

## Investigating Using Smart Phone in Improving English Language Learning

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### Abstract :

This study aims to investigate a newly approach in foreign language learning both in theory and in practice. Studies about mobile learning in English language do not have a place in Sudanese libraries, and they aren't addressed by the investigators and researchers. The research used the descriptive and analytical method and a questionnaire as a data collection tool . The results showed that the majority of the students' participants of the study have a mobile phone, and the most of them said that they use it for educational purposes. Finally, the researcher recommends the Universities should have a clear strategy for implementing mobile - learning.

**Keywords:** smart, mobilephone, address, strategy.

## تجري استخدام الهاتف الذي في تطوير تعلم اللغة الانجليزية

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تهدف الدراسة إلى التعرف على منهج جديد في تعلم اللغة الأجنبية نظريا وعمليا وذلك لدراسة استعمال الهواتف النقالة في تعلم اللغة الانجليزية وان لبس لها مكانا في المكتبات السودانية ولم يتم تناولها من قبل الباحثين . استخدم البحث المنهج الوصفي التحليلي ولاستبانة كأداة لجمع المعلومات .أظهرت النتائج أن معظم الطلاب لهم هاتف متنقل وان معظمهم يستخدمونه لإغراض تعليمية. وأخيرا يوصي البحث بان يكون للجامعات إستراتيجية واضحة لتنفيذ التعلم عبر الهواتف المتنقلة

الكلمات المفتاحية: ذكي، آله. والهواتف المتنقلة، يخاطب، استراتيجية.

## Introduction

### 1.2 Background of the Study

Today the Information and Communication Technology (ICT) has been increasing rapidly. The result of this growth can be realized in almost every single phase of learning area: presentation of information, tasks, assessment, interaction and performance of learners. Moreover, these new technologies have constantly increased the opportunity for interaction and flexibility amongst students around the world, overcoming the time and space and individual differences obstructions. At present, mobile phones are the most widespread revolution, and they have a significant place mainly in young people's lives. All over the world, mobile phones are more than personal computers.

### 1.2 Statement of the Research Problem

Smartphone technologies have been increasingly combined into learning. The wide use of mobile and another portable and wireless devices has been expressively changing the ways of learning in many contexts, including language learning. Though mobile devices have come into every aspect of our lives and has used in supporting a wide range of learning events, there is insufficient understanding of the factors that impact the distribution of mobile-learning in higher education. In addition, there are many English learners are behind or do not cope with these changes and their usage of mobile still does not suffice

and are not well used

### **1.3 Objectives of the Study**

1. To determine the learners' attitudes towards using mobile in English language learning.
2. To demonstrate the benefits of mobile in English language learning.
3. To identify the barriers that obstruct English language learners from the using of mobile.

### **1.4 Research Questions**

This study attempts to answer the following research questions:

1. What are the barriers obstruct English language learners from using mobile devices in their learning process?
2. To what extent do teachers are ready to use mobile in English Language teaching?
3. What are the benefits of mobile in English language learning?

### **1.5 Research Hypotheses**

1. There are various barriers that could obstruct learners to use the mobile device in English language learning.
2. English Language teachers have negative attitudes towards the use of mobile in English Language learning
3. There is a significant association between using a mobile phone as learning tool integrated into the classroom and the benefits that the student acquired.

### **1.6 Significance of the Study**

This study addresses a newly approach in foreign language learning both in theory and in practice. Studies about mobile learning and English language do not have a place in Sudanese libraries, and they aren't addressed by the investigators and researchers. Furthermore, growths and improvements in mobile technologies and innovations in EFL/ESL learning have been on the progression and more research will always be required in such growing field. The results of this research will be of interest to educators and university managers concerned with the use of mobile devices in higher ed-

education. It also offers possible contributions to applied linguistics. It improve teaching practice by introduction mobile devices in English language field, through enlightening the policy makers of the role mobile learning and evaluating the present situation of the English language learners towards mobile learning; it helps in spreading the awareness of mobile learning and its role in learning among English language learner, it helps in identifying the practice which is necessary for effectively consider mobile as an effective tool for language learning resources. And it offers instruction and guideline for the learners to realize and understand the significance of using mobile devices in their learning process ..

### **1.7 Research Methodology**

In this study, both quantitative and qualitative methods were used to collect data from the selected candidates.

The researcher used a well-structured questionnaire to elicit responses from the students while interviews of nine participants were conducted in order to provide more understanding of teachers' perceptions of mobile learning.

The Questionnaires were administered within 70 undergraduates' learners from three Sudanese public universities, English college of education, Department of English language, fourth-year students', where the systematic random sample method was applied. The information gained from the questionnaires was analyzed using the software Statistical Package for Social Sciences (SPSS). After interpretation of the results, then conclusion and recommendation are drawn.

### **1.8 Delimitations of the Study**

The number of contributors was small ( $N = 70$ ), from only two public universities so, their response may not be equally applicable to all English learners perceptions. Time of study: 2020.

## Literature Review

### 2.1 Introduction

This chapter provides a review of relevant literature in the field of mobile learning, it consists of many parts. The first part of the literature review focuses on the concept of mobile learning. The second part seeks to identify the existing learning theories in relation to mobile learning such as: behaviorist (Naismith et al., 2004), constructivism learning theory,

### 2.2 The Definition of Mobile

According to Traxlor, (2005), mobile learning is, “any educational provision where the sole or dominant technologies are handheld or palmtop devices”. This definition may mean that mobile learning could include mobile phones, smart phones, personal digital assistants (PDAs) and their peripherals, perhaps tablet PCs and perhaps laptop PCs, but not desktops in carts and other similar solutions.

Traxler, (2005) identified three categories of mobile learning been used in past literature. He identified that early approach to defining mobile learning focus on the nature of mobile devices, referring particularly to handheld or palmtop electronic devices. The next generation of definitions exhibited a greater focus on mobility but, was largely still directed towards the mobility of the technology. The third category moved away from considerations of the technology to emphasize the mobility of the learner and the learning process. Many researchers and educationalists considered mobile learning as the immediate descendant of e-learning. Both (Quinn, 2000) and (Pinkwart, et al, 2003) defined m-learning as “*e-learning that uses mobile devices*”. Mostakh-demin and Tuimala, (2005) views mobile learning simply as the expected development of e-learning, which completes a missing component of the solution (i.e. adding the wireless feature).

Mobile learning refers to any learning that takes place when the location of the learner is not fixed, or the process of learning is



enhanced by using mobile devices and technologies (O'Malley et al., 2003). (Quinn, 2000) considered mobile learning as the overlap of using e-learning (learning by using information technologies and devices) and mobile computing, which includes mobile applications in the small, wireless, and portable devices such as smartphones and PDAs (Quinn, 2000). However, as the mobile technologies are developing rapidly, the shift to mobility is occurring day by day, and the mobile devices are now becoming more portable than ever.

The mobile activities of students once consisted of carrying textbooks, pencils, and paper from classroom to classroom. At present, mobile learning has been reconsidered as the activities of using capable electronic information communication technologies and devices to support students to access meaningful learning materials both inside and outside classes (Messinger, 2011). With time, the perspectives and understanding of mobile learning are becoming broader and deeper, since many researchers and communities have defined mobile learning differently, based on their own backgrounds and experiences. This has made the characteristics and properties of mobile learning even harder to define. Currently, the concept of mobile learning is somehow mistaken. As Sharples, (2007) said—it seems to be all things to all people (Sharples, 2007).

### **2.3 Learning Theories in Relation to Mobile Learning**

Naismith et al., (2004) have briefly identified main theories and areas of learning related to learning with mobile technologies. They are a behaviorist, constructivist, situated, collaborative, informal and lifelong learning, and learning and teaching support. Currently, theoretical underpinnings of mobile learning research are mostly based on the work of (Naismith et al, 2004), who compared new mobile learning practices against existing learning theories, which are a behaviorist, construc-

tivist, situated, collaborated, informal and lifelong learning.

