An Investigation into the Effectiveness of MALL during COVID-19 in the Higher Education in Pakistani EFL Classrooms

Abstract:
The main aim and objective of this study is to understand the effectiveness of MALL during COVID-19 in the Pakistani context through the insights gathered from the views of EFL learners at the higher education level. The theoretical framework employed in the research is the Technology Acceptance Model (TAM) proposed by Davis (1986). The framework employed in the study is of TAM; its two factors were mainly focused, which are perceived usefulness (PU) and perceived ease of use (PEOU). The purpose of this model in the paper is to understand the behavior and attitude of the learners towards mobile technology. This research is mixed in its nature as it encompasses both qualitative and quantitative research designs. The data have been gathered from fifty students of the undergraduate and postgraduate level of English Department at the Women University Multan. The results of the study have revealed that the factors of PEOU and PU have been found to be working in this study as the learners' views about the smartphones indicate it.

Key Words:
Mobile Assisted Learning (MALL), Covid-19, TAM Model, Pakistani EFL Classrooms, Usefulness of MALL, Pandemic Situation Higher Education

Introduction
In the 21st Century, education is becoming more and more dynamic due to the widespread of globalization. The rapid growth in the field of technology has undoubtedly revolutionized the whole area of education. It has also encouraged the use of new and innovative ways of producing and exchanging information for the purpose of communication and socialization. Different devices and modes for learning and teaching in the field of SLA have emerged due to technological advancement such as smartphones, laptop, multimedia, iPod, e-learning, e-reading, video-calls etc. Now a student feels more confident in the use of technology not only for the purpose of education but also for socialization and entertainment.

Countries all over the world are now in a global crisis because of the complete lockdown due to the COVID-19 pandemic. This pandemic has now turned into one of the most difficult challenges for the world after World War Two. Like many other countries, Pakistan has also resorted to a complete lockdown from March to onward. It has been recommended from the health officials to avoid social distancing and face-to-face interaction during these days. Though the government is taking all the precautionary measures but still the society is in a devastating condition as the social and economic condition of Pakistan is deteriorating.

It is now a big challenge to save the students from the loss of their valuable time, and therefore the online educational system has been launched. In Pakistan, the government is encouraging the educational institutions to commence their teaching and learning in schools and universities through digital learning. In this depressing as well as challenging situation, distance learning through various technological devices can bore miraculous results if work properly.

Moreover, it is proposed in the study that as most of the students in Pakistan already possess mobile devices, it will be quite helpful to use MALL to integrate it in our educational system and to get the benefits out of it in this pandemic.

*Assistant professor, Department of English, The Women University Multan, Punjab, Pakistan.
Email: mamonakhan1234@gmail.com
*M.Phil Scholar, Department of English, The Women University Multan, Punjab, Pakistan.
Mobile-Assisted Language Learning (MALL)

Mobile learning is regarded as a relatively new and innovative field of research which is constantly evolving and rapidly changing with the passage of time. The research done on MALL is often considered as a subdivision of CALL, which is not only early established but also a widely recognized field of research. However, there are many significant distinctions between these two; MALL provides more mobility and autonomy to its users as mobile devices are portable and easy to handle than computers. M-learning has facilitated learning not only in the classroom but also outside the classroom, and it helps to accomplish learner’s motivation and enhance their interest by providing a new outlook to their learning environment. (Kim & Lee, 2016).

According to Traxler (2005), M-learning can be defined as the educational process, which is dependent on the use of modern technologies that are handheld and portable. In m-learning, various features of mobile and other portable technological devices like texting, audio & video recording and fast access to cameras and internet have not only enhanced the communicative skills of language learners but have also provided them with an opportunity to access authentic materials. Miangah & Nezarat (2012) are of the view that the MALL is usually concerned with the employment of smartphones in academic learning. It is totally different from the traditional classroom learning, and thus learners are not restricted or limited to remain in a classroom or use computers to achieve learning materials. As a matter of fact, MALL could be regarded as a flawless way for the learning impediments as in the matter of place and time. Learners can therefore feel more connected to the outside real-world experiments, and thus they can use their free time in a more productive way by learning certain language skills in it.

