they use it for non-educational purposes, they text to family and friends and do other things, I used to say that it is not ok to text maybe if it happens once its ok but if it takes ten or 15 minutes and the student is not concentrating the lesson and then doesn't know what we are doing and ask other students and disturb them it's not ok.

On the other hand, teacher 4 showed a different understanding of students' use of smartphones for non-educational purposes. She noted, *"I do not feel that the students look at Facebook or writing messages not in a way that disturbed, the phone calls they receive in the class disturb"* In essence, she acknowledges the use of smartphones for social media and other non-educational purposes. Some students supported her belief by indicating that their use of smartphones to access social media was limited in time and use (e.g., replying to important messages from family or work). Student 2 declared *"I should keep my phone open and check all the messages I receive, as my children are at school and maybe something important happen"*

Third, students used their smartphones for language learning and cultural knowledge. During the class observations, some students navigated some Swedish websites such as Metro newspaper website, and Aftonboladet. The teacher asked students to read a specific article silently about a specific topic and then to discuss the topic together. According to many students "these discussions enrich our language and social knowledge as well." In fact, in one of the classes, the teacher asked students to use their smartphones to watch Swedish films. These films handled social and political issues students set in groups and discuss the topic of the film in Swedish to support their Swedish language. In an interview with student 7, he stated *"the*

teacher asks us to watch some specific short Swedish movies on our phones and then discuss the topic of the film together." Moreover, a teacher in another class asked the students to browse educational platforms (e.g., checking homework, see uploaded educational content from the teacher). The teachers asked the students to read some materials she uploaded onto these platforms.

5.2 Student Use of Smartphone Applications for Language Learning in the classroom

The study found that students extensively used smartphones in the classroom for different purposes, mainly: language learning. In a sense, students are allowed to use their smartphones to make meaning of activities planned to teach them Swedish. These language activities included vocabulary, pronunciation, grammar, writing, reading, speaking, and listening. More specifically, students stated that they used smartphone applications for activities of translation and sentence construction, grammar, documentation, and communication.

5.2.1 Translation and sentence construction

One major activity in the classroom students used their smartphone applications for was translation. Students had access to their smartphones connected to the internet and used translation applications to look up the meaning of vocabulary words. In fact, many students stated that a smartphone is a *"mobile dictionary"* that can be both in and outside the classroom. In class observations, almost all students used smartphone applications for translation purposes. Fig -1- below shows some images of students' use two major translation applications: *Google Translate* and *Lexin*. Both applications are free and easy to download, but they have different functions. Google translate is a free multilingual translation app which translates words, sentences and even pictures which include text. Lexin is a Swedish dictionary, which includes a number of languages including English and Arabic.
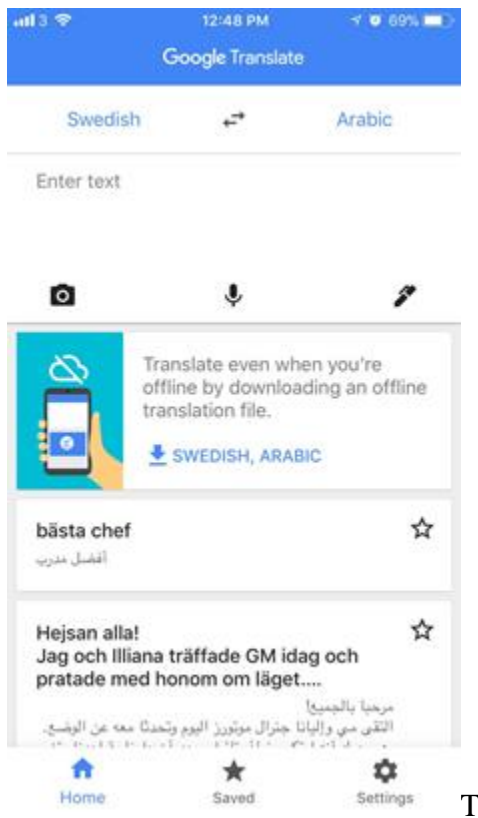
Mobile translation Apps fig 1

These applications are used, as some students stated, to *"translate individual words or sentences and even a whole text."* In many language-learning tasks such as reading and writing, students come across new vocabulary words, without knowing the meanings of those unfamiliar words, they would not be able to complete the tasks. This indeed makes translation an indispensable language activity with which students are engaged in almost every single class. In a class observation, the teacher asked students to read a text for later discussions, where one student forgot his smartphone at home. The student asked a classmate, "Excuse me, I forgot my phone at home, can you look for this word in your phone?" This is to say; the student might not have been able to participate in the class discussions if he had had not used a translation application on the smartphone.