### 2.3.1 Behaviorist learning theory

Behaviorist learning emphasizes learning experiences gained as a change in *“observable actions with proper stimulus and response. This approach is predetermined, constrained, sequential and criterion-based”* (Juhary, 2007, pp. 378). With the advance of mobile technologies, mobile learning makes it possible to form a drill and feedback mechanism complied with the behaviorist learning theory. Specifically, mobile learning can give learners content specific questions, then gather their responses in a rapid manner and provide instant feedback by such as using wireless network or SMS, which fits with the behaviorist learning paradigm (Naismith et al., 2004)

### 2.3.2 Constructivist learning Theory

The constructivist theory highlights gaining learning experience in a way that learners actively build new ideas or perceptions based on both their earlier and existing knowledge (Naismith et al., 2004). With a mobile phone, a learner can build his/her own knowledge and share it easily and freely with peers regardless of time and place. Specifically, an easy way for mobile learning to facilitate an immersive constructivist learning experience is to offer edutainment (e.g. handheld games) (Corbeil and Valdes-Corbeil, 2007).

### 2.3.3 Learning and Teaching Support

Lastly, the use of mobile technology provides learning and teaching support for coordinating learners and learning activity resources and for assisting with administration duties more generally. Examples include helping teachers for attendance reporting, reviewing student marks, or effective personal organization (Naismith et al., 2004). These functions lead to positive rewards and could support learning activities as a whole.

## 2.4 Technology Acceptance Model (TAM)

### 2.4.1 Perceived ease of use

Several researchers have followed Davis's original study (Davis, 1989) to provide empirical evidence on the relationships that exist between usefulness, ease of use and system use. Davis defined Perceived ease of use as "the degree to which a person believes that using a particular system would be free from effort" (Davis, 1989). According to Sathya, 1999; Rogers, and Shoemaker (1999), consumers go through—a process of knowledge, persuasion, decision and confirmation before they are ready to adopt a product or service. The adoption or rejection of an innovation begins when—the consumer becomes aware of the product (Sathye, 1999; Rogers and Shoemaker, 1971). As mentioned by Cooper, and Zmud, (1997) ease of use of an innovation is one the most important characteristics for the adoption of an innovation. Adoption of mobile learning is more likely to occur if the process of usage is easy for customers.

### 2.4.2 Perceived usefulness

Perceived Usefulness was defined as "the degree to which a person believes that using a particular system would enhance his/her job performance" (Davis, 1989, p. 82). People can assess the results of their behavior in terms of perceived usefulness and build their choice of behavior on the desirability of the perceived usefulness. Consequently, perceived usefulness will affect their intention to accept and adopt mobile learning, through direct or indirect ways. Many studies have offer support for the proposal that perceived usefulness is the main predictor of information technology usage (Davis, 1989; Davis et al., 1992; Venkatesh and Davis, 2000; Gefen, 2003; Hsu and Lu, 2004).

### 2.4.3 Perceived risk

Perceived risk as defined by Pavlou, (2001), "*It is the user's subjective expectation of suffering a loss in pursuit of the desired outcome*". The term perceived risk (PR) in this study can be looked at from



the learner's perception of the uncertainty and unsafely results of learning English language using mobile technologies. However, introducing a new technology may bring both benefits and risks to the user, and before deciding to adopt the technology, the learner may want to weigh risks and benefits. Mobile learning services will not be an exception to this general rule. A larger perception of risk may decrease the perceived advantage of the technology (Horst, Kuttschreuter, and Gutteling, 2007).

### **2.5.1 Dimensions and Characteristics of Mobile Learning**

For quite some time now, universities across the country have used educational technologies to enhance their curriculums (Bakia et al., 2007). When used appropriately, mobile technologies have been shown to —enrich learning environments and enhance students' conceptual understanding (Bakia et al., 2007, p. 9). Mobile learning can add value and enrich existing learning models; however, the probability that learning on mobile devices will replace classroom or other electronic learning approaches is rather farfetched (Mottiwalla, 2007). Over time, learning and technology has advanced, which has set the stage for the successful merging of learning and technology in a mobile format

(Sharples, 2000). But to maximize learning chances as a result of this convergence of learning and technology, teachers must become familiar and aware of a new digital language possessed by their students (Corbeil & Valdes-Corbeil, 2007). While teachers are trying to come to grips with the technical skills of their students, students must also learn to craft their own learning and educational experiences outside the classroom environment with the assistance of the Internet and/or mobile technologies to develop the necessary 21st-century skills required to survive in today's and upcoming society. Ozdemir, (2010) describes mobile devices as technologies that are with us whenever and wherever we are. Peo-

ple cannot be expected to carry distance learning items, such as a radio, television, or computer, with them at all times. Furthermore, the radio and the television only allow for one-way communication, which hinders the interactions that are inherent in a typical learning environment between the teacher and student. Characteristics that make mobile learning unique and effective are the personalization of learning and the capability of these devices to extend beyond the traditional modes of education. As a result, mobile devices have the potential to change the way in which students conduct themselves and interact with one another (Motiwalla, 2005).

Mobile learning does not necessarily take place in a fixed location, such as a classroom, over a scheduled amount of time; instead, learning runs across locations, topics, and technologies (Sharples et al., 2008). The use of mobile or handheld devices for learning offers a learner with global access to information and remote resources (Liaw, Hatala, & Huang, 2010).

This ubiquitous access to information and resources has some compelling implications for informal learning due to the fact that students can use mobile devices to peruse the information in substantially less time with greater efficiency than ever before. The opportunity for unintentional learning (i.e., learning that was not planned ahead of time) is also much more likely with a powerful handheld tool that can retrieve information from the Internet, through applications, and through collaboration and communication among classmates, friends, family, or even social networks (i.e., Facebook). When removed from the context of a formal, externally imposed learning environment, informal learners predominantly take advantage of technologies, resources, or tools that best suit their learning needs and personal preferences (Clough et al., 2008).

In the palm of her hand, a cell phone user, an iPad user, or even a net book user has instant access to the Internet and other

educational resources. Learning opportunities continue to present themselves just about anywhere one goes. With this in mind, the mobility of the learner and the use of a mobile device by the learner should not take away from the fact that actual learning may be taking place. Liaw, Hatala, and Huang (2010) suggest that learning as a mobile activity should not be portrayed separately from other forms of education. Mobile learning can be characterized by the personal and public processes of the acquisition of knowledge through exploration and conversation with the assistance of various interactive technologies (Sharples et al., 2008). To make meaning of concepts, students predominantly use the processes of conversation (Pask, 1976) and exploration (Dewey, 1916). Mobile learning provides an opportunity that allows students to communicate with each other to further improve their educational experiences inside and outside the classroom. In addition to communication, Sharples et al. (2008) contend that mobile learning draws upon the conception that knowledge is constructed through activity. Therefore, through conversation and exploration, people are able to learn where they want, when they want, and what they want. The informal learning opportunities that are created when using mobile devices allow learners to negotiate with content and subject matter they never may have planned or envisioned. The practice of mobile learning is composed of a tripartite system in which the learner, the technology, and the learning process itself operate in an *“uninterrupted continuum within the social context of education”* (ElHussein & Cronje, 2010, p. 17) In this sense, Hussein and Cronje believe that the mobile learning environment is based on the mobility of learners, the mobility of technology, and the mobility of learning that broadens the scope of the educational landscape. As technology becomes more embedded in the daily lives of people, learners become more dependent on creating educational opportunities through social exchanges with the assis-

tance of mobile devices. Moreover, the blending of the learner, the technology, and the learning process helps blur the definitive lines that once isolated these three events. Technology is being used ubiquitously by learners who have learned to create learning opportunities and to access information because of the mobility of the technology itself, the mobility of the learner, and the mobility of the learning process. The actual mobile devices that are being used by learners share a set of common characteristics: (a) portability, (b) social interactivity, (c) context sensitivity, (d) connectivity, and (e) individuality (Klopfer & Squire, 2008).

