

## The Use of Handheld and Mobile Devices for Language Learning

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### Abstract

Mobile and handheld devices have played a significant role in daily lives of people in general and of students in particular. Learning languages particularly English on mobile devices is no longer new for language learners. Mobile devices have become inseparable part of everyday lives and activities; this also applies to the field of foreign language learning. The use of handheld devices and mobile phones in foreign language pedagogy, such as English, has been the subject of discussions and debate for many studies and made the researchers and educators to explore the advantages and implications of mobile devices in their scope for efficient and energetic language teaching/learning.

This paper is looking at the advantages and disadvantages derived from using handheld and mobile devices for language learners as well as how to make an effective, appropriate and interactive use of mobile phones from the perception of Salahaddin University and Koya University students. Hence, most of the respondents agreed that mobile phones benefit them in learning English as a foreign language. Moreover, the applications and types of dictionaries will also be discussed in this study.

**Key words:** Handheld devices, Mobile applications, Mobile dictionaries, Mobile learning

### 1. Introduction

Mobile phones and other portable devices are increasingly interested and engaged novel consumers, offering various capabilities and enabling the users for more multifaceted practices. Thus, this affects social, cultural and educational practices and makes innovative settings for pedagogical opportunities and learning (Pachler et al., 2010; Demouy et al., 2015; Dashtestani, 2016; Cavus and Ibrahim, 2017, inter alia). The incorporation of such mobile devices into instruction and learning has been incremental, as pedagogues should realise how they can be efficiently utilised to assist a variety of learning and promote practical approaches and resources for (MALL) mobile assistant language learning (Kukulska-Hulme and Shield, 2008). Ogata and Yano (2005) have summed up and introduced the key features of mobile learning for example, user-friendliness, convenience, durability, interactivity, directness, and positioning of educational activities. M-Learning is defined by Sharples et al. (2007) as a 'process of coming to know through conversations across multiple contexts among people and personal interactive technologies' (p. 255) with the emphasis on settings. The technological tools support this procedure involves any type of handheld devices including smart phones, cell phones, iPods, iPads, and so forth. Laptops are usually not regarded as mobile in this field, although they have the feature of mobility to a certain degree.

Furthermore, M-Learning is recognised as highly supportive in a range of pedagogical circumstances, such as independent learning (Bull and Reid, 2004), cooperative learning (Hine, Rentoul and Spencht, 2004), constant learning (Attewell and Savill-Smith, 2004) and EFL learning as well (Liu, Yu and Ran, 2008). Although, there are numerous studies on the application of information communication technologies in EFL learning, research on MALL are still essential. Since mobile devices have many benefits and features. Practitioners are investigating the way of utilising them in assisting learning

languages (Huang et al., 2012). The principal features of mobile learning are acknowledged as having the possibility for learning procedure to be ubiquitous, spontaneous, informal and personalised. While learning via mobile and handheld gadgets might take longer time in comparison to using computers. Language learners feel a better sense of convenience in terms of time and place, in order to make use of their spare time to learn a foreign language whenever and wherever they are.

Nevertheless, there are noticeable drawbacks in using mobile technology for educational purposes too, for instance, limited text entry, constrained potential of showing visuals and small screen size (Albers and Kim, 2001). Regardless of such disadvantages, Thornton and Houser (2005) demonstrate that handheld and mobile devices can certainly be efficient gadgets for presenting language learning resources to the learners. In addition, they (ibid) reveal three cases on using mobile phones for learning. They conducted experimental studies on Japanese students by using email service to receive daily vocabulary lessons and exchange emails with each other and with their teacher through their mobile phones. Finally, they were asked to explain English idioms via their own video-capable mobile phones. The targeted students expressed their satisfaction with using mobile phones for vocabulary learning purposes and they stated that it was 'a valuable teaching method' (p. 217) as well as they positively valued its pedagogical efficacy (ibid) within the classroom setting. Another recent study by Dashtestani (2016) on EFL Iranian learners reveals the importance of MALL to improve learners' language skills and strategies (p.839).

This paper attempts to explore the efficient way of learning and teaching via mobile phones. This led to a change from teacher-centred learning to students-centred approach - that is giving more autonomy to the learners in their learning process through M-Learning.

It is worth mentioning that the expression mobile and handheld devices refer to mobile phones and tablets. Furthermore, for the space limitation and the similarities of both mobile and handheld devices only **mobile devices** or **mobile phones** are used throughout this paper.