However, translation by using mobile applications has drawbacks. Translation applications may not provide accurate translations of specific vocabulary words, namely those words within long sentences. student 9 said, *"Translation apps[applications] are not accurate when translating whole sentences especially from Swedish to Arabic."* In the case of unfamiliar words within long sentences, many students indicated that the translation did not "*make sense*." Other

students who speak English mentioned that they found translation from Swedish to English is *"more accurate"* than that from Swedish to Arabic.

Overall, students use translation applications (apps) in the classroom in a variety of ways. One way students use translation apps is to look up the meaning of words. Some students then write down the meaning in their notebooks, while others do not. In response to this phenomenon, student 5 said, "*It depends on the word and if they feel they will need it after.*" That is, some students wrote down the words and their meanings for future use.

Many students use smartphone apps for translating single words, complete sentences, and even a whole text while engaged with reading activities. When reading Swedish texts, students encounter many words for the first time. Students find it difficult to interpret these texts, so they translate unknown words using translation apps. Fig-2- shows student use of translation applications in the classroom. Student 7 said, *"When the teacher gives us new lessons, I translate all strange words for me, so I can understand the whole text and what the topic is about. I use Google translate to have the Arabic meaning for these words."* Other students mentioned that when the text is difficult, and they do not have the enough time they translate the whole text. The process to translate whole paragraph is to take a photo of the whole text and paste it into google translate. Student 1 claimed *"I have to that photo for the text due to the limitation of the time and I should understand what they are discussing in the class."*

Students also use translation apps not only to translate single words or even full sentences but also to synthesize meaningful sentences. Translating single words seems to be a necessary step before constructing a sentence. Students 8 said, *"I now can create a whole sentence by the translation of individual words by using different apps on my phone."* When students were asked to complete a writing task, they used their smartphone applications to ensure that their sentences were structurally correct. Student 4 said, *"As I am a beginner learner of Swedish, I do not trust my writing especially when I write whole sentences I should check it through translation apps before I send it to the teacher."* In the interviews with many students, student 3 said, *"Sometimes the topic is difficult, and we cannot understand what the topic is about, and we want to grab the whole meaning of the text."*
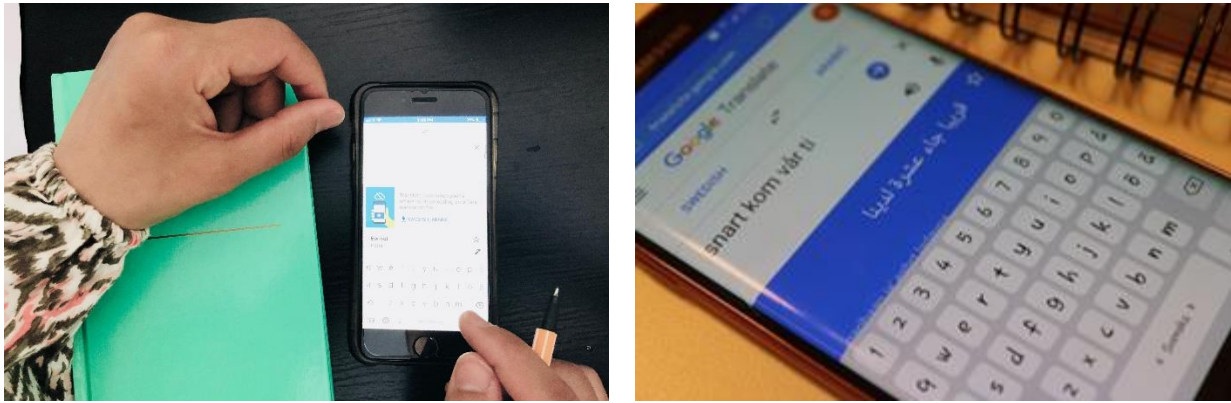
Translation process fig 2