The devices are powerful and easily transportable. Communication and collaboration are facilitated with the use of mobile devices. Mobile devices are sensitive to the context in which they are used in the sense that the devices can take advantage of GPS, data networks, or even audio or video capture to collect and respond to data in a particular area. Connectivity provides the devices with the ability to connect to a network. Lastly, individuality paves the way for the users of the devices to tailor the devices to meet their specific needs. Handheld mobile devices are becoming more relevant technologies to help support collaborative learning scenarios.

Because of their potential for enhancing learning, mobile devices have undergone a number of studies by not only researchers but academic and industrial practitioners as well (Hoppe et al., 2003). Mobile learning will now be referred to as a process of education for a learner positioned in any random location with the assistance of a handheld, portable device that can connect wirelessly to the Internet in an effort to support or extend classroom learning or create new, intentional or unintentional learning opportunities.

### **2.5.2 The Impact of mobile phones in Education**

As mention by (Ellen D, (2005 ), Although tablets and laptops have provided the means and the methods for demonstrating that learning no



longer needs to be classroom- or course-bound, the anticipated rush toward mobile learning will be sparked by the obvious draw of short, stand-alone programs. Current trends suggest that the following three areas are likely to lead the mobile movement: educational games, language instruction, and performance-support and decision-support tools. In particular, gaming has taken the wireless world by storm, and there is every reason to believe that educational gaming will provide mobile learning with its first big —win, in terms of adoption. In a March 8, 2005, talk given at the Game Developers Conference (GDC) held in San Francisco, Robert Tercek, co-chairman of GDC Mobile, said that 6 million people download games to their mobile devices each month and that 18 million Americans play wireless games..

### **2.6.1 Using Mobile Devices in the Classroom**

According to Kukulska-Hulme (2007), the three main motivations for the use of mobile technology in education are improved accessibility to information, the potential for future changes in teaching and learning, and the goals and aims of businesses and institutions. When examining the changes in teaching and learning, —Researchers are interested in collaborative learning, students' appreciation of their own learning process, consolidation of learning, and ways of helping learners to see a subject differently than they would have without the use of mobile devices (p. 4). When multimedia content is well-designed, a learner's cognition can be activated even if the content being studied is mundane or the learner is disinterested in that which is being taught. When efficiently designed, the result of multimedia on learning is a more meaningful, deeper level of understanding exhibited by the student (Ozdemir, 2010). Mobile learning systems and applications have consistently garnered positive praise among learners who contend that using handheld devices for learning increases the overall satisfaction and motivation of its users. Likewise, mobile learning has the potential to alter student behaviors,



interactions, and overall attitudes toward learning (Homan & Wood, 2003). The significance of using mobile devices to create learning opportunities can be advantageous to students of all ages and academic achievement levels, especially as these students move on to tackle the imminent changes in the consistently evolving 21st century.

*“Students need to leave school with a deeper understanding of school subjects, particularly science, mathematics, and technology, and with the skills needed to respond to an unbounded but uncertain 21st century skills to use their knowledge to think critically, to collaborate, to communicate, to solve problems, to create, and to continue to learn”.* (Kozma, 2005.p 1).

### **2.6.2 Mobile learning, Currently and in the Future**

Regardless of current disadvantages, the mobile learning will become increasingly popular with the progress of mobile devices. Its common use within the traditional education will accord to the needs of educational quality improvement. The educational process will become more versatile and will satisfy the demands of lifelong learning (Georgiev et al., 2004).

Mobile learning is absolutely obtaining momentum (Pollara et al., 2011). The vast majority of research studies relating to mobile learning have yielded positive results in both achievement and attitudes (Pollara et al., 2011). Moreover, according to Pollara et al. (2011, p. 8), *“the need for ubiquitous learning opportunities is immediate.”* The implications of mobile learning are far reaching, and its potential influence on education are profound (Group, 2004). The following years will witness a period of swift growth for mobile learning, with evolutionary rather than revolutionary alterations (Librarian, 2007). The Commission of the European Communities announced that it was planning Europe’s —digital future— via the identification of strategic challenges for competitiveness and ICT take-up in Europe (Kukulska-Hulme, Sharples,

Milrad, Arnedillo & Vavoula, 2011). It is crucial that education embraces this new technology and develops pedagogies to foster and enrich learning with the use of mobile devices. Since smart-phones become increasingly ubiquitous and capabilities rise up, the need for real-time communication and access to learning materials will ascend and modern education must meet the challenge (Pollara et al., 2011). Researchers in mobile learning will be keen to address the current challenges ascending from the technical advancements and from learner

### 2.6.3 Mobile Today

According to Ellen, (2005), a rich mobile Internet experience includes the following attributes:

- Ubiquity: How widely available is the media player that will be required for the viewer to see the application on the device display?
- Access: How widely available is the wireless network that will distribute the mobile content?
- Richness: Do pages load quickly? Do animations play in a smooth and seamless manner? Does the streaming media (media that is consumed—read, heard, viewed—while it is being delivered) flow at a sufficiently rapid rate?
- Efficiency: How large is the client that will be required to make use of a particular media player? How fast will the application load and play?
- Flexibility: Will the application be viewable on a variety of devices? Can content designed for use with one kind of device or operating system be played on other devices with some expectation of comparable quality?
- Security: Is the interactive mobile device protected from worms and viruses? Is the shared content protected from being intercepted by unintended recipients?

Reliability: Will content be displayed in a consistent manner, regardless of the browser, device, and screen size? - Inter-

activity: Does the application allow users to interact freely with the display and the content? Third, people want —anytime, anywhere— connections more than ever before. Demands for information, performance support, instruction, training, and education are being shaped by people who want access to resources, assets, program, and people when and where they need those connections most. As more people gain greater comfort with simple mobile applications like SMS text-messaging and mobile Web-surfing, the greater will be the demand for broadband service. And as bandwidth increases and media players like Flash continue to improve users' experiences, the more rapidly will mobile applications continue to increase in number (Ellen, 2005).

## **2.7 The Benefits and Drawbacks of Mobile Learning**

### **2.7.1 The Advantages of Mobile Learning**

The information and communication technology tools such as smart phones, laptops PCs with the connection to wireless networks facilitate M-Learning. M-Learning can assist the instructors and learner and to extend beyond the traditional schoolrooms levels. Mobile devices offer instructors and learners and support them with new opportunities to interact with each other and offer them access to relevant information (Elias, 2011).

### **2.7.2 Critical Success Factors for Mobile Learning**

Naismith and Corlett, (2006) identified five critical success factors for mobile learning. These are: Firstly, Access to technology: The successful projects make mobile technology available where and when it is needed, either by developing for users' own devices such as phones and media players, or by providing learners with devices that they can use at home and on the move.

Secondly, Ownership: It is important that learners are able to either own the technology or to treat it as if they own it. Using the technology for entertainment and socializing does not appear to reduce its value as a tool for learning, but rather helps to bridge the gap between institutional and

personal learning. Thirdly, Connectivity: Many successful mobile learning projects have been based on wireless or mobile phone connectivity, to provide access to learning resources, to link people across contexts, and to allow students to capture material that can be sent to a personal media space and then shared or presented. Fourthly, Integration: Successful mobile learning projects are integrated into the curriculum, the student experience, or to daily life, or a combination of all of these. One way to achieve this integration is to extend a successful form of learning onto mobile devices, such as Frequently Asked Questions, or audio/Powerpoint recordings of lectures. Another approach is to provide mobile technology that augments the student experience, for example by mobile tools such as ‘\_\_moblogs’ (mobile weblogs) to maintain an electronic portfolio or record of learning. Fifthly, Institutional support: Although a major benefit of mobile technology is —the ability to put control in the hands of the learner‖ (Naismith and Corlett, 2006) successful projects also need strong institutional support, including the design of relevant resources in mobile format, staff training, and technical support.

