

# The Proliferation of Smartphones and their Effects on Improving the Vocabulary of Indonesian Learners of Arabic

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**Abstract:** This article aims to describe the use of the smartphone as a media to improve the mastery of students' Arabic vocabulary (mufradat). The participants in this study are students who are studying Arabic for the second and the third years of the Arabic at Hasanuddin University. The number of participants is 32 and 33 students for the respective batch. The researcher has created a mufradat database in an html-based interactive application, which is easily accessed to via a smartphone or tablet. The testing of media effectiveness in improving mufradat mastery is done through two experimental and control groups. Both groups can use PC facilities available at the computer lab to access mufradat database. Both groups can also use their smartphones to access the online interface. The difference is only in the memorization report of the mufradat and the competency test. Experimental group uses smartphone media to report their memorization, while control group reports theirs through a daily vocabulary record and was tested by using written test. The results show that experimental group indicates better mastery than control group. The average memorization of the experimental group is 1432 words while control group only reaches an average of 532 words.

## 1 INTRODUCTION

Arabic learning systems in Indonesia are like endemic diseases. This crisis shows poor learning performance, low quality of teaching and lack of educational resources to support the learning process. This can be seen from the number of students who can have proper Arabic language knowledge and skill. This condition is not much different from Arabic education in the Middle East (UNESCO, 2012).

Arabic learning is also currently dealing with the 4.0 technology era. This era of disruption has shown a tremendous gap between the way of life of the Indonesian learners of Arabic and how educators (teachers and lecturers) expect them to learn. This sort of disruption requires changes in the attitudes and responsibilities of the Arabic language instructors, the skills needed, and their professional role.

It is undoubtedly said that the teaching of Arabic in Indonesia in the last few decades has not been able to improve Arabic learning system significantly. One of the data that supports this statement is that the number of study programs (Arabic) with an A accreditation status is still 16.35% or 26 of the total 159 S1 (Bachelor Degree) study programs recorded at the Indonesian National Higher Education

Accreditation Board or BAN-PT (BANPT, 2018). The condition of an accredited study program is still less experienced by other study programs. Arabic study program accredited A is 16.35% or 26 of 159. English Study programs accredited A are 8.92% or 44 of 493, Japanese study programs are 21.95% or 9 of 41, and Chinese study programs reach 12.50% or 2 of 16 recorded in BAN-PT. This can be seen in table 1:

Table 1: Accreditation of Language Study Program.

Study Programs	Total	Percentage		
		A	B	C
Arabic	159	16,35	47,80	35,85
Dutch	2	50,00	50,00	0,00
English	493	8,93	62,68	28,40
Japanese	41	21,95	70,73	7,32
Germany	15	46,67	46,67	6,67
Chinese	16	12,50	68,75	18,75

Source: BAN-PT, July 2018

Along with the pace of civilization development, knowledge and technology, teachers of Arabic and other foreign languages in Indonesia should be aware of the rapid development and the use of mobile phones. Internet user behavior in Indonesia should be used as study material associated with Arabic

learning media. A survey conducted by the Indonesian Internet Service Providers Association (APJII) in 2016 and 2017 shows that 132,7 and 143.26 million people are internet users from 257 and 262 million Indonesian population (APJII, 2017).

Penetration of internet users, the devices used and the browser used is noteworthy as shown in table 2:

Table 2: Devices Used for Browsing.

Devices	Total (million)	Percentage
Smartphone	89,9	68,57
PC	19,5	14,87
Laptop	16,7	12,74
Tablet	5	3,81

Source: APJII, 2016

Based on this data, the writer has not yet obtained the information on how many teachers use smartphones and the internet as one of the learning media. This is one side of the community's potential learning age and lifestyle using a smartphone. This data is interesting to study especially the study of Arabic.

Data on smartphone and internet usage in Indonesia is a challenge for teachers of Arabic at Hasanuddin University (Unhas). We are challenged to make it one of the Arabic learning media. We have to attract the attention of teachers in our institution to find ways to make this smartphone to be used efficiently and effectively as one of the learning media.

This effort is an initiative to attract and improve the interest of students learning Arabic while facing the demands and challenges of people living in the technology era 4.0. The use of cellular technology as