5.2.2 Smartphone apps as grammar checkers

Students use mobile apps in writing tasks to have grammatically correct Swedish language sentences. To make grammatically correct sentences, students needed to figure out the parts of speech including nouns, verbs, adjective, adverbs, prepositions, and conjunctions. These are important for many of the students to know how to start and end the sentence. For example, in a class observation the teacher started to explain a writing task for the students to complete. She wrote on the board the following in Swedish: "skriv ett brev till din vän och berätta hur din helg i Tyskland varit" and this means "Write a letter to your friend telling him/her how your weekend in Germany was." Then she started to explain in Swedish how students are going to write this letter. When the teacher stopped talking, the students picked up their pen and paper and their phones. One student picked up her smartphone and started to look up the meaning of particular words on *Google Translate.* Every time she found the meaning of a word, she put it down on her notebook. After she finished looking up the meaning of many words, she started writing down full sentences using those words. Next, she typed every full sentence in Swedish on her *Google Translate* translating it into Arabic, in order to make sure it made sense. In this sense, the student used *Google Translate* not only to translate the words but also to check the grammar of the sentences she made up of those words she had previously translated on *Google Translate*. When the student was asked why she had to go through such a process, she said she wanted to be sure that the sentence was grammatically and linguistically correct. Other students indicated the process of translation and grammar checking was a necessity process to be sure that they were on the right track while completing writing tasks. In fact, student 10 said, *"I feel comfortable when I double check what I wrote on my notebook by rewrite the sentence I wrote on google translation and check if it is correct or not."*

This process of grammar checking had been documented in a short video which had been recorded during one of the Swedish classes while the students were working on the writing

task. The video shows the process of starting with individual word from Arabic to Swedish, then the student wrote down the whole sentence on the notebook, then finally the student typed the whole sentence and translate it from Swedish to Arabic. The result was incorrect sentence, and linguistically inappropriate, so the student knew that there are grammar mistakes in the sentence and this sentence should double checked before using it in the text they are working on.

In grammar tasks students translate separate words, as they all agreed on the efficient use of Lexin app in grammar tasks as for student 5 lexin is *"the perfect app for grammar tasks, it gives us the different types of the word."*

5.2.3 Documentation of learning activities with smartphones

Students use smartphones to document evidence of learning. Smartphones are equipped with some technological functions and features such as cameras and recording applications that can facilitate student language learning. In fact, smartphone cameras can capture photographs and record videos. Students were found taking advantage of these functions while learning Swedish in SFI classrooms. Many have been found taking photos of the texts (written and visual) on the board for several reasons. Student 6 mentioned, *"Sometimes I cannot read what the teacher writes, so I just take a photo and then get back to it later."* In fact, teachers encourage taking photos; teacher 1 said, *"When we do not have much enough time in the class, I ask them to take photos for what I wrote so they can get back to it later."* That is, the smartphone camera could help to save what was being taught in class to use outside the classroom. Moreover, the camera can help them capture a complete text or sentence on the board for translation purposes. In this sense, instead of typing each word or sentence written on board, students can simply take a photo of the whole text then insert it on *Google Translate*. In this way, the camera made it efficient for the students in translation.

Students also used recording applications to document their learning. In class observation, one of the students used his smartphone to record the lesson, because he felt the teacher spoke fast and he needed to listen again carefully, so he could understand the core of the lesson. Smartphone recording applications, according to the student, can help him pause and play back to better capture what the teacher explained. The student stated, *"I record all lessons and I come home listen again to understand what I couldn't understand in the classroom."* For teachers, documentation of learning activities can be important for ongoing learning. Teacher 3 said, *"I know that the students will do many things with their phones, including documenting and recording that is great thing and it will help them in learning Swedish language."*