## **2.8 Barriers Obstruct Adoption of Mobile Learning**

### **2.8.1 Lack of A generalizable Theory of Mobile Learning.**

A significant amount of literature pertaining to mobile learning currently exists; however, most of the research is technocentric and overlooks the pedagogical issues associated with integrating mobile technology into the classroom (Ozdemir, 2010). Schools continue to remain hesitant about adopting mobile learning as a form of classroom instruction. Instead, a mobile learning theory needs to be established that embraces learning that occur outside classrooms and lecture halls by people performing basic learning activities (Liaw et al., 2010). This mobile learning theory should investigate the ubiquitous nature of these personal and knowledge sharing devices. Moreover, further research is needed to elucidate the advantages, chal-



lenges, and limitations of using mobile devices as learning tools and to create appropriate learning pedagogies (Ozdemir, 2010).

### **2.8.2 Lack of Effective Design of Mobile Learning Tools**

Sharples et al. (2008) feel that the design of mobile learning activities should be driven by specific learning objectives. The technology should be used as a means to further engage students and promote activities that would not have been possible without the use of the technology. Schwabe and Goth (2005) investigated the motivational values of mobile learning as a result of the use of mobile games. In their experiment using the MobileGame system, Schwabe and Goth discovered four technical design issues that need to be addressed to create an effective learning game: accuracy of positioning, play on the move, offline area and response time, and interface design. As the demands for mobile technologies that support learning continue to increase, the need for the creation of quality applications and tools for mobile learning devices must also be acknowledged. Well-designed mobile learning games and other applications can be used outside of the classroom in an effort to spark discussions when the students return to class (Klopfer, Osterweil, & Salen, 2009).

### **2.8.3 Mobile Technology Access**

As mentioned by (Fox & Rainie, 2014), in the past, access to technology has been a barrier to technology integration. However, as we progress further into the 21st Century, access seems to be less of a problem. Teachers and students have more access to technology than previously thought. In response to the 25th anniversary of the Internet, Pew Research measured the rapid adoption of the Internet. In 1995, only 14% of adults polled were users of the Internet. In 2014, that number grew to 87%. Even more staggering is that 97% of young adults (ages 18-29) utilize the Internet today (Fox & Rainie, 2014).

According to a study released by Nielsen, (2013), 70% of teens (ages



13-17) own a smartphone. For a frame of reference on the rapid increase of smartphone adoption amongst this age group, 58% of American teens owned a smartphone in 2012, and 36% in 2011 (Kerr, 2012). Students are accessing the Internet at home and on the go, utilizing various mobile devices for entertainment and communication purposes. Educators must leverage technology that is already in the hands of our students in order to engage learners. This can be accomplished through building teacher self-efficacy with technology.

### 2.8.4 Teacher Self-Efficacy

In order for technology to be utilized in the classroom, district leaders need to ensure that teachers' attitudes and beliefs towards technology are positive. Pajares (1992) emphasizes the importance of this second-order barrier by identifying a strong relationship between teachers' educational beliefs and their planning, instructional decisions, and classroom practices. Teacher beliefs influence professional practice, which is why confronting these beliefs is an integral step in integrating new technologies in the classroom. Bandura (1997) defines self-efficacy as the belief about one's capability to learn or perform actions at certain levels. Bandura emphasizes that self-efficacy is not based solely on an individual's skill level, but on the belief that one can complete a task. This makes self-efficacy a predicament for technology integration in that if a teacher believes he/she can accomplish technology integration then he/she will attempt it. But, if the teacher does not have the skills to do so, then he/she will not even try it.

Science, Technology, Engineering, and Mathematics report to the President captures this predicament of technology integration, *"Some teachers who are early technology adopters do this routinely, and selecting materials they feel fit their students' needs and their own instructional goals and preferences. But most teachers lack the time, confidence, content knowledge, and inclination to do so"* (President's Council of Advisors on Science and Technology, p. 80).

Increasing teachers self-efficacy with technology can be accomplished in various ways. Vicarious learning, or learning through watching others successfully complete a task, with technology can increase efficacy (Bandura, 1997; Wang, Ertmer, & Newby, 2004).

Utilizing early adopters or teacher leaders to demonstrate examples of effective technology integration will create this learning environment, which could also lead to Professional Learning Communities (PLCs). These learning communities can lead to collaborative discussions and networking that can grow and build self-efficacy with and amongst teacher colleagues. Another way to increase self-efficacy with technology is to differentiate technology training based on teachers' levels of skill and confidence—just as one would differentiate instruction in a K-12 classroom.

Technology professional learning should meet and challenge teachers at their current level of skill and comfort, so not to intimidate or frustrate them. Sheingold (1991) suggests this type of technology training- through —iterative interventions would be responsive and flexible in order to meet the needs of the learners (in this case, teachers) in order to respond to individual levels of use. Educators utilize differentiation in the classroom to meet P-12 students' needs, this also needs to be done during technology professional learning in order to meet and respect individual teachers' needs. This is just good teaching practice. Technology professional learning must address teachers' beliefs and concerns about technology in order to increase the likelihood of technology adoption in individual classrooms.

### **2.8.5 Technology Support**

Other effective teaching practices that support students in the classroom, and will do the same for teachers as technology learners, are follow-up and support. When students learn a new concept or skill, they have to work independently to practice their new learning, and the teacher provides feedback and guidance through-

out the student's learning process.

Technology professional learning for teachers does not always follow this effective teaching practice. Massive, large-group, stand-alone technology training are not an effective use of professional learning funds if teachers are not expected to follow-through and do not have an identified support system. Support can be provided through the establishment of PLCs, the awareness of technology teacher leaders in the building, identified personnel that provides technology support, online tutorials, and examples, books, etc. Having a variety of support access points that accommodates the variety of teacher learners and their stages of concern will provide a return on investment in these support systems in that teachers will accommodate the variety of teacher-learners in a district. *"Teachers' abilities to identify the human and digital resources, within and outside their school, that can provide the help they need, can have a dramatic impact on the success of technology integration"* (Groff & Mouza, 2008, p. 31).

Having a support plan in place that is clearly communicated to teachers in a variety of different formats will indicate that technology integration is a priority and expectation and respect the individual teachers' learning styles (Groff & Mouza, 2008).

#### **2.8.6 Technical limitation or Restriction of Mobile Devices**

Despite the many advantages of M-learning as a new technology to enhance learning and teaching in all education institutes, it does have some limitations that need to be considered as issues facing its implementation.

According to previous studies, the limitations of implementing M-learning are as follows:

Many studies (Seppala, et al, 2002; Corlett et al., 2005; Wang, Wu and Wang, 2009; Hashemi et al., 2011; Park, 2011) indicated that mobile devices have some limitations due to small screen, memory size, slow network speed, battery life and small and limit-

ed keyboard. Furthermore, the devices being used in M-learning may not give the same resolution or design of contents as a computer (Barker et al., 2005). In addition, mobile devices are limited in processing power and resources and they have a variety of different input possibilities and operating systems.

### **2.8.7 Mobile size**

Many other characteristics that have led to the ubiquity of mobile devices are also viewed as by some researchers as potential barriers. For example, the small size of mobile devices is what allows for mobility and portability, enabling anytime, anywhere learning. However, researchers are concerned that the screen size of mobile devices may influence learning.

Research analyzing screen size and learning is limited; however, Manair (2007) found that students learned significantly more when the screen size is more than 58mm (2.28 in.) diagonal.