Statement of the Problem

In the 21st Century, m-learning is one of the prominent ways of teaching in all the fields of education as it has a great impact on the learning outcomes of today’s learners. In Pakistan, the situation is not quite different from other countries around the globe. Though it is a developing country, still the Government is trying its best to get complete benefit out of the use of technological devices in the educational institutions. Nowadays, Covid-19 has hit all the countries with a huge loss in all the fields of life. It is, therefore, a burning issue which the researcher has tried to investigate through the study that to what extent the learners at the higher level in Pakistan are willing to use mobile phones for language learning during their stay at homes.

Research Objectives

- To understand the perceptions of Pakistani EFL learners regarding the use of smartphones for language learning in Covid-19.
- To apprehend the effectiveness of MALL in language learning at a higher level during the lockdown.

Research Questions

This study will address the following research questions:

1. To what extent the Pakistani EFL learners are ready to integrate MALL in their learning during the lockdown?
2. What is the effectiveness of m-learning for the language learners at a higher level in Pakistan during the Covid-19?

Theoretical Framework

Technology Acceptance Model (TAM) is an augmentation of the Theory of Reasoned Action (TRA) which was proposed by Fishbein and Ajzen (1980). TRA’s aim was to understand and predict human attitudes and behaviors. Then for the limited and specific use of TRA another theory was formulated, which is known as the theory of Planned Behavior (TBA). From the modification of the aforementioned theories, Fred Davis in 1986
coined TAM which predicts and investigates the acceptance and rejection of modern technology. TAM has proved to be a reliable and valid model through its investigation and testing.

Figure 1: Theoretical Framework (TAM)

In TAM, perceived usefulness (PU) and perceived ease of use (PEOU) are the two important key factors which influence the views and perceptions of people regarding the adoption of technology and proved insight about the intentions of the users to develop new skills. (Davis, 1989) PU as Davis (1989) has defined it is the scope to which a person believes that by using a specific technique would ultimately improve his performance in a job or other responsibilities. According to Davis (1989), PEOU is the degree to which an individual considers his work more effortless through the use of a specific system. Therefore people are more apt to use the application which they perceive to quite easier to use or can improve their ability to perform certain tasks.

This model tries to provide a concise method to understand and predict the influence of the external variables like training, access, experience or quality of system etc. on people’s attitudes, beliefs and aims in using a particular technology. Durodolu (2016) has integrated TAM in his research to evaluate its variables for Information literacy. This study has provided a better understanding of TAM and has proved that it is an appropriate model for IT and for other technological-based studies. It has further identified that resistance is the main factor in the cause of failure in adapting new technology and in attaining information literacy (IL).

TAM has been used by a great number of researchers in understanding m-learning. Various successful researches have been done to increase its effectiveness by adding more variables in it. According to Chang et al. (2013) PU has a positive impact on the intentions of language learners regarding the usage of mobile devices. Moreover, if users think that the use of a specific technology will improve their effectiveness, then they will show more extrinsic motivation for the adoption of that technology.

Literature Review

There are various studies which indicate that though some developing countries in Covid-19 are implementing online learning successfully, they are on a smaller level. Many countries have limited technology because of which they are not ready for the online classes countrywide.

Allo, G.D.M (2020) in his article, has investigated the EFL learners’ perception regarding the online studies during the pandemic of Covid-19. The results of the study have shown positive views of the learners who are desperate to continue their studies through an online learning program. However, there are some issues like the availability of internet access and financial issues in this regard as well, which are needed to be tackled to make online studies successful.

Raheem & Khan (2020), in their study, have briefly discussed the concepts of distance learning and open learning. They have explored the strategies and skills of teaching, which could be effective in online teaching and learning at a higher level.

The research of Basilaia & Kvavadze (2020) has indicated that a fast transition to the online educational system seems a successful way of connecting the students to their education. The study has reviewed the
various available platforms in Georgia and has suggested that online studies through these platforms can bore fruitful results in this time of distress.

MALL has been widely researched and discussed for the last two decades. The reviews on it have indicated that language teachers have endeavoured and struggled for a long time to infuse m-learning and other ways of learning through technology into their everyday practices. (Stockwell, 2010). Related to it, in 2014, Lin did a meta-analysis on the use of computer-mediated communication (CMC) in Second Language Acquisition (SLA) which was based on 59 studies which were conducted in between 2000 to 2010. The results indicated that CMC could be considered to be a better alternative in the traditional educational classrooms of language. It was proposed that the teaching and learning tasks in the traditional classes should be modified in order to integrate new technology into it. (Park & Slater)

Soleimani, Ismail & Mustaffa (2014) in their paper have explored the responses of the post-graduate ESL students regarding their readiness and acceptance of MALL in language learning and teaching. They have utilized the technology acceptance model (TAM) for their research. Their results have indicated that there is a significant correlation among the variables of TAM and their implementation on MALL. Furthermore, they have proposed that teachers provide motivation and enhance the interest of their learners through the integration of technological device like a mobile phone in the classroom.