### 1.1 Objectives of the study

The main objectives of this study are two folded:

1. To discover how students at both **Salahaddin University (SU)** and **Koya University (KU)** use mobile phones in their English language learning process.
2. To find out their perceptions, attitudes, and application usages to learn an L2.

### 1.2 Research questions

This study focuses on the use of mobile phones in academic settings and investigates their advantages and disadvantages in the second language (L2) process by two Kurdistan Region's university students. The major questions of this paper are:

1. What are students' perceptions about the use of mobile phones in their English language learning?
2. How do SU and KU students utilise mobile phones in their English language learning?
3. What types of mobile applications do university students use most in their L2 learning?

## 2. Mobile and handheld device applications for language learning and improvement

Smart phones and tablets such as iPhone, iPad, Galaxy mobile and its tablets are widely owned and used by students and educators for different purposes including for learning and teaching aims. Language learners now have more opportunities and facilities to learn a target language than before via using these mobile technologies, and there are now thousands of applications that can be downloaded on their phones and tablets for free or in a very low price in order to use them for learning different languages. These software and applications are commonly known as 'applications', and these language learning applications are highly helpful for specific language learning skills (Viberg and Grönlund, 2012; Cavus and Ibrahim, 2017), for instance promoting vocabulary learning, building speaking skills, enhancing phonetic comprehension, learning grammar points and more.

For language learners especially university students, the accessibility, convenience, and free or low price mobile applications, provide great opportunities for them to make use of them in their L2 process especially outside classroom. Few studies have been conducted on student' use of mobile applications and their views regarding the productiveness of utilising them in their L2 learning, and how these applications can promote and accelerate their learning procedure (Kim, 2012; Oberg and Daniels, 2013).

Expanding language learning practice beyond classroom setting is crucial, particularly where the duration of in-class language use is limited (Kennedy and Levy, 2009). In order to master an L2, informal frequently practicing of it is required (Kukulska-Hulme, 2012). In a setting where lacks direct contact with the target language for students, this indicates attempting to sustain a more constant contact with L2 by allocating chances and time for self-activating and rehearsal. In this sense, mobile technologies and their applications possess possible language learning accessibility for its learners (Kukulska-Hulme, 2012).

For the busy language learners and students, mobile applications provide them with a variety of learning materials that can be downloaded on their smart phones and utilise effectively at their convenience in various contexts and on the go. In this study various types of mobile applications are given as examples for L2 learning. Those applications incorporate firstly, an application for building conversational skills i.e. improving speaking and writing in English, secondly applications for vocabulary learning or translating through monolingual and bilingual digital dictionaries and thirdly, a group of applications in different languages of the world about learning the most 2000 common words in daily use.

### 3. Advantages of mobile phones in language learning process

The general advantages of M-Learning are many and varied. Studies have verified the ample advantages of mobile learning such as space saving, time saving, cost decreases, as well as the better chance for personalised and autonomous learning (Zhang et al., 2011).

Mobile devices have numerous advantages; they are highly portable, multipurpose, convenient, are instantaneously operational and they have little propensity for application problems. They are like boxes of resource tools that can be employed in educational institutions in general and in a language classroom in particular, for example a recorder, microphone, camera, a library of e-books and dictionaries and so on. Hence, it is not surprising that mobile phones have been adopted by schools for educational purposes globally. They are considered as user-friendly and convenient. They have been considered as tools to assist the learning procedure (Wong and Looi, 2010; Oberg and Daniels, 2013).

Most mobile technologies are valuable in education as management, arrangement and teaching facilitators for educators, as well as learning assistant devices for language learners. The following points are some of the major benefits:

- a) Interaction and communication: language learners can communicate and interact with their teachers and with one other through their mobile devices instead of sitting behind large monitors of desktop computers.
- b) Portability: mobile devices are lighter than books and much smaller than desktops and thus allow the learners to take notes or save data immediately into the mobile device irrespective of position either by voce recording, typing or taking pictures of the written data. In addition they can be utilised anytime anywhere for educational purposes especially for language learning.
- c) Cooperative: mobile devices make opportunities for several learners to work together on their tasks and assignments within or outside the classroom setting.
- d) In terms of accessibility and vacancy, it is much easier to provide numerous mobile devices for a classroom than the numerous desktop computers.