### **2.8.8 Personal Nature of Mobile Devices**

Other major barriers, according to researchers, relate to the personal nature of mobile devices. Many foresee challenges associated with creating content for various independent operating systems of student mobile devices (Kadirire, 2009). Others believe the personal nature of mobile devices may hinder collaboration by isolating users from meaningful social interactions (Dieterle et al. 2007; Mandryk et al. 2001).

### **2.8.9 Teacher-Student Gaps**

As mentioned by Pamela, P.(2011) another gap in the literature, however, has the potential to hinder the integration of mobile learning in the classroom, perhaps more than any other. Teacher-student gaps seem to be a massive barrier to incorporating mobile devices in the classroom. Although teacher fears of disruption and cheating may be valid on some level, research is needed to understand how to appropriately teach—mobile etiquette. Since the mobile devices can be used for both social and educational purposes, students must be taught how to



appropriately use and navigate the mobile world within an educational context.

## **2.9 Previous studies**

### **2.9.1 Ahmad, A. (2014)**

Towards Mobile learning Deployment in Higher Education in **Brunel University** London. Published Ph.D. Thesis. The aims of this research work are to study students' readiness for M learning, investigate the factors that affect students' acceptance and analyze M-learning literature in order to propose and evaluate a model which can be used to foster the sustainable deployment of M-learning within teaching and learning strategies in higher education institutions. The research was conducted at Brunel University, West London. Data were collected from Students from different undergraduate levels. Data were reported from 174 participants (125 males, 49 females students using three surveys. The outcome of this research leads to a conceptual model that gives a wide overview of all elements that need to be addressed in the mobile -learning the environment and bridges the gap between the pre- and post-implementation phases in order to ensure sustainability. Furthermore, the model provides university educators with a planned approach to incorporate Mobile -learning in higher education curriculums with the aim of improving teaching and learning.

### **2.9.2 Mohammed, M. (2012)**

Mobile learning in the English vocabulary acquisition: Toward the implementation in Malaysian secondary schools. Unpublished Ph.D. Thesis This thesis explores the use of mobile phones to support English vocabulary learning in Malaysian schools with the interview as the main research tool.

The methodology consists of rigorous steps in developing, evaluating and disseminating the implementation strategy as well as



exploring other issues associated with mobile learning implementation in Malaysian schools. It has been established that the implementation strategy developed in this study would have the potential to provide guidance in the implementation of mobile learning in Malaysian schools. The findings revealed the opportunities and the challenges in embracing mobile phones as a learning tool.

### **2.9.3 Osman, M. (2013)**

Evaluation of mobile and communication technologies for language learning. Unpublished Master Thesis.

This master's thesis explores the use of mobile and communication technologies in English Language learning. Specifically, the use of mobile phone and wiki in language learning is investigated among the undergraduate student in a higher education institution. By applying both quantitative and qualitative methods, three themes are derived in the study; accessing, communication and usability. This finding suggests that although the use of mobile phone and wiki in language learning is feasible, further studies are needed to enhance the possibility. This study is important in providing alternative learning tools in the area of English Language learning.

### **2.9.4 Baharom, S.S. (2012)**

Designing mobile learning activities in the Malaysian Higher Education Context: A Social Constructivist Approach. Unpublished Ph.D. Thesis

This thesis explores how mobile learning activities, developed using social constructivist learning principles have the potential to support an undergraduate in English Language learning. The methodology applied in the study is a design-based research with two stages of data collection. The research tools include questionnaires, students' blog posts, and online interviews. The findings indicate that students have a positive attitude toward the use of mobile learning in their learning activities. The study also highlighted several types of mobile learning activities which should be introduced; contextual, reflective, and collabora-

tive, multiple media, communication and learning management.

### **2.9.5 Maria B. Cruz (2012)**

Student and Teacher Perceptions of a Mobile-Based Biology Vocabulary Study Tool for English Language Learners published Ph.D. Thesis.

This study investigated biology students' perceptions of their experience independently using an iPod Touch-based mobile study tool to complement classroom learning. Interviews with the students' biology teacher, an educator with a strong background in language acquisition teaching and learning, were also used to supplement student testimony.

### **2.9.6 Muhanna and Abu-Al-Sha"r (2009)**

in a study based on graduate and undergraduate students at a Jordanian university, investigated the university students' attitudes towards the usability of cell phones in a learning environment wherein cell phones are used as learning tools in the classroom. In addition, the study aimed to explore any differences in students' attitude based on their gender and level of study. The researchers conducted a survey consisting of two questionnaires among two groups of two different levels of university students. The questionnaires were distributed to 50 student's university levels (graduate, undergraduate) and gender (male, female).

The findings indicated that students appreciate using cell phones in the learning environment. Undergraduate students are more interested in using cell phones than graduate students, and female students are less ambitious in this regard than males. These results were in agreement with previous research done in the same area. Thirteen students chose to participate in the study. All 13 students were between ages 14 and 18.

## **Methodology of the Study**

### **3.1 Introduction**

The aim of this chapter is to describe the design and methodology used in conducting this study. It provides details about research population, participants, data col-

lection procedures, and instruments used in this study. The questionnaire is the tools of data collection in this study. The reliability and validity of these tools are presented comprehensively. It concludes by explaining the type of data analysis and ethical concerns.

### **3.2 Research Method**

This study adopted a used a descriptive and analytical methods. These methods assisted in building a base on a complete understanding of the research problem. Questionnaire is used as a data collection tool.

### **3.3 Population and Sampling**

In this study, the population was 163 Sudanese English language University students. The sample was 70 learners divided into subgroups from two universities. These Universities were Bahari University and Omdurman University. Accordingly, 35 male and female students represented each University. The research sample similarly included seven English language lecturers, representing English Language teachers from these Universities, samples of two teachers were randomly drawn from each subgroup. These divisions permitted the comparison of subgroup results.

### **3.4 Data Collection Techniques**

The main instruments used in this study the mixed method research consists of closed-ended questionnaires.. The quantitative data are obtained through closed-ended questionnaires and the qualitative data through an interview. The items of the questionnaires are mainly developed based on the research objectives and research questions.

#### **3.4.1 Questionnaires**

The aim of the questionnaire was to elicit direct judgments; obtain uniform, straightforward; data for analysis. Questionnaire encompasses a variety of instruments in which the subject response to written questions to elicit reactions, belief, and attitudes. In this study, the questionnaire was designed to gather either qual-

itative or quantitative data and to elicit information from the 70 English language learners on their attitude towards using mobile phones in learning The English language. The questionnaires were distributed to the research sample. The questionnaire which was developed to elicit the data on students' perceptions about using mobile devices in language learning consisted of three parts. Part 1 contained 10 items asking about learners' attitudes towards using mobile in English language learning. Part 2 consisted of eight items asking about benefits of using mobile in English language learning and Part 3 consisted of nine items asking about barriers that hinder the learners from using mobile in English language learning, and The Questions measured by a 5-point Likert scale (1=strongly disagree; 5= strongly agree)

### **3.5 Research Procedures**

#### **3.5.1 Students' questionnaire**

A questionnaire was designed in the second semester of the academic year 2019 to collect the data for this study. The questionnaire was sent through a WhatsApp group to all students in the department. The WhatsApp contained the link to the questionnaire and the expected time for completing the survey was 10 minutes. In the first page of the questionnaire, a brief explanation of the research project and the aims of the study were provided. In addition, students were informed that all the data and participants details would be kept anonymous and that they could withdraw from the study at any time. Participants were also provided with the contact information of the researcher.

### **3.6 Validity and Reliability**

The questionnaire was validated in terms of reliability and validity. Reliability is the degree to which a test consistently measures whatever it is measuring (Hayes, 1998). Initial internal consistency reliability was assessed on the data collected in the pilot test using reliability coefficient of Cronbach's alpha (Lattin et al., 2003).