5.2.4 Smartphone as a communication facilitator

Students use their smartphones and their applications for communicative activities (Fig-3-). Students 8 stated that he used smartphone applications not to simply translate but to *"communicate with other colleagues and the teacher with no hesitation."* In other words, translation is not an end in itself. Students translate words, phrases, and sentences to establish communication. Moreover, student 7 noted, "*Using mobile apps helped me to socialize more with my colleagues.*" In the class observation, two students, one from Turkey and the other from Syria, were having a chat before the beginning of the class. They used *Google Translate* to help them better communicate in Turkish to Arabic. In fact, they communicated to discuss a class issue. The Syrian student said, *"because I do not speak Turkish and he [his friend from Turkey] does not speak Arabic and we want to communicate about something important related to the class so we used to google translation."* Student 3 noted *"I was having an appointment at the employment office and I wanted to leave early so I looked at Google Translate to see how can I say this in Swedish and I memorize it and then ask the teacher for permission to leave early."*

Communicative activity fig 3

5.3 Teachers Perception about Using Smartphones in the Classroom

The interviewed teachers have shared their views about student usage of smartphones in the classroom. Some teachers allow the use of smartphones in the classroom, while others do not. Some highly recommend smartphones as learning tools, while others deemed it a distraction.

5.3.1 Smartphones as learning tools

One argument for allowing student use of smartphones in the classroom is that students need to translate words, phrases, and sentences since the teacher does not speak the first language of the learner. In this respect, teacher 2 said:

> *I allow my students to use their phones during the lesson since it is not a test, I allow them, and I tell them that they should use it. Because I cannot give them the right translation, I can explain but it will never be so closed as the translation in the dictionary.*

On the other hand, teacher 5 that believes that smartphones are useful learning tools argued that students can be fully dependent on smartphones and their behavior and learning can be therefore affected in a way. She said, "*I want to see how many words they can master in Swedish, mobile phones teach students how to be lazy in memorizing words and roles, this small device which replace their memories can be destructive inside the classroom.*" Therefore, she does not allow students to use them in the classroom. Moreover, some teachers support the use of smartphones in the classroom but were concerned about students' behavior as to whether the students would use them for educational or non-educational purposes. As mentioned by one teacher, "I can say that students use smartphones for educational purposes, but others don't as they could enter noneducational content on the internet through their smartphones."

In other words, with precautions, many teachers believed that smartphones are learning tools if used appropriately for education purposes. Indeed, teacher 2 referred to the smartphone as a mobile book that student can open and make use of in the classroom. He said, "*you (students) do not need to carry a heavy book to school you have it close to you and you have it whenever you need. So, it's positive, but both students and teachers should be aware for the appropriate use for it inside the classroom.*" Teacher 2, during the interview, asserted that "*I allow them, but in certain cases I ask them not to use it at all because I know that they do not need to use it.*" This is to say, teachers encourage the use of smartphones in the classroom if needed.

Moreover, teachers during the interviews asserted the importance of translation apps as they can facilitate student language learning in the classroom. Teacher 2 said, "*from the first class, we recommend these two applications for students to help them in their Swedish learning, as it is free apps because I cannot recommend apps with fees.*" Teachers stated that these translation applications make language learning and teaching efficient in the classroom. In fact, some teachers asked the students to use their smartphones when new words were introduced.Teacher 1 commented, "*I have to ask them [students] to translate specific words to their language because I cannot explain the right meaning for these words so it's more easy and time consuming to look for the right translation in their phones.*"

5.3.2 Smartphones as distraction

Other teachers though, may believe that smartphones can be useful in learning and teaching language, but find them distractors in the classroom. Teacher 3 said, "*basically when I am explaining new grammar rules or when I ask them [students] to set in groups and discuss then the mobile phone will be a source of distraction more than useful tool.*" Because smartphones can drive students to distraction, some teachers define rules such as asking students to set their smartphones on silent mood and to not make or receive calls in the classroom. teacher 3, though he allows students to use their smartphones in the classroom, noted, "*mobile phone is a disturbing device, students get messages, sometimes they receive calls during the class.*" While teacher 1 stated, "*sometimes I write a word on the board and ask student what the word means so directly they started to look into their phones and will not give me the chance to explain to them what the word is.*"

The findings of the study showed that students use their smartphones in the classroom setting as a language learning facilitator. Smartphones facilitate language learning for students through a number of functions students are aware of, and they use these functions to apply many educational activities. The activities were translation, sentence constructing, grammar checking, documenting learning activities, and supporting face-to-face communication situations.

Additionally, the results presented teachers' perceptions regarding smartphone use in the classroom by students. Teachers encouraged student use of smartphones in classroom settings, but they were restricted about this use as smartphones could also be distracting tools in the classroom.