Fazeena et al (2015) have investigated the prospects of Sri Lankan school leavers and undergraduate students. The study was based on the activity theory and was conducted through the design-based research (DBR) methodology. Moreover, the mixed-method approach was used in the research. They have concluded that the scope of the usage of mobile devices among the students is quite satisfactory, and learners prefer audio lessons and content-based lessons on their mobile devices. Bezircilioğlu (2016) has done research on the usage of smartphones by pre-school students during classrooms and the viewpoints of both teachers and students concerning their use. The data were gathered from sixty students through a questionnaire. The results of the study indicate that the use of mobile devices in learning can make the learning process for teachers and students more motivating and productive.

Saidouni & Bahloul (2016) did their research to understand the attitudes and percepts of teachers and students regarding the use of MALL at a higher level in Algeria. The research is descriptive in nature, and the data were collected through a questionnaire. Their findings revealed that they have a positive attitude towards the use of MALL, and they consider it a potentially favourable approach for foreign language teaching and learning. Moreover, better pedagogical infrastructure is required in this regard.

A similar study was conducted on MALL by Park & Slater (n.d.) with the aim to investigate and highlight a typology of real-world tasks performed by the language learners in MALL in order to help in the development of the teaching tasks for ESL courses. Their research has provided valuable feedback on the application of mobile learning in their daily lives from teachers and students. Furthermore, the study has offered a typology of tasks based on the four language skills which can be developed to make language learning and teaching easier and more satisfactory.

Doan (2019)’s study has identified certain factors which can positively influence the intention of using smartphones by EFL learners through the theoretical framework of TAM by Davis (1989). The data were gathered through 348 survey responses from Vietnam’s university students. The results have indicated that perceived playfulness, perceived usefulness and self-management of learning have proved to have positive determinants of intention to use the mobile devices.

Ali et al (2019), in their recent study, have investigated the views of ESL learners in Pakistan concerning the integration of m-learning in English language classes. Their theoretical framework was based on TAM. The data were collected through a close-ended questionnaire from sixty students from six public sector colleges. Through their results, they have proved that the Pakistani students have a positive attitude towards the use of a mobile phone in learning the language. They have further noticed that this type of learning can provide learners with more motivation to study in collaboration.
Another valuable research on MALL in Pakistan has been conducted by Naz, Rasheed & Rasheed (2019). In their paper, they have tried to investigate and identify the role of smartphones in the development of the proficiency level of English language learners. The study was descriptive in nature, and data was collected through a mixed-method approach. The participants of the study were 480 students of B.S and M.A belonging to six Pakistani universities. As for the results, they concluded that overall all the students had shown a positive attitude towards the use of a mobile phone for learning English and it proved to have a significant effect on their communicative skills.

Through the extensive review of the literature above, it has been noticed that MALL is an effective way of learning, and numerous studies have been done to understand its significance in language learning. Even in Pakistan, there are several pieces of research has done on MALL but on different levels. However, in the scenario of Covid-19, it is important to understand whether Pakistani EFL learners are ready to integrate mobile learning in their language learning program. To my knowledge, no study has been done so far on the effectiveness of MALL in Covid-19 in the Pakistani background. Therefore, it can serve as the gap which the researcher has sorted out through the literature mentioned above.

**Methods and Materials**

The research design which has been exploited in this study is the mixed-method approach. It is because both the qualitative and quantitative researches have been conducted in it. A close-ended questionnaire comprised of ten questions and five-point Likert Scale was distributed through the random sampling method. In the end, an interview was conducted through the three open-ended questions. The population of the sample is comprised of the female undergraduate and postgraduate students of the English Department at the Women University, Multan.

The instrument through which the data were collected is Google form and interviews. In the first stage, fifty questionnaires were filled by the participants through the Google forms, which were sent via WhatsApp. Then three interview questions were collected from the ten students to gather some qualitative data apart from the quantitative data. As this research has been conducted in the lockdown, so the researcher had to face some problems in the collection of the data as well. Though there were no time constraints still, it was quite a challenging situation, and the participants were in trauma, they posed a bit difficulty in collecting the data from them.

