Mobile-Assisted Language Learning (MALL): Students’ Perception and Problems towards Mobile Learning in English Language

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Abstract. Mobile-Assisted Language Learning (MALL) is the latest learning way in the language education where applications or websites are used to facilitate students learning activities. Mobile phone has been studied years by researchers in its connection with education-related activities. This research will focus on its main purposes, they are: 1) students’ perceptions in using mobile phone in English language learning classroom activities; 2) the problem of using mobile phone to support classroom activities, especially in English language learning. The method of the research was quantitative method which used 70 students as research object. The data were collected through a 5-point Likert Scale questionnaire. The research found; first, the students’ majority had positive perception on the usage of MALL to support classroom activities, especially in learning English language. Second, the problem in internet connectivity is the biggest problems that students faced in terms of using MALL in English language classroom. But, It is hoped that MALL will be used as one of the teaching aids that could assist students in learning English as a Foreign Language (EFL) more effectively.

1. Introduction
In the modern society culture, people live in really interesting days regarding to the technology. They have characteristic as digital generation in which they accustomed to the multitasking, active, connected, and comfort learning environment. In line with the development of technology, mastering English as a second and foreign language become more essential in national and international communication. So that, it is very prominent to provide convenient environment and learning atmosphere for students to learn English. In addition, the improvement of various learning materials and methods also has high position to be concerned. It is important to have more facilities or new way to support students to learn English in a different way. Due to its accessibility and universality, Mobile-Assisted Language Learning (MALL), as an approach to learning English as foreign language is considered in the learning environment as a promising technology for teaching a language[1]. MALL is associated with the usage technology especially mobile phone technology in the field of language learning. Unlike learning in the conventional
In MALL, the students are no need to sit in the class or at a computer to get learning materials. MALL comes up to help learners learn in new ways, it is about how the ability of the students to learn anywhere and anytime. Students have chance to study a second language in a classroom or specific area but they also possible to learn it using mobile phone when they desire and where they are. This learning tool provide many advantages, such as the easiness of access resources, user friendly, low cost, etcetera. These factors allow language learners to access learning materials and communicate with their teachers or facilitators and peers with no time and space constraints. Because of its portability, mobile technology is a growing trend in a wide range of activities in modern life such as: communication, entertainment, banking and education. One of the reason why mobile devices more accessible to all type users compared to computers is low cost. In fact, MALL can be considered an ideal solution to language learning barriers in terms of time and place.

The usage of technology, especially mobile phone in classroom activities can help learning aims, for instance assisting all stages of difficulty in learning, developing learners’ achievement and reaching learners that would not otherwise have the chance to participate in education. Many learners will become more able to take advantage of these options, but they will still need help. Because of there has been a lot of research on the use of mobile phone in English language learning and due to the increasing interest of students in practicing skills of English language, so the researchers are interested in conducting a research based on this behavior. The main contribution of our work is researchers try to investigate the students’ perceptions and problems in using mobile phone for English language learning.

2. Methods

This study used quantitative method. The method was aimed at investigating students’ perceptions and experiences on using mobile phone at classroom activities. To collect data, the researchers applied questionnaire. In descriptive research method, a minimum population of 10%, for a relatively small population of at least 20%, while for a correlation study a sample of 30 respondents is needed. The participants in this study were the 100 (a hundred) registered students in English Major at Bina Sarana Informatika University who had mobile phone. In this study, researchers distributed 100 questionnaires but only 70 questionnaires were returned. In the first part of the questionnaire, it explored students’ perceptions toward MALL usage to support learning activities. The second part of this questionnaire, it concerned on the problems toward the use of mobile phone as the tools in language learning. These questionnaires divided in two aspects with 20 items, perception aspect contains 10 items and problems aspects contains 10 items. The 5-point Likert Scale was used for the collection of quantitative data and the category was put the items ranging from Strongly Agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1.