6 Discussion

The presence of smartphones and their applications in classrooms seems to have impacted student learners in several ways. In the previous chapter, we have presented three major themes that emerged from the collected data: smartphone use in the classroom, student use of smartphones in the classroom, and teachers' perspectives on the use of smartphones in the classroom. In this chapter, we discuss the major findings and point out the potential limitations of this study and suggest future research directions.

The first finding relates to students' dependence on smartphones. The study shows that all students extensively use smartphones in the SFI classroom. The students and many teachers believe that smartphones and their applications are useful in language learning and should be used in the classroom. Therefore, there is a need for systematic smartphone use in language learning classrooms. Many scholars (e.g., O'Bannon et al, 2017) argue that smartphones and other mobile learning devices should be incorporated in the classroom. During the classroom observations, students relied on smartphones and their applications, namely translation applications, in almost all activities such as writing, which is seen as a major language learning activity (Chun et al., 2016). Our study supports the study of Chun et al. (2016) in that writing was a relevant activity that Swedish language learners are engaged with and for which smartphones and their applications are necessary to help them complete writing tasks.

Fundamentally, students use smartphones to help them create and improve communication in face-to-face situations. This can be seen from a sociocultural perspective, where learners build their world based on mutual social interpretations (Lantolf & Johnson, 2007). Smartphones and their applications can help them talk to others who speak different languages in the classroom. That is, smartphones and their applications can be seen as facilitators for social interactions (Lantolf & Johnson, 2007). However, students did not replace smartphones and their applications with paper-related tasks. In fact, all of the students assert that they needed both in the classroom. This finding is consistent with Säljö (2010), who asserts the effects of both smartphones and paper/pen(cil) on student's communication and learning in the classroom. For instance, when students used *Google Translate* to look up the meaning of some words, later they used their pen(cil) to write down the words and their meanings in their notebook. This is to say, we do not call for a replacement of pen(cil) and paper. Rather, we stress the importance of the combination of both technologies in the language learning classrooms.

The second finding is about the learning affordances of smartphones and their applications. According to Parsons et al., (2016), a learning affordance is "the relationship between the properties of an object and the characteristics of its user" (p. 44). Smartphones are mobile learning tools that include several functions including capturing visual content and recording audio

content (Stockwell, 2010). In the classroom observations, students used their smartphone cameras to take photos of what was written on the board and recorded some conversations, in order to make that material persistent and available for study outside of the classroom. Moreover, students used cameras to capture texts that could be inserted onto translation applications, in order to facilitate learning. One distinct feature of smartphones is the small size--a reason that students preferred them to other mobile learning devices such computers and laptops in the classroom. What distinguishes smartphones from other technological devices "is that they have more to do with the way a device is used than the features of the device itself" (Parsons et al., 2016, p. 44). Indeed, "learning with handheld devices" (Hockly, 2013, p. 80) is of pedagogical affordances.

When students use cameras and recording applications on their smartphones, they do it to document learning activities and content. The possibility to document seems to be an important affordance for the smartphone (Gaver, 1991, Norman, 2008). In essence, the learners of our study express that they are changing the process of learning by changing the setting of learning from the formal setting in the classroom to other informal settings such as buses, cafes, libraries and even homes. Because students store the material discussed in class on their smartphones, they can recall and retrieve it anytime and anywhere. Smartphones therefore are learning tools outside of classrooms, as well (Kukulska-Hulme, 2009; Mahdi, 2018).

The third finding relates to teachers' perception about using smartphones in language learning classrooms. The results of the study indicated teachers' significant support for using smartphones in the classroom. The only teacher who did not support the use of smartphones in the classroom still perceived that smartphones are useful mobile learning tools; however, the teacher was concerned about students' reliance on it—from his perspective, such as a reliance can negatively affect students' attention and learning behaviors such as being on task. Those teachers who allow students to use smartphones in the classroom value the features and functions of smartphones and their implications, believing they have positive impacts on language learning and teaching in the classroom. Teachers perceptions of positive effects of smartphones as a learning tool in classroom are highlighted in several research papers (e.g., Baker, Lusk, & Neuhauser, 2012; Hutchby, 2001).