**Data Analysis**

In the process of data analysis, first of all, the data was processed, labelled and categorized. The simple descriptive statistical analysis was performed on SPSS, and findings are displayed in the table. The data collected through the interviews are analyzed qualitatively and presented in the form of themes.

**Data Analysis of the Google Forms/Questionnaire**

The quantitative data collected through Google forms were processed and coded. The codes assigned to the scale are as follow: Strongly agree: SA, Agree: A, Neutral: N, Strongly disagree: SD and Disagree: D. Following is the summary table of analysed data collected through

| S. No | Categories                                      | SD | D  | N  | A  | SA |
|-------|------------------------------------------------|----|----|----|----|----|
| 1.    | Portability/Convenience in handling             | 4% | 14%| 10%| 46%| 26%|
| 2.    | Preference of mobiles on other digital devices. | 14%| 12%| 24%| 38%| 12%|
| 3.    | Role of mobile in Motivation for e-learning     | 14%| 18%| 18%| 40%| 10%|
| 4.    | Learning through mobile apps                    | 10%| 18%| 18%| 44%| 10%|
| 5.    | Problems in m-learning                         | 6% | 6% | 14%| 28%| 46%|
| 6.    | Assistance in communication and information exchange | 20%| 10%| 10%| 38%| 22%|
| 7.    | Improvement in the effectiveness of e-learning | 12%| 16%| 22%| 30%| 20%|
Majority of the respondents have shown their inclination towards the idea that mobile phones are handy and are user friendly. The cumulative responses of agreeing and strongly agree are 72% which is more than the other three types of responses. It shows that the EFL students in Pakistan are more comfortable with the use of their mobile devices. However, the other responses of disagreement and neutrality cannot be totally ignored as the accumulated result of disagreements is 18% and the rest of the 10% has remained neutral which narrates that there are still some problems regarding the portability and easiness of the mobile devices which the learners are facing.

The respondents showed their views in both agreement and disagreement with the given statement. As learners nowadays have to use mobile devices for learning purposes, it was inquired from the respondents whether they prefer mobile phone on computers or not. The results do not show a huge difference between the agreement and disagreement as the accumulative result of the agreement is 50%, and the result of disagreed ones is 26%. Moreover, 24% of respondents have remained neutral. It makes it clear that half of the population does prefer mobile phones on the computer, but the other half feels comfort in either using both type of devices or they use computers most of the time for learning purposes.

In response to another question regarding the, it is again half of the population who feel motivated and inspired due to the use of mobile phones for language learning in Covid-19 as the accumulative result of the agreement is 50%. It demonstrates the idea that the English language learners in Pakistan are now feeling more motivated to learn language through mobile phones during Covid-19 crisis. Their positive attitude towards the employment of technological devices in learning might provide great success in their academic life. However, the situation does not seem that stable because 32% of respondents have disagreed, and 18% have remained neutral in this regard.

The respondents in the category no. 4 have responded both positively and negatively according to their preferences in this regard. The accumulative result of the agree responses is 54% which shows that more than half of the population is getting benefits out of various apps on their mobile devices during their stay at homes in the lockdown. Some respondents have shown their disapproval regarding the use of mobile apps and their accumulated population is 28% which is more than half of the agreed population. However, 18% of learners remained neutral which shows their confusion or inability to use their mobile phones properly for.

In response to Q no. 5, the findings narrate one of the biggest challenges which we are facing in the integration of mobile learning in our academic area. Most of the students have agreed with the statement, and their accumulated result is 74% which is quite high. It has provided us with a deep insight into how much difficulty the learners are facing in their use of mobile phones for language learning. In Pakistan, this issue is quite prominent as there are problems which the learners have to face like poor internet connection and time-management. The remaining population is quite short in numbers, i.e. 12% in disagreement and 14% who maintained their neutrality in this regard.

The data also indicates that the accumulative result of the agreed respondents is 60% which is more than half of the population. It shows that in the learners’ view, mobile devices have assisted them in better communication both with their teachers as well as their class fellows. The most significant purpose of the mobile device is to accommodate better communication for its users, and here learners are getting benefit out of it in their learning process. However, the accumulated result of the disagreed respondents is 30% which shows that some of the learners are facing problems in having smooth communication with others.