### 4. Disadvantages and challenges of mobile phones in language learning process

Despite those advantages mentioned earlier, several disadvantages have been contributed to M-Learning and the use of mobile devices in education process in general and learning process in particular

(Zhang et al., 2011; Miangah and Nezarat, 2012). ). The following possible disadvantages are identified by researchers:

- a) The small screen size of mobile phones and smart phones constrain the quantity and kind of information that can be shown.
- b) The majority of mobile phones have limited storage capacities.
- c) Regular recharging is required for mobile devices due to limited battery capacity.
- d) The written data entry is difficult in mobile devices because of having small keyboards.
- e) Owing to continuous development in mobile technologies, particularly for mobile phones, mobile devices may be soon become outdated.

Furthermore, some issues should be taken into account regarding the use of mobile phones for educational purposes. First, mobile phones have been used only as a supplement to traditional vocabulary learning, such as the use of dictionaries and books. Second, learning vocabulary through SMS technology of mobile phones has not been very effective in L2 process (Kennedy and Levy, 2008). Third, learning vocabulary via mobile phones only is said to be short-termed as Zhang et al claimed that words learned merely with a mobile phone cannot be recalled for long (2011).

Nevertheless, those mobile devices which are suitable for particular learning tasks are too costly for most of the learners to purchase especially in the developing countries. Therefore, instructors need to consider what types of mobile devices learners have, and then plan to choose or adapt learning materials well-matched to such tools (Kukulka-Hulme, and Traxler, 2005).

However, the advantages of M-Learning and the use of mobile devices for educational purposes have outweighed the disadvantages as most of the defects of mobile devices which have been mentioned above regarding small screen size, storage capacity, data entry and more, have now been solved to a large extent for instance in smart phones and tablet. .

## **5. Methodology**

### **5.1 Setting**

The current study is conducted at the English Departments of both Salahaddin University and Koya University, during the academic year 2017-2018.

### **5.2 Participants**

The target participants of this research paper consisted of 60 second-year students at the English Departments of SU and KU. Thirty participants from each university were chosen randomly without considering their age, gender, and language proficiency.

### **5.3 Research Tools**

For data collection and analysing research findings a questionnaire of ten statements was designed which was followed by two open-ended questions (that's to say 12 questions in total). The design of the questionnaire was based on two different ways of eliciting the data; which were statistical and verbal responses. Respondents are asked to indicate their scale of agreements or disagreements to measure their attitudes and perspectives of given statements regarding the use of mobile phones in L2 learning. Five-point Likert scale is used to measure the scale of agreement and disagreement. The questionnaire was distributed to a sample of 30 students at SU and 30 students at KU who they peruse their English language at their departments. The participants were not invigilated. They felt free to take the questionnaire home and return them back the day after. Almost half of the subjects completed the questionnaire inside the class. Further, the rest were able to complete at home and return them back the day after. In addition, SPSS (Statistical Package for the Social Sciences) program was used to analyse the data.

## **6. Results and analyses**

The quantitative data analysis given in this section is based on the students' responses to the questionnaire, while the qualitative analysis is based on students' responses to the open-ended questions. Two answer the three research questions, it is better to group the items related to each other.

### **6.1 Close-ended questions**

All sixty participants at both SU and KU were asked to show their scale of agreements or disagreements to measure their perspectives and attitudes of given statements about the use of mobile phone in L2 learning. Five-point Likert scale was used to assess the scale of agreement and disagreement as follows:

**1. Mobile phone has helped my overall language learning process and I believe its use is very effective.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	22	36.7	36.7	36.7
	Agree	30	50.0	50.0	86.7
	Neutral	4	6.7	6.7	93.3
	Disagree	4	6.7	6.7	100.0
	Total	60	100.0	100.0	

**2. I plan better for my language learning with mobile phone than without it.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	13	21.7	21.7	21.7
	Agree	27	45.0	45.0	66.7
	Neutral	12	20.0	20.0	86.7
	Disagree	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

These two above tables illustrate students' usage of mobile phones for overall and planning L2 learning. The data shows that 50% of the respondents agreed that mobile phone has assisted their overall learning process, while 6.7% gave neutral and disagreement responses.

In addition, 45% of the students agreed that mobile phones help them plan better for their L2 learning. In contrast, 13.3% expressed their disagreement to the statement.