However, the use of smartphones could have limitations. For instance, all teachers mentioned that students are not allowed to use their smartphones while taking exams. The study builds on previous research (e.g., Baker, Lusk, & Neuhauser, 2012) that suggests smartphones can be distractions. Students can be driven to distraction when they choose not to be on task and turn to social media platforms. In this case, longer 'micro' breaks should be granted to the students within which the students can be allowed to use their smartphones for non-educational purposes, such as making and receiving calls, texting, signing in their social media accounts, etc. (Ott, 2017). In fact, those social media platforms can be brought to class for educational purposes.

In sum, the three major findings of our study include student's heavy reliance on smartphones, pedagogical afforaces of smartphones, and teacher's perceptions about allowing students to use their smartphones in the classroom. Regardless of the limitations of smartphone use in the classroom, most teachers encourage students to use their smartphones for educational purposes—a reason that explains why students in the study have extensively used and interacted with their smartphones in the language-leanrign classroom.

6.1 Study Limitations

One limitation of this study was that based on observing only one SFI class for a period of eight weeks. According to the researchers, this was being not adequate for the data collection. Another limitation of this study was that the results were based on observing a small sample of 10 Arabic-speaking learners, who were not guaranteed to attend the class every day. The findings are specific to those 10 students and may not apply to other populations in other settings. Moreover, the direct observation for both students and teacher might have affected the situations and thus the credibility of the findings. That is, observations may have caused teachers' and students' behaviors change.

6.2 Directions for Future Research

Although the study has added to the body of research in the field of mobile learning regarding the use of smartphones apps in the Swedish language learning classroom setting, there is still room for future study in this area. First of all, a study with a method of documentation (i.e., collecting artifacts such as essays, tasks completed by students, etc.…) besides observation and interviews could explain the affects of smartphones on students' achievement. Videotaping the classroom where students use smartphones to capture the interaction between students and other students and between students and teacher would provide a more detailed picture of the phenomenon. Furthermore, our study focuses on the use of smartphones as mobile learning tools in the classroom; considering other tools such as laptops may provide further descriptions of students' learning behavior as a result of mobile learning.

7 Conclusion

This study focused how smartphones are being used for language learning and how students and teachers perceive the use of smartphones in a language-learning classroom.

The research question was: how are smartphones being used for language learning in a classroom setting? To answer the research question, qualitative research methods including observations and interviews were utilized. The data revealed that smartphones are used to promote language learning. Students are engaged with language learning activities such as pronunciation, vocabulary, grammar, writing, reading, speaking, and listening which smartphones and their applications are facilitating.

Overall, the results of the study were intriguing but also predictable: intriguing because students use their smartphones extensively and continuously during class time to engage with the multi-functions of smartphones. The results were predictable, in the sense that students are "digital natives" (Prensky, 2001) who are aware of the affordances of smartphones and will use smartphones and their applications to learn Swedish for translation and other purposes including communication and documentation. This study revealed that teachers encourage the use of smartphones in the classroom, recognizing their advantages and disadvantages.

In essence, the study highlights the uses for smartphones and their applications in the classroom. We argue that if used appropriately, smartphones are inseparable mobile learning tools of second language learning. Indeed, technology and mobility are integral parts of learning (Bradley et al., 2017; Säljö, 2010; Kukulska Hulme, 2009). Second or foreign language teaching/learning classrooms should be equipped with mobile learning. Smartphones technologies in classroom are facilitating and ease language learning.

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Code book

Students interviews

1. Personal information:

1.1 Gender:
- Male 1
- Female 2

1.2 Age:

- 20-25 **1**

- 26-30 **2**

- 31-35 **3**

- 36-40 **4**

1.3 Nationality:
- Syrian **1**
- Palestinian **2**

1.4 Educational background:

- Not finished high school **1**

- finished high school **2**

- has a university degree **3**

1.5 Time duration living in Sweden

- Few months **1**
- One year **2**
- 2 years **3**
- 3 years **4**
- 5 years **5**

2. Do you use your phone in the classroom for educational purposes?
- Yes **1**
- No   **2**
- A lot **3**

- Yes , but not a lot **4**

3. Does the teacher allow you to use the smartphone inside the classroom?

Yes 1
With control 2
Of course 3

4. How often do you use smartphone phones during the class?
- most of the time **1**
- nearly half of the class time **2**
- when needed **3**

5. What are the activities you use your smartphone inside the classroom for? Translating words? Find certain words? Do tasks? Can you give examples?