In the results of table 07, it has been shown that half of the population has responded in an affirmative manner as the accumulated result of the agreed respondents is 50%. Though it’s not quite a satisfactory response in this regard as 28% population has disagreed accumulatively but still 50 percent respondents have indicated that their language learning has been positively affected by the use of mobile phones which is a
positive sign. Moreover, 22% respondents have remained neutral, which shows a sense of hesitation in the learners regarding their own capability of language learning and the impact of mobile phone accordingly.

In response to another question, the respondents who have favored the use of mobile devices in their ubiquitous learning are 60% of the accumulative population. By ubiquitous learning, we mean that the type of learning done without the specification of any particular time and space so that the learner could learn anytime anywhere. Mobile phones have assessed the learners’ mobility and thus have a good effect on their learning processes. Only 26% of respondents have disagreed accumulatively. 14% of respondents have remained neutral, which shows that they are also not in complete opposition to the given statement but might be facing some issues regarding the ubiquitous learning through mobile phones.

The data also indicates that the responses of the participants are quite varying concerning the improvement of their academic performance through m-learning. The accumulative result of the agreed respondents is 50% which is half of the population. It seems to indicate that the Pakistani EFL learners are getting huge benefits out of their use of smartphones for educational purposes. However, 26% of respondents have shown disagreement as they have not found them effective in their learning process. The remaining 24% has remained neutral as might not clear about the impact of mobile phones on their learning.

The responses have provided a new view of the learners’ readiness and willingness about the use of smartphones for their academic purposes. Results show that 56% of respondents have agreed accumulatively as they are willing to use smartphones for learning. It’s a good sign as this trend of academic learning through mobile phones is getting more popular in developing countries like Pakistan. Learners’ readiness might bore fruitful results in this regard. 28% respondents have disagreed as their accumulative result indicates. Their disagreement can be because of the problems they are facing in m-learning. Moreover, 16% of respondents are still in neutrality and flux about their willingness for its use.

Data Analysis Interviews
The interviews were recorded and transcribed after careful listening of the recordings. Following the thematic approach, the data have been coded, categorized and extracted themes.

Role of MALL for Pakistani EFL Learners During COVID-19
All of the respondents are of the view that mobile learning is playing a crucial role in their language learning, especially during Covid-19. They believe that in this time of crisis, mobile devices are helping them to remain in contact with their teachers and thus with their studies as well. It has provided them with an easy solution for distance education. Some of them have highlighted the benefit of ubiquitous learning as one of the most important factors of MALL and that now they can use their time and energy without even getting out of their homes.

Perceptions about MALL
The views of the respondents regarding the ease and difficulty present a similar pattern for analysis. Most of them have accepted the fact that mobile phones have provided them quite ease and comfort because of easy access and learning opportunities even during the quarantine. However, there are some problems as well, which have made mobile learning in the Pakistani context to some extent, less effective. The most common issue which the EFL learners are facing in their use of mobile is the poor internet access, and it sometimes proves to be a real challenge for these students. Some other problems are health issues (eye strain) and lack of expertise.

Reasons to Switch to MALL during Lockdown
All of the responses to this question indicate that Pakistani EFL learners are eager to use mobile devices for educational purposes. They are motivated because now their educational process is ongoing through the virtual classrooms, and thus they have been able to use their time properly even in Covid-19. They feel comfortable in
using mobile devices, and this thing motivates them. Their connection with their teachers and friends is also another important factor which urges them to use mobile phones for learning during the lockdown.

**Results and Discussion**

MALL is certainly an innovative way of teaching and learning in every field of education. In this study, the efficiency of the MALL in the Pakistani EFL context during the Covid-19 was being investigated. The framework employed in the study TAM; its two factors were mainly focused, which are PU and PEOU. This model was mainly used in the paper to understand the behavior and attitude of the learners towards mobile technology. As the learners’ perspective was the target of the study so much so that the learners have shown an overall good and motivating response regarding their use of cell phones academically.