Data analysis from questionnaire classified in the form of a rating scale. It was calculated to find out standard deviation and mean. Then, it is measured based on criteria by Best as follows:

| No | Students Level | Mean  |
|----|----------------|-------|
| 1  | Lowest         | 1.00 ≤ x ≤ 1.50 |
| 2  | Low            | 1.51 ≤ x ≤ 2.50 |
| 3  | Moderate       | 2.51 ≤ x ≤ 3.50 |
| 4  | High           | 3.51 ≤ x ≤ 4.50 |
| 5  | Highest        | 4.51 ≤ x ≤ 5.50 |
However, the bulk of the statistical analysis was performed using IBM SPSS Statistics. Then, to answer research questions, the data gathered will be analyzed qualitatively. Data from questionnaire also will be described, categorized and interpreted. The statistic used for analyzing the data was mean and standard deviation which analyzed using a computer program.

3. Result and Discussions

3.1. The Demographic Data

Table 2 below shows the demographic of participants regarding to their gender and age.

|                | N  | Percentage |
|----------------|----|------------|
| 1. Gender      |    |            |
| a. Male        | 29 | 41.43      |
| b. Female      | 41 | 58.57      |
| Total          | 70 | 100        |
| 2. Age         |    |            |
| a. 16 - 20     | 31 | 44.29      |
| b. 21 - 25     | 39 | 55.71      |
| Total          | 70 | 100        |

From the table 2 above, it is clear that there were 41.43% male and 58.57% female participants. It also indicates that the dominance age of the participants was between 21 and 25 years (55.71%). The presence of various participants gives positive impression because they have diverse gender and age.

3.2. Validity and Reliability of the Questionnaire using the Cronbach’s Alpha ($\alpha=5\%$)

In order to check the validity and reliability of the data, the validity and reliability test was done using Cronbach’s Alpha. The criteria of validity and reliability used the following formula:

$$r_{test} \begin{cases} \leq r_{table} \Rightarrow \text{accept } H_0 \\ > r_{table} \Rightarrow \text{reject } H_0 \end{cases}$$

The statistical hypothesis formula for validity test:

$H_0 : \rho \leq 0$; there is negative relation between each items score to the total perception variabel.

$H_1 : \rho > 0$; there is positive relation between each items score to the total perception variabel.

The statistical hypothesis formula for reliability test:

$H_0 : \rho \leq 0$; there is negative relation with the variation in perception variable.

$H_1 : \rho > 0$; there is positive relation with the variation in perception variable.

Below are the tables that show the validity and reliability in students’ perception and problems.

|                | Cronbach’s Alpha | Spearman & Brown |
|----------------|------------------|------------------|
| Validity       | 0.729            |                  |
| Reliability    | 0.644            | 0.235            |
From the table 3 above, it showed that the validity of students perception instruments with 
\( r_{test} = 0.729 > r_{table} = 0.235 \) which meant reject \( H_0 \) or in other words, there is positive relation 
between each items score to the total perception variabel. From all the questionnaire items 
tested, all items had \( r_{test} > r_{table} \), which meant that all were valid for the perception variable. 
So it continues to reliability test. As shown in table 3 above, it also proved that \( r_{test}=0.644 > r_{table} = 0.235 \), it means the items studied are reliable. Below is the table for validity and 
reliability of students' problems questionnaire:

| Item No. | Items                                                                 | \( \bar{x} \) | S.D  | Level |
|----------|----------------------------------------------------------------------|----------------|------|-------|
| 1        | Mobile phones provide opportunities learners to study English without place and time constraint. | 4.30           | 0.76 | High  |
| 2        | Mobile phones provide opportunities learners to study English language learning material whenever I need. | 4.49           | 0.53 | High  |
| 3        | The important factor of mobile devices is portability.                | 4.43           | 0.73 | High  |
| 4        | Time-efficient is the benefit of using mobile phones for English language learning. | 4.43           | 0.62 | High  |
| 5        | Different English language skill can be learned using mobile phones. | 4.43           | 0.62 | High  |
| 6        | Cost-effective is the reason why English language learning use mobile phone. | 4.41           | 0.57 | High  |
| 7        | Mobile phone usage will facilitate English Language Learning activities. | 4.16           | 0.55 | High  |
| 8        | Interactive English language learning activities is supported by using mobile phone. | 4.03           | 0.77 | High  |
| 9        | Mobile phones can connect to the internet at anywhere and anytime.    | 4.23           | 0.87 | High  |
| 10       | A number of applications and software in mobile phones is beneficial for learning English language. | 4.24           | 0.52 | High  |
| TOTAL    |                                                                       | 4.31           | 0.65 | High  |
Results of the questionnaire study. Based the results show on the table 5. above presented that the average mean of students’ perception toward the use of MALL was high ($\bar{x} = 4.31$). It shows that students have high positive perceptions toward the implementation of MALL. It can be proved by the mean score on the data above. The highest level was given to the item No. 4 “Mobile phones allow me to reach authentic English language learning material whenever I need.” ($\bar{x} = 4.49$). As shown in Table 5, the highest means were the items No. 4. It means ($\bar{x}$) indicate that the students’ held positive perception towards the ability of mobile phone in providing authentic material in supporting English language learning. Followed by 3 (three) items in high rank ($\bar{x} = 4.43$), item No. 5 “Portability is the important factor of mobile devices”, item No. 7 “Time-efficient is the benefit of using mobile phones for English language learning” and item No. 10 “Mobile phones can be used to learn different English language skills”. From those 3 (three) items that students put high perception that mobile phone as learning media will help students to increase flexibility of learning inside and outside classroom because the students’ can access to learning materials anywhere and anytime. As in this study, most of the students expect that the use of mobile phone will help them to improve their language skill and enable them to independent learning. However the lowest rank is the item No. 9 “The use of mobile phones can create interactive English language learning activities.” ($\bar{x} = 4.03$). It indicates that the students think mobile phone still cannot provide any kind of comfortable atmosphere in interactive learning. However, nowadays in the digital era, the use of mobile phone will become the choice for the students in learning activities, especially English language learning.

| Rank | Item No. | Items                                                                 | $\bar{x}$ | S.D | Level  |
|------|----------|----------------------------------------------------------------------|-----------|-----|--------|
| 1    | 3        | Problem of internet connectivity.                                     | 4.33      | 0.76| High   |
| 2    | 2        | Students’ use mobile phone for non-academic purposes.                 | 4.17      | 0.80| High   |
| 3    | 8        | The mobile feature does not support English language learning.        | 3.86      | 0.75| High   |
| 4    | 1        | Mobile phone has small screen size.                                   | 3.74      | 1.03| High   |
| 5    | 7        | Battery capacity of mobile phone.                                     | 3.60      | 1.18| High   |
| 6    | 6        | High cost of mobile data.                                             | 3.40      | 1.08| High   |
| 7    | 9        | Less of students’ knowledge in using mobile phones as a source of English language learning | 3.23 | 1.48 | High  |
| 8    | 4        | Problem of slow internet speed                                        | 3.00      | 1.23| High   |
| 9    | 5        | High cost of mobile phone                                             | 2.90      | 1.36| High   |
| 10   | 10       | English language learning mobile-based application is still lack.      | 2.84      | 1.18| High   |
|      | TOTAL    |                                                                      | 3.51      | 1.08| High   |

Results of the questionnaire study. Based on the results shown in Table 6, the EFL students agreed on the importance of most challenges to the implementation of MALL. The students’ problems in the use of Mobile-Assisted Language Learning was at a high level ($\bar{x} = 3.51$) refers to the average means score on table 6. Specifically, the highest rank problem was “Problem of internet connectivity” with ($\bar{x} = 4.33$) in item No. 3, followed by “Students’ use mobile phone for non-academic purposes” ($\bar{x} = 4.17$) in item No. 2. While the lowest rank problem was in item No.10 “Lack of language learning mobile-based software and activities” ($\bar{x} = 2.84$). Some of these obstacles that mostly appears are internet connection, non-academic purposes by the students using mobile phone, mobile feature does not support, screen size, and battery capacity. The overall responses prove that there are problems faced by student in using MALL while learning English. In other words, based on the results of the table above, it can be seen that the use of mobile phones in learning English still has problems so that it cannot be ascertained as the main learning media. This study might initiate the development of MALL.
for English learning. The fact that MALL has entered the learning process in the classrooms and undeniable[1].