**3. The use of mobile phones in language learning makes me more productive.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	11	18.3	18.3	18.3
	Agree	28	46.7	46.7	65.0
	Neutral	16	26.7	26.7	91.7
	Disagree	4	6.7	6.7	98.3
	Strongly Disagree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

**4. I find the use of mobile phone improves the language learning process.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	19	31.7	31.7	31.7
	Agree	29	48.3	48.3	80.0
	Neutral	7	11.7	11.7	91.7
	Disagree	4	6.7	6.7	98.3
	Strongly Disagree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

The table of question three shows a large number of respondents (46.7%) thought that the use of mobile phone in L2 learning makes them more productive, while 6.7% did not agree with the statement. Moreover, the table of question four indicates that 48.3% of participants have agreed that the use of

mobile phone improves their language learning process, whereas only 6.7% have disagreed with this idea.

**5. My vocabulary acquisition (learning) has increased because of text message are written in English.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	21	35.0	35.0	35.0
	Agree	22	36.7	36.7	71.7
	Neutral	10	16.7	16.7	88.3
	Disagree	6	10.0	10.0	98.3
	Strongly Disagree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

**6. My vocabulary acquisition (learning) has increased because of my mobile phone dictionaries.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	18	30.0	30.0	30.0
	Agree	22	36.7	36.7	66.7
	Neutral	9	15.0	15.0	81.7
	Disagree	10	16.7	16.7	98.3
	Strongly Disagree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

Regarding questions five and six, which are about vocabulary learning via mobile phones, 36.7% of participants seem to have a higher preference to vocabulary learning from English text messages and mobile phone dictionaries. However, only 10% of the respondents have expressed their disagreement regarding their vocabulary learning from English text messages on their mobile phones. In addition, 16.7% of students disagreed with the idea of learning vocabulary learning from their mobile phone dictionaries.

**7. My language learning motivation has been improved by the use of mobile phone in and outside the classroom.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	9	15.0	15.3	15.3
	Agree	28	46.7	47.5	62.7
	Neutral	13	21.7	22.0	84.7
	Disagree	8	13.3	13.6	98.3
	Strongly Disagree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

**8. Mobile phones help learners to learn independently and at their own speed.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	9	15.0	15.0	15.0
	Agree	33	55.0	55.0	70.0
	Neutral	13	21.7	21.7	91.7
	Disagree	5	8.3	8.3	100.0
	Total	60	100.0	100.0	

It is immediately clear from these two tables that 46.7% of students agreed that their motivation has improved through using mobile phones in and outside the classrooms. In contrast, only 13.3% of them disagreed with this notion. Following this, 55% of respondents agreed that mobile phones have helped them to learn L2 autonomously at their own speed, but merely 8% of students disagreed with this statement.

**9. Mobile phones are helpful for learning new words and checking spelling, parts of speech and pronunciation of vocabulary.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	33	55.0	55.0	55.0
	Agree	20	33.3	33.3	88.3
	Neutral	5	8.3	8.3	96.7
	Disagree	2	3.3	3.3	100.0
	Total	60	100.0	100.0	

**10. Mobile phones help me to improve my English speaking and writing skills.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	18	30.0	30.0	30.0
	Agree	23	38.3	38.3	68.3
	Neutral	13	21.7	21.7	90.0
	Disagree	3	5.0	5.0	95.0
	Strongly Disagree	3	5.0	5.0	100.0
	Total	60	100.0	100.0	

Significantly table nine shows that 33.3% of respondents have agreed mobile phones are actually helpful for learning new words, parts of speech, pronunciation, and spelling check of their vocabularies, whereas, only 3.3% of students have disagreed with the statement respectively.

Additionally, the latter table reveals that 38.3% of students expressed their agreement towards improvement of their speaking and writing skills through mobile phones, while only 5% did not agree with the idea that mobile phones were helpful to improving their speaking and writing skills.

It is important to state that the previous tables and data description may clearly answer the first and second questions of this study.

**6.2 Open-ended questions**

Regarding the two open-ended questions, various answers from both SU and KU students were elicited.

The first question was about using applications on the participants' mobile phones. Hence, twenty-seven out of sixty participants from both universities have mentioned using (Longman Dictionary) on their mobile phones which is English-English dictionary. Also, fifteen students from both universities have stated they use (LitCharts) application on their mobile phones which is a great source for literary genre. Moreover, more than half of them have written that they have English-Kurdish Dictionaries on their mobile phones like (Karzan, Rebin and Shwan dictionaries). This might be due to the fact that the majority of the students are Kurdish native speakers.