Davis (1989) was of the view that people usually use some technology because of the natural motivation they get due to its benefits and rewards. As for the perceived usefulness (PU), 50% of the respondents have accepted that m-learning has improved their language learning performance during the Covid-19 and therefore, 56% have shown their willingness for the use of mobile devices for academic purposes. Motivation is an important factor in education which can promote more vitality to learning and teaching processes in unpredictable ways Pintrich & Schunk (2002). Mobile learning has provided the learners infinite opportunities for productivity and connectivity in learning, Lunsford (2010). It shows m-learning has motivated them to manipulate technology for the learning purposes as respondent #01 said that

*My motivation for using a mobile phone during lockdown is that at least we are in touch with our teachers and are in the learning phase with them. So instead of wasting time while waiting for the Covid-19 condition to get better, we should keep on the struggle by using phones and different apps.*

Their perceptions of m-learning have been urged because of its easy access. Nanthida (2011) argued that the benefit of usability and enjoyment perceived by the users about a technological system could influence their views about its ease of use as respondent # 02 said,

*It is easy to learn language through mobile devices during lockdown. Language is accessible for learners through mobile phone.*

When people consider something as effortless and free from complexity, then they are more prone to its use Davis (1989). To consider the factor of perceived ease of use (Peou), 50% of the respondents have preferred mobile phones on computers because it is portable and easy to handle and this view has also been shared in 2007 by Stockwell that students prefer mobile on the computer because of its benefits of being convenient and portable. Huang et al (2012.) have also highlighted the fact that m-learning is convenient because of its prominent characteristics like natural, unprompted and ubiquitous learning. Learners’ positive perception for the use of mobile phones is also because of its benefit of distance learning. In this scenario, they can take their classes on mobile phones anytime and anywhere.

Moreover, the learners are also facing some difficulties in their use of mobile phones like poor internet connectivity, lack of expertise and eye strain. Thoronton and Houser (2005) were of the view that mobile screens can be a hurdle in the learning process because of its size, and Respondent # 03 has expressed the same view:

*I'm not habitual of giving too much time to my mobile phone or sitting in front of the screen for too long... But in this current situation, I'm bound to use screen or mobile phone for learning which I find it tiresome as well as annoying. This makes my headache, and my eyes get tired too soon.*

**Another Respondent Claimed**

*Yes, I do face difficulties, but it is mostly because of internet connection and also lack of expertise.*

The factors of Peou and PU have been found to be working in this study as the learners’ views about the smartphones indicate it. They are trying to use it and to learn its rightful use to integrate it into their language learning. They are positive about the use of apps to improve their knowledge of the English language. The use
of various apps on mobile phones can increase the effectiveness of communication skills in English learners Naz, Rasheed & Rasheed (2019). Nowadays, in Covid-19, the use of smartphones for the purpose of language learning is providing more autonomy to the learners. Kukulska-Hulme (2018) is of the view that mobile devices have provided more flexibility in the learning process as now the learners are becoming more independent in learning, and it sometimes seems to be even out of the control of the teacher.

Thus through the use of TAM it has been analyzed that the attitudes of the learners have been affected due to their perception of the ease and comfort in using mobile phones. To some extent, they can handle it properly and with ease. Though they are facing the issues of internet connectivity and lack of expertise, they are still eager to use this technology if the issues are resolved.

**Conclusions and Recommendation**

The overall learner's attitude towards MALL is quite encouraging and positive. The study has identified a potential in the learners regarding the use of mobiles for language learning as they perceive it as an easy and accessible source of learning in this Covid-19 crisis. That is why most of them are willing to use smartphones for educational purposes. Their readiness is an encouraging factor which has proven the framework of TAM as a good option to measure the behavior of the technology users. However, in Pakistan, both the students and teachers are in dire need of proper training in the field of mobile technology to get better benefits out of it. Other researchers can do further research to find out the factors which are causing difficulties in the integration of MALL in virtual EFL classrooms during the lockdown and how we can make MALL effective in learning and teaching the English language in Pakistan. Moreover, the problems which the learners and teachers are facing in the use of mobile phones for language learning can also be further analyzed in the Pakistani context. Further research, this study can be replicated for the other educational levels in Pakistan, and the perceptions of teachers should also be added in it.
References

Ali, M. M., Mahmood, M. A., Anwar, M. N., Khan, L. A., & Hussain, A. (2019). Pakistani Learners’ Perceptions Regarding Mobile Assisted Language Learning in ESL Classroom. International Journal of English Linguistics, 9(4).