Validity is the best available approximation to the truth of a given



proposition, inference, or conclusion. Validity is an essential criterion for quantitative and qualitative paradigms in terms of credibility, neutrality or Confirmability, consistency or dependability and applicability or transferability Lincoln and Guba 1985; Cohen et al 2000; Trochim, 2001; Patton (2002).

The researcher also did analysis to ensure that individual teachers receive data that are reliable. Generalization analyses were also performed to ensure that individual students received reliable data. In this study, different data collection techniques were used (i.e. interviews, and questionnaire) also meant to ensure validity. Additionally, triangulation was used to search for any convergence among multiple and different sources of information and form themes or categories in the study Creswell and Miller (2000). Although the size of participants in this research was small compared to the target population, it is expected that the data collected will be sufficient to give an overview of all target populations.

### **3.7. Data Analysis and Discussion**

To achieve the research objectives data needed to be collected through using a questionnaire method,. Data collected are entered and treated by using the Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics techniques such as frequencies, percentages, average means, standard deviations have been used to analyze and interpret the sample perceptions, and demographic characteristics.

In addition to that the questionnaire reliability and validity was examined by using Cronbach's Alpha coefficient, moreover, analysis of variances techniques such as (T-Test) was used to find if there are significant variations in learners attitudes towards using mobile devices in English language learning by gender and age. While descriptive and interpretive analyses will be used to analyze qualitative data gathered through interviews.



## Data Analysis, and Discussion

### 4.1 Introduction

In this chapter, data collected using different research instruments, are discussed and triangulated with each other, in order to pick up the research findings. The main objectives of this study are to determine learners' attitudes towards using mobile devices in the English Language from the perception of learners and teachers in the Departments of English within the Colleges of Education of three Sudanese Governmental Universities. It also aims to demonstrate the benefits of mobile learning in English language learning and identify the barriers obstruct English language learners from the use of mobile in English Language. In addition to that, the study will investigate teachers' attitudes towards using mobile in English language teaching. To achieve the research objectives data needed to be collected through

### 4.2 Sample of the study demographic characteristics:

The first sample of the study is (70) students segmented according to the following demographic characteristics include (age, gender, and specialization) as shown in the below table:

Table: 4 .1 Demographic characteristics of the sample (n=94) .

Demographic characteristics	Frequency	Percentages %
The distribution according to gender		
Male	40	41.1
Female	30	58.9
Total	70	100.0%
The distribution according to age		

to less 20 15- years	31	45.6
to 25 years 20-	39	54.4
Total	70	100.0%

Table 4.2 shows the sample of the study perceptions regarding using a mobile phone for educational purposes and its requirements.

Frequency	Percent %	
Have a mobile.1 phone		
Yes	80	88.9
No	10	11.1
Total	90	100.0%
Use a mobile.2 phone for educa- tional purposes		
Yes	77	85.6
No	13	14.4
Total	90	100.0%
Net at home.3		
Yes	79	87.8

### 4.3 Research Questions and Hypotheses:

his part of data analysis is mainly specified to provide answers to the research questions and hypotheses through the analysis of perceptions in concern with using a mobile phone for educational purposes. The students' answers are rated in frequencies & percentages (%) as well as means presented in tables (3-4-5), the mean (M) was calculated according to the five- scale (1 strongly disagree, 2 disagree, 3 uncertain, 4 agree, and 5 strongly agree).

Table 4.3 scale of the average mean value

1-to 1.79	Strongly disagree
to 2.59 1.8-	Disagree
to 3.39 2.60-	Not sure
to 4.19 3.40-	Agree
to 5 4.20-	Strongly agree

#### 4.3.1 Research Question one: What are the barriers that obstruct English language learners from using mobile in their learning process?:

Table (4.6) showed students' perceptions' regarding the barriers that obstruct

Strongly agree	agree	uncertain	disagree	Strongly disagreed	M	Ranking			
19	Lack of internet coverage in some classrooms deprives me of using mobile devices in the learning process	F	43	36	11	0	0	4.36	3
%	47.8	40.0	12.2	0.0	0.0				
20	My English Language teacher prevents me from using a mobile in the classroom	F	60	24	6	0	0	4.60	2
%	66.7	26.7	6.7	0.0	0.0				
21	The high cost of a mobile hinders me from using it in the classroom	F	33	34	14	9	0	4.01	8
%	36.7	37.8	15.5	10.0	0.0				

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22	The major and rapid development of mobile devices hinder my chances from using updated ones in the classroom	F	57	30	3	0	0	4.6 0	1
%	63. 3	33 3	3.3	0.0	0.0				
23	Inadequate of teacher knowledge about technology and experience with it limits my mobile usage in the classroom.	F	52	14	14	5	5	4.1 4	5
%	57. 8	15. 6	15. 6	5.6	5.6				
24	Small screen and memory size hinder my mobile usage in the classroom	F	47	30	7	5	1	4.3 0	4
%	52. 2	33. 3	7.8	5.6	1.1				
25	The unrestricted use of mobiles (by not being timetabled) in the classroom, hinders me from using one in the classroom	F	1	9	13	31	36	1.9 8	9
%	1.1	10. 0	14. 4	34. 4	40.0				
26	Short battery life and small and limited keyboard hinder my mobile usage in the classroom	F	34	41	9	3	3	4.1 1	6
%	37. 8	45. 6	10. 0	3.3	3.3				



27	Being easy to lose, misuse and get damage are some obstacles to using mobiles in the classroom	F	38	30	12	7	3	4.0 3	7
%	42.2	33.3	13.3	7.8	3.3				
Overall mean	4.01								

The results in table (4.6) illustrates responses of the sample of the study regarding the students perceptions concern with the barriers that obstruct English language learners from using mobile in their learning process , it was obvious from the statistics in the table, that the overall mean value was reaching (4.01), which indicated that the majority of the students sample of the study perceptions tend to agree that there are problems obstruct learners to use a mobile devices in their learning process .

The results in table 6, showed that one of the most important barriers that obstruct English language learners to use a mobile phone in their learning process is the major and rapid development of mobile devices hinder my chances from using updated ones in the classroom, as the mean value of the sample responses is reaching (4.60) supported by that there are 63.3% of the participants strongly agreed, while 33.3% do agree, whereas only 3.3% were not sure. furthermore, the results in table 6, showed that the second barrier that obstruct English language learners to use a mobile phone to learn English language, is that —My English Language teacher prevents me from using a mobile in the classroom” as the results revealed that there are 66.7% of the participants strongly agree, while 26.7% agree, whereas 6.7% were not sure.

Therefore, it could be concluded that the majority of the participants with (93.4%) do confirm that English language teacher is one of the most important barriers to use a mobile phone to learn English; this high response was supported by the overall mean value equal to (4.60). in addition to that the third barrier that obstructs learners of English language to use a mobile device to learn English, is the —Lack of internet coverage in some classrooms deprives me from using mobile devices

in the learning process as there are about 47.8% of the participants strongly agree, whereas 40.0% agreed, while 12.2% of the learners were not sure. Hence, it could be concluded that the majority of learners of English participated in this study do strongly believe that lack of internet coverage in some classrooms deprive some students of using mobile devices in the learning process. These high and positive responses are supported by the mean value (4.36).

the fourth most effective barrier that obstruct learners from using a mobile devices in learning English is the —Small screen and memory size hinder my mobile usage in the classroom this high response is supported by the sample responses as there are 52.2% strongly agree, while 33.3% were agreed, whereas 7.8% were not sure, where those with negative attitudes comprised 6.7% of the total sample of the current study. The sample responses regarding the effect of the small screen and memory size is a major obstacle that faces learners when using a mobile device in learning English, was supported by the mean value of the sample responses equal to (4.30). this indicated that majority of participants strongly agree that the 113 small screen and memory size are regarded as one of the most hindering barriers of using a mobile phone in English language learning process. Furthermore, when participants of the current study were being asked to express their thought regarding —The high cost of a mobile hinders students from using it in the classroom it was obviously observed there are about 36.7% strongly agree, while 37.8% of them agree, whereas 15.6% were not sure, where 10.0 were disagree. Thus, it could be confirmed that the majority of the students thought that the high cost of mobile hinders them using it in the classroom. This high positive response of the students was supported by the mean value equal to (4.01). As for responses regarding the statement —The unrestricted use of mobiles (by not being scheduled ) in the classroom, hinders me from using one in the classroom it could be seen that there are just 1.1% strongly agree, while 10.0% were agreed, whereas 14.4% stand at the crossroad, and those with negative perceptions comprised 74.4% in total, among 40.0% strongly disagree.