Furthermore, eleven of them have stated that they use Merriam-Webster Dictionary on their mobile phones, fifteen of them have also mentioned using Oxford Dictionary on their mobile phones, and eight of them have written (Dict Box) Dictionary. In addition, almost all of them have declared using other applications such as: English Grammar, Idioms, phrasal verbs, collocations, busuu, kids stories, hello talk and so on.

It is worth mentioning that more than thirty of them (out of 60 students) have written that they use social networking sites and other web pages, such as Facebook, YouTube, and BBC learning English, TED, Google translation and so forth.

It is to be noted that almost all applications mentioned above are a collection of free apps that can be downloaded onto smart phones and tablets and they are compatible with both iOS and Android systems. These apps are available in main languages with the same features and layouts, which offer great opportunities for L2 learners whatever language they wish to acquire and whenever and wherever they prefer to learn them.

Moreover, the second open-ended question was about whether they usually use English-Kurdish dictionaries or English-English Dictionaries. On one hand, twenty-six out of sixty learners usually use both of them. On the other hand, twenty-two of them often use only English-English dictionaries for learning an L2, whereas only ten of them use English-Kurdish dictionaries when they check vocabularies on their mobile phones. Overall, these two open-ended questions answer the third research question of the current investigation.

### **6.2.1 Dictionaries applications on mobile phones**

Dictionary applications are now widely available and used on mobile phones. Digital dictionary applications are great facilitators and convenient tools for language learners in their learning process. The latest generation of mobile phones and smart phones enable their consumers to access multimedia utilities such as recoding, listening and speaking ones. Having such facilities, the learners may download various types of dictionaries on their personal mobile devices including monolingual and bilingual ones with sound functions so as to learn the correct pronunciation of unknown or new vocabularies to be able to meet their L2 learning requirements. This study is in line with Miangah and Nezarat's (2012) work.

Language scholars have considered dictionary use a significant vocabulary learning strategy and dictionary itself is a valuable resource device for L2 learning in order to acquire the meaning of unfamiliar and new words as well as most of the other facets of word knowledge. This paper is in line with Cook's (2008) and Nation's (2008) studies.

## **7. Limitations and suggestions for further study**

Upon the research results of the current study, the advantages and drawbacks of mobile phone usage in language learning process, it can be stated that the researchers provided a number of limitations and suggestions that may deserve investigation:

First, the number of participants were limited (n 60) at two universities in Kurdistan Region. Therefore, it is suggested that a larger number of participants may give a clearer representation of the use of mobile phones in L2 learning among students. Second, the participants were only English major students (2<sup>nd</sup> grade), thus, future researchers can work on non-English major learners to explore their mobile phone usage in their L2. Third, this paper did not focus on specific mobile phone functions such as email, text messages, camera, audio recordings, and so on. Hence, future research studies can investigate on these areas. Finally, this research has taken on the perception and attitudes of students into consideration only. Therefore, further researches can take EL teachers, non-English major students' perceptions and attitudes into account.

## **8. Implications of the study**

Because of the importance of mobile phones in the process of L2 , it is highly recommended for teachers to encourage their students to use mobile phones especially applications and dictionaries for L2 learning both inside and outside classrooms. It is also crucial for students to use their mobile phones for macro and micro skills of language learning such as, writing, reading, listening, speaking, vocabulary,

pronunciation, spelling, parts of speech, phrasal verbs, idioms and so on. Lastly, it is extremely vital for educators, scholars, curriculum designers to integrate mobile phone applications in their L2 learning process.

## 9. Conclusion

In summary, this paper has tried to investigate the use of mobile phones in English language learning by SU and KU students in general. Language learning through mobile devices is really effective to learn an L2 via the use of mobile devices to make L2 learning more convenient that can happen anytime anywhere. The domain of learning becomes more flexible, more mobile, and more exciting with the use of multifunctional mobile phones if they are integrated into educational settings and language learning contexts.

Although mobile devices can play a significantly vital role in L2 learning it has also some disadvantages in educational context, such as small screen size, data entry difficulties, and low storage capacity. However, most of these deficiencies have now been solved to a large extent especially via smart phones and tablets which have larger screen sizes, more storage capacity and more learning opportunities particularly through numerous applications that can be installed on them. Finally, in light of the research results several suggestions have been recommended for further studies so as to evade the limitations of the current paper regarding the number of participants and other functions of mobile phones for other purposes.

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