Allo, M. D. G. (2020). Is online learning good in the midst of Covid-19 Pandemic? The case of EFL learners. Jurnal Sinestesia, 10, No. 1. Retrieved from: https://www.researchgate.net/publication/34081584

Basilia, G., & Kavvadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. Pedagogical Research, 5(4), em0060. https://doi.org/10.29333/pr/7937

Bezircilioğlu, S. (2016). Mobile-Assisted Language Learning. Journal of Education and Instructional Studies in the World. 6 Special Issue 1 Article: 02 ISSN: 2146-7463

Chang, C. C., Liang, C., Yan, C. F., & Tseng, J. S. (2013). The impact of college students’ intrinsic and extrinsic motivation on continuance intention to use English Mobile Learning Systems. The Asia-Pacific Education Researcher, 22(2), 181-192. doi: 10.1007/s40299-012-0011-7

Davis, F. D. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly. 13, 3

Doan, N (2018), Influences on Smartphone Adoption by Language Learners. Retrieved from: http://callee.org/journal/19-2/Nguyen2018.pdf

Durodolu, O.O. (2016). Technology Acceptance Model as a predictor of using information system’ to acquire information literacy skills. Library Philosophy and Practice (e-journal). 1450. http://digitalcommons.unl.edu/libphilprac/1450

Fazeena et al (2015), A Theoretical Approach to initiating Mobile Assisted Language Learning among school leavers and University Students of Sri Lanka. Australasian Conference on Information Systems.

Kukulska-Hulme, A. (2018). Mobile-assisted language learning. In: Chapelle, Carol A. ed. The Concise Encyclopedia of Applied Linguistics. Wiley. Retrieved from: http://oro.open.ac.uk/42093/

Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning. International Journal of distributed and Parallel System, 3, 309-319

Nanthida J. B. (2011) Altering User Perceptions of Applications: How System Design Can Impact Playfulness and Anxiety.

Naz, Rasheed & Rasheed (2019). The Role of Smartphones in Learning English: A Study of Learners’ Perspectives. International Conference on Research in Humanities. London. Retrieved from: http://www.dpublication.com/wp-content/uploads/2019/03/ICRH-1-232.pdf.

Park, M & Slater, T. (n.d) A Typology of Tasks for Mobile-Assisted Language Learning: Recommendations from a Small-Scale Needs Analysis. Retrieved from: https://files.eric.ed.gov/fulltext/EJ1052104.pdf.

Pintrich, P. R., & Schunk, D. H. (2002). Motivation in education: Theory, research, and applications. Englewood Cliffs, NJ: Merrill/Prentice-Hall.

Raheem, R. B & Khan, A.M.(2020). The Role of E-learning In Covid-19 Crisis. International Journal of Creative Research Thoughts (IJCRT) 8, Issue 3.] ISSN: 23202882

Saidouni, K. & Bahloul, A. (2016). Teachers and Students’ Attitudes towards Using Mobile-Assisted Language Learning in Higher Education. Arab World English Journal (AWEJ) Special Issue on CALL No.3

Stockwell, G. (2007). Vocabulary on the move: Investigating an intelligent mobile phone-based vocabulary tutor. Computer Assisted Language Learning, 20(4), 365–383. https://doi.org/10.1080/09588220701745817

Thornton, P & Houser, C (2005). Using mobile phones in English education in Japan. Journal of Computer Assisted Learning 21, 217-228.

Traxler, J. (2005). ‘Mobile Learning: It’s here, but what is it?’ Interactions, 9(1), University of Warwick.

Twarog, M. & Pereslenyi-Pinter. 1988. Telephone-Assisted Language Study and Ohio University: A report. The Modern Language Journal, 72, 426-434.
Appendix

Kindly tick the write answer according to the scale below:

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Questionnaire

- I find mobile phone portable and thus easy to handle.
- I prefer mobile phones for language learning than computers during lockdown.
- I feel motivated to learn language through Mobile devices during Covid-19.
- I prefer to learn the language through various apps on mobile during my stay at home because of Covid-19.
- I often face some difficulties during my language learning on mobile devices at home like poor internet connection or time management etc.
- It is quite easy to exchange information and to communicate with my teachers and class fellows through mobile devices during Covid-19.
- Mobile devices have made education quite effective for me even during the Covid-19 lock-down.
- The availability of mobile devices during the Covid-19 has facilitated my language learning without the limit of time and space.
- Using the mobile phone has improved my language learning performance even during lock-down.
- I am willing to use mobile phone during Covid-19 for educational purposes.

Interview Questions

- What in your view is the role of Mobile learning for Pakistani EFL students in Covid-19?
- Have you faced any difficulties or you feel comfortable in using mobile phones for learning purposes?
- What is your motivation or cause of willingness to use mobile phone for language learning during lock-down? (e.g. self-management or easy to learn etc.)