Thus, it could be seen that the majority of students sample of the study don't agree that the unrestricted use of mobiles (by not being scheduled) in the classroom prevents them from using a mobile phone for learning the English language in the classroom.

Therefore, in conclusion, and regarding the students attitudes concerning the most important barriers that obstruct students to use a mobile phone in learning English in the classroom, the most important barriers include:

- The major and rapid development of mobile devices hinder the students' chances of using updated mobiles in the classroom.
- English Language teacher prevents students from using a mobile in the classroom.
- Lack of internet coverage in some classrooms deprives students of using mobile devices in the learning process.
- Small screen and memory size hinders mobile usage in the classroom.

#### 4.3. 2 To what extends teachers are ready to use mobile in English

##### Language teaching?

Table 4.4 Perception of the student of mobile phones as learning tool integrated into class (n=70).

Strongly agree	agree	uncertain	disagree	Strongly disagreed	M	Ranking			
1	Using mobile a phone will increase my vocabulary	F	42	32	7	6	3	4.16	6
%	46.7	35.6	7.8	6.7	3.3				
2	Using a mobile phone will develop my writing style	F	38	36	5	9	2	4.10	8
%	42.2	40.0	5.6	10.0	2.2				

3	Using a mobile phone will motivate me to speak English fluently	F	42	31	8	9	0	4.18	4
%	46.7	34.4	8.9	10.0	0.0				
4	Using a mobile phone will enhance my English learning.	F	47	27	4	5	7	4.13	7
%	52.2	30.0	4.4	5.6	7.8				
5	The use of a mobile phone will help to build the relationship between me and my teachers	F	55	32	1	1	1	4.54	2
%	61.1	35.6	1.1	1.1	1.1				
6	Using a mobile device will help me to plan better for my learning	F	48	26	10	6	0	4.29	3
%	53.3	28.9	11.1	6.7	0.0				
7	Using a mobile device will help me in sharing ideas, opinions and homework	F	23	50	14	2	1	4.02	9
%	25.6	55.6	15.6	2.2	1.1				
8	Using a mobile device will help me brainstorming ideas about different topics	F	40	36	8	1	5	4.17	5
%	44.4	40.0	8.9	1.1	5.6				
9	Using a mobile device will help me to communicate outside the classroom	F	89	0	1	0	0	4.98	1
%	98.9	0.0	1.1	0.0	0.0				
10	Using a mobile device	F	21	47	16	5	1	3.91	10
	will assist me to record the lesson and send it to my classmates who were absent	%	23.3	52.2	17.8	5.6	1.1		
	Overall mean	4.25							

From the results in table (4.4) we noticed that the overall mean value of the participants attitudes regarding, how do students perceive mobile devices as a learning tool integrated into class and what are their attitudes towards mobile learning is reaching (4.25)) which indicated that the majority of the students sample of



the study strongly agree that the mobile devices can be used as a learning tool integrated into class.

The detailed analysis of the sample of the current study perceptions and attitudes regarding the usefulness of using mobile phone a learning method are presented accordingly as follows:

The findings in table 4 showed that the majority of participants with 98.9% strongly agreed that using a mobile device will help to communicate outside the classroom while only 1.1% was not sure. This high level of responses regarding the effectiveness of using a mobile device to help students to communicate outside classroom is supported by the mean value equal to (4.98).

The second most agreed with is that : The use of a mobile phone will help to build the relationship between me and my teachers, as there are about 61.1%102 of the participants strongly agree, while 35.6% agree, whereas only 1.1% were not sure, and the same percent for those who disagree, and strongly disagree. This it could be concluded that the majority of participants strongly agree that the use of a mobile phone will help them to build a relationship between themselves and their teachers. The third most rated item show the students' perceptions regarding the use of a mobile phone as learning tool integrated in the classroom is that|| Using a mobile device will help me to plan better for my learning|| as the are 53.3% strongly agreed, while 28.9% agree, whereas 11.1% were not sure, and only 6.7% disagree. This it could be concluded that the most participants hold positive perceptions regarding that the use of a mobile phone device will help them to plan better for their learning, this positive perception were supported by the mean value equal to (4.29). On the other hand, the students sample of the study confirmed that —Using a mobile phone will motivate them to speak English fluently|| as 46.7% strongly agree, whereas 34.4% agreed, while 8.9% were not sure, where 10.0% of them disagree. Thus, it could be concluded that the majority of participants positively rating that using a mobile phone will motivate them to speak English fluently. This high response was supported the mean value (4.18).

At the same time, when participants were asked to show their perceptions regarding the statement that "Using a mobile device will help me brainstorming ideas about different topics" the statistics in table 4, showed that 44.4% of the students sample of the study strongly agree, while 40.0% do agree, whereas 8.9% were not sure, where those hold negative attitudes comprised 6.7% of the total respondents. Thus, it could conclude that the majority of the students showed positive perceptions regarding that using a mobile phone will help them brainstorming ideas about different topics in learning to the English language. Regarding the students' perceptions the statements numbers: (1-4-2-7-10), it is noticed from table 4, that participants agreed with these statements, as their mean values for rating these statements successively come as follows:

- Using mobile phone will increase my vocabulary
  - Using a mobile phone will enhance my English learning.
  - Using a mobile phone will develop my writing style
  - Using a mobile device will help me in sharing ideas, opinions and homework
- Using a mobile device will assist me to record the lesson and send it to my classmates who were absent. Hence, based on the previous analysis of the sample perceptions regarding the use of mobile devices as a learning tool integrated into class, it is clear that the most important indicators that showed the effectiveness of using a mobile device as a learning tool to be integrated into class include: Using a mobile device will help students to communicate outside the classroom, the use of a mobile phone will help to build the relationship between students and their teachers, using a mobile device will help students to plan better for their learning, in addition to that using a mobile phone will motivate students to speak English fluently .

#### **4.3.3 Research Question Three: What are the benefits of mobile learning in English language learning?**

To examine the students' perceptions regarding the benefits of mobile in English language learning, results are presented in table 6 below:

Table (4.5) students' perceptions' regarding the benefits of using mobile in English language learning

Strongly agree	agree	Uncertain	disagree	Strongly disagree	M	ranking			
11	I think a mobile phone will assist my whole learning process	F	32	40	7	4	7	3.96	5
%	35.6	44.4	7.8	4.4	7.8				
12	I believe using a mobile device is only waiting time and efforts	F	9	7	0	26	48	1.92	8
%	10.0	7.8	0.0	28.9	53.3				
13	I think using a mobile device in English language learning will make me more productive	F	37	38	4	5	6	4.06	4
%	41.1	42.2	4.4	5.6	6.7				
14	I think a mobile phone will motivate me to learn English inside and outside the classroom.	F	41	34	2	10	3	4.11	3
%	45.6	37.8	2.2	11.1	3.3				
15	I believe learning through a	F	9	8	1	42	30	2.1	6

mobile phone will increase the cost of learning	%	10.0	8.9	1.1	46.7	33.3	6		
16	I believe using a mobile phone in English learning is very effective	F	48	27	3	7	5	4.18	1
%	53.3	30.0	3.3	7.8	5.6				
17	I believe using a mobile phone in English learning is a type of distraction	F	8	7	2	34	39	2.01	7
%	8.9	7.8	2.2	37.8	43.3				
18	I think using the mobile phone in English learning is an assistive tool for creativity.	F	47	28	2	6	7	4.13	2
%	52.2	31.1	2.2	6.7	7.8				
Overall mean	3.32								