4. Conclusion

Based on the results of questionnaires study above (see Table 5), it revealed that students moderately high perception toward the use of MALL in classroom activities. It proved by the average means score (\(\bar{x} = 4.31\)) for students’ perception. Students’ put the highest positive perception on flexibility to reach authentic English language learning material (\(\bar{x} = 4.49\)). Similarly, regarding to the results of the problems faced by the student (see Table 6), it also indicated that students had faced high problems in the use of MALL. It showed by the average means score (\(\bar{x} = 3.51\)). They found any kinds of obstacles in using mobile phone as the media in English language learning. One of the biggest problems is internet connectivity (\(\bar{x} = 4.33\)). In other words, it still needs to be improved in terms of technology that supports English learning. The problem found must be a way to improve mobile-based learning media to improve learning objectives. This research has been tried and done according to scientific procedures, however, still have limitations for instance the number of questionnaires distributed and received was not appropriate and the answers provided by the participants are not reflected the real situation. Direction for future research will be in the development of MALL. In particular, as technology progress, it would be interest to see how the drawbacks of MALL devices such as small screen sizes, mobile features, and internet connectivity might be overcome.

References

[1] S. F. Isamiddinovna, 2019, “Mobile Applications As A Modern Means of Learning English,” Int. Conf. Inf. Sci. Commun. Technol. Appl. Trends Oppor. ICISCT 2019, pp. 1–5, doi: 10.1109/ICISCT47635.2019.9011897.
[2] A. R. Luis, 2016, “MALL and second language teaching: Challenges for initial teacher education,” Iber. Conf. Inf. Syst. Technol. Cist., vol. 2016-July, doi: 10.1109/CISTI.2016.7521623.
[3] UNESCO, 2013, UNESCO Policies Guidlines for Mobile Learning. France: the United Nations Educational, Scientific and Cultural Organization.
[4] I. Simonova, 2015, “Mobile-assisted Language Learning in Technical and Engineering Education,” in Proceedings of 2015 International Conference on Interactive Collaborative Learning (ICL), no. September, pp. 169–176.
[5] T. M. Miangah and A. Nezarat, 2012, “Mobile-Assisted Language Learning,” Int. J. Distrib. Parallel Syst., vol. 3, no. 1, pp. 309–319, doi: 10.5121/ijdps.2012.3126.
[6] W. Pengnate, 2018, “Students’ Attitudes and Problems towards the Use of Mobile-Assisted Language Learning (MALL),” in 2018 5th International Conference on Business and Industrial Research (ICBIR), pp. 590–593.
[7] K. S. Ahmad, J. Armarego, and F. Sudweeks, 2013, “Literature Review on the Feasibility of Mobile-Assisted Language Learning (MALL) in Developing Vocabulary Skills among Non-English Speaking Migrant and Refugee Women,” in 3rd International Conference on Research and Innovation in Information Systems – 2013 (ICRIIS’13), vol. 2013, pp. 336–341.
[8] P. Zervas and D. G. Sampson, 2013, “A quantitative analysis of the reuse of mobile assisted language learning resources: the case of mobileLearn repository,” Proc. - 2013 IEEE 13th Int. Conf. Adv. Learn. Technol. ICALT 2013, pp. 36–40, doi: 10.1109/ICALT.2013.16.
[9] V. A. Nguyen and V. C. Pham, 2012, “CAMILES: An adaptive mobile learning system to assist student in language learning,” in Seventh IEEE International Conference on Wireless, Mobile and Ubiquitous Technology in Education CAMILES, pp. 72–76, doi: 10.1109/WMUTE.2012.19.
[10] E. Y. and M. A. M. M. Elaish, L. Shuib, N. Abdul Ghani, 2017, “Mobile Learning for English Language Acquisition: Taxonomy, Challenges, and Recommendations,” vol. 5, pp. 19033–19047, doi: 10.1109/ACCESS.2017.2749541.
[11] A. Kukulska-hulme, 2016, “Mobile Assistance in Language Learning: A critical appraisal Open Research Online The Open University’s repository of research publications Mobile Assistance in Language Learning: A critical appraisal Book Chapter,” no. August.
[12] L. R. Gay, G. E. Mills, and Peter Airasian, 2012, Competencies for Analysis and Applications 10th Edition, vol. 6, no. 2.
[13] J. Best, 1981, Research in Education, 4th ed. New Jersey: Prentice Hall.