- Translation **1**
- Writing activity **2**
- Listening activity **3**
- Reading activity **4**
- Checking grammar **5**
- Checking spelling **6**
- Taking photo for a text **6**
- Taking photo for the board teacher wrote on it **7**
- Translating a photo through google translation **8**
- Recording the lesson **9**
- Communicate with classmates **10**
- Communicate with teacher **11**
- Find certain words **12**
- When write the sentence in Swedish and translate it to Arabic **13**

6. From your own perspective how much effective to use the smartphone in the classroom for language learning?

- Very effective **1**
- Effective **2**
- Important and necessary **3**

7. How has your experience been with using these smartphones as means of Swedish language learning?

- Easy to use it inside the class **1**
- The mobile is easy and simple and not heavy to carry all way to school and all day **5**
- Makes it so easy to understand what the teacher says **6**
- Facilitate the tasks in the classroom **7**

in doing Swedish language tasks inside the classroom 1
In translation certain words 2
mobile has variety of properties and can do many things with it 3

8. **What is the duration of time you spend on using your smartphones during your lesson?**

- Most of time **1**
- more than half of the time of the class **2**

9. **Do you think that using smartphones help you learning Swedish language easier and faster?**

- Of course **1**
- Yes **2**
- Yes sure, without the mobile will never be able to learn Swedish **3**
- without the mobile will never be able to understand what the teacher says inside the classroom **4**

10. **How smartphones helped you in Swedish language learning?**

- In understanding what the teacher talks about **1**
- In doing educational tasks which given by the teacher **2**
- In writing different texts in Swedish **3**
- In face to face communication situation **4**

11. **Do you think that using smartphones facilitate your communication with others and your engagement in the Swedish society?**

if yes, how? can you explain to me?
if no, why? what do you think the reason (s)?

- Yes, of course **1**

- To write a message to my teacher **2**

- In communicating with my classmate from other nationalities **3**

- Translate sentences or words to communicate **4**

Teacher interviews

a. Personal Information

1.1 Gender:

- Male **1**
- Female **2**

1.2 Age:

- 40-45 **1**
- 46-50 **2**
- 51-56 **3**

1.3 SFI class level the teacher is teaching:

- A and B level **1**
- C level **2**
- D level **3**

1.4 Teaching experience duration:

5 years **1**
10 years **2**
12 years **3**
14 years **4**
15 years **5**

b. Do you allow your students to use their smartphones inside the classroom?

- Yes, I allow them **1**

- since it is not a test I allow them, and I tell them that they should use it **2**

2.1 Why?

- Because I cannot give them the right translation **1**

- most of the translation they will find at lexicon **2**

- Its more accurate and time consuming **3**

    c. Do you think that only because they are in the basic level? I mean after that when they study advanced Swedish are they going to need their phones?

- No I do not think **1**

- it doesn't matter if they are in SFI or advanced level **2**

- you will always need your phone to translate new words. I think you should use it under all levels of your studies **3**

    d. How often do you encourage your students to use their smartphones during lessons?

- I encourage them every time **1**

- In reading texts **2**

- Sometimes when they write a letter I want to see how many words they can in Swedish **3**

- It depends if I want to test them or if it is just free **4**

- I give instructions if the students are allowed or are not allowed **5**

    e. Do you think using smartphones in the classroom by students is positive or negative?

- Positive **1**

- Disturbing **2**

- Positive with control **3**

- Distributing sometimes **4**

    f. Do you trust your students they will not access social media through the tasks or through the class?

- I trust them but sometimes I see that they use it to text families and friends **1**
- When I see students over use smartphone I tell them to put it away **2**

g. **How effective are these smartphones as a tool of language learning?**

- It is very effective **1**

- Students don't need to carry a heavy book to school **2**

- students have the mobile close to them and they have it whenever they need **3**

h. **Do you as a teacher use smartphone to interact with your students?**

- I have never done this **1**
- Yes , send emails or messages **2**