The results in table (4.5) illustrates the sample of the study responses regarding the students perceptions in concern of benefits of a mobile in English language learning. It is noticed that the overall mean value reached (3.32), which indicated that the majority of the students' perceptions tend to be neither agree, nor disagree which indicated the existence of some variations between sample responses. One of the most important benefits of mobile learning is that the majority of students believe that using a mobile phone in English learning is very



effective, as 53.3% of the participants strongly agree, while 30.0% agree, whereas 3.3% were not sure, where those with negative attitudes comprised 13.4% of the total member of participants. Therefore, it could be concluded that the majority of the participants with (83.3%) have positive perceptions regarding using a mobile phone in English learning is very effective, as this high response was supported by the overall mean value equal to (4.18). Regarding the participants' perceptions in concern with the statement No.18 "I think using the mobile phone in English learning is an assistive tool for creativity" the results in table (4.5) showed that there are 52.2% of the participants were strongly agree, whilst 31.1% agree, whereas 2.2% stand at the crossroad, where 14.5% have negatively responding. Hence, it was noticed from the above statistics that the majority of the students with 83.3% confirmed that using the mobile phone in English learning is an assistant tool for creativity. The previous high response of the students was supported by a mean value equal to (4.13).

The third indicator showing the benefits of a mobile phone in learning English is that "I think a mobile phone will motivate me to learn English inside and outside the classroom." the results in table (5) revealed that there are 45.6% of the students strongly agree, whilst 37.8% agree, whereas 2.2% were not sure, where 14.4% were negatively responding. Therefore, in general, there were 83.4% of the participants positively agreed that they thought that a mobile phone will motivate them to learn English inside and outside the classroom, which was supported by the mean value reaching (4.11).

On the hand when participant were being asked to show their perceptions regarding the statement No.17 —I believe using a mobile phone in English learning is a type of distraction" the results in table (5) showed that there are 8.9% of the students strongly agree that they believe that using a mobile phone in learning is a type of distraction, while 7.5% agreed, whereas 2.2% were not sure, where those disagree comprised 37.8%, and those strongly disagree constitute 43.3%. Thus, it could be concluded that almost students with 81.1% percent ignored that using a mobile phone in English learning is a type of distraction.

The previous negative response was support by the overall mean value equal to (2.01) which indicated that students don't agree that using a mobile phone in English learning is a type of distraction. In last, when respondents were being required to specify their perceptions regarding the statement "I believe using a mobile device is only waiting time and efforts " it is clear that there are 10.0% of the respondents strongly agree, whereas 7.8% of them agree, while 28.9% disagree, where the majority with 53.3% strongly disagree. Therefore, the majority of the students with (82.2%) negatively responding that using a mobile device is only wasting time and efforts. The previous negative responses are supported by the mean value (1.92).

In conclusion to the sample of the study perceptions in concern with the benefits of mobile device learning in English language learning, it could be concluded that the most important benefits of mobile learning for learning English language include:

- I believe using a mobile phone in English learning is very effective.
- I think using the mobile phone in English learning is an assistive tool for creativity.
- I think a mobile phone will motivate me to learn English inside and outside the classroom.
- I think using a mobile device in English language learning will make me more productive.

Therefore, the previous results do confirm strongly that using a mobile phone has several benefits for learners.

#### 4.3.4 Testing Research Hypotheses

##### 4.3.4.1 Hypothesis three: Stated that "there is a significant association between using a mobile phone as learning tool integrated into the classroom and the benefits that the student acquired.

To test this hypothesis, Person's Correlation coefficient is run, and the result was shown as in the table below: Table 4.7, explains the correlation relationship between using a mobile device as a learning tool to be integrated into the classroom, and the benefits of using the mobile device.

Variables	Using a mobile device as a learning tool to be integrated into classroom	
Benefits of using a mobile phone in learning the English language.	Person's correlation	P-value
0.745**	0.00	

- indicated that correlation is significant at the (0.01) level. The results in the above table, showed the value of correlation coefficient between two variables using a mobile device as a learning tool, and the benefits of using a mobile phone acquired by learners, is reaching (0.745) at a significant level (0.01) which is less than the (0.01) significant level, this indicated that there is statistically significant association between using a mobile device as a learning tool to be integrated into classroom and the benefits of using it obtained by the students learners of English language.

#### 4.3.4.2 Testing Hypothesis one:

**There are various barriers that could obstruct learners to use a mobile device for learning the English language.**

To test this hypothesis, Person's correlation coefficient is run, and the results demonstrated in the table below:

Table 4.8 shows the correlation relationship between using a mobile device as a learning tool to be integrated into the classroom, and the barriers that obstruct the learners from using mobile devices.

Variables	Using a mobile device as a learning tool to be integrated into classroom	
Barriers obstruct using a mobile phone in learning the English language.	Person's correlation	P-value
-0.239*	0.023	

- indicated that correlation is significant at the (0.05) level. The results in the above table, showed the value of correlation coefficient between two variables using a mobile device as a learning tool, and the barrier that obstruct using a mobile phone for learning English, is reaching (-0.239) at a significant level (0.023) which is less than the (0.05) significant level. Hence, it could be concluded that there is an inverse correlation relationship between using a mobile device as a learning tool, and the barrier that obstruct using it in learning the English language. This means that there are various barriers that hinder the use of mobile devices in learning the English language.

## Findings, Recommendations and Suggestions

### 5.1 Introduction

This chapter concludes findings, recommendations and conclusions were drawn from this study. Also, it provides a suggestion for further studies. devices in all Sudanese Universities.

### 5.2 Research Findings

Based on data analysis, in the analysis chapter, the study concluded with the following findings:

1. The results showed that the majority of the students' participants of the study have a mobile phone, and the most of them said that they use it for educational purposes.
2. The results showed that the majority of students with 87.8% have internet access at home or at the university. Which is a good indicator supporting the use of a mobile phone for learning the English language.
3. With regard to the students perception towards the use of a mobile device as a learning tool to be integrated



into class, students have positive views towards using a mobile phone as a learning tool, and the most important of these indicators include: Using a mobile device will help students to communicate outside the classroom, the use of a mobile phone will help to build the relationship between students and their teachers, using a mobile device will help students to plan better for their learning, in addition to that using a mobile phone will motivate students to speak English fluently .

4. The results confirm strongly that using a mobile phone has several benefits for learners, among them it is very effective in learning English language, second it is an assistive tool for creativity, in addition to that it enables students to learn English inside and outside the classroom.

### 5.3 Recommendations

Finally, the researcher recommends the following:

1. The governments should make a policy statement along with financial support on a national mission on the introduction of ICT particular, mobile learning and its use in universities as well as strategic partnerships with industries, private sectors and non-governmental organizations (NGOs) to support this proposition.
2. Universities should have a clear strategy for implementing mobile-learning.
3. Workshops should be held for both students and professors to clarify the educational services of Mobile-learning tools.
4. Regular seminars and courses on the technological practices in education should be provided.
5. Mobile technology should be considered by curriculum designer and material developer.
6. Classes in tertiary education should be supported with an internet connection.

### 5.4 Suggestions for further research

This research targeted only two Sudanese Universities. More efforts are to extend this research to other Sudanese universities in order to gain a

complete and comprehensive vision of attitudes within higher education in Sudan.

Future road for more future studies such as:

1. The impact of mobile learning on students' achievements.
2. Students' readiness toward M-learning.
3. The use of mobile devices as communication tools in education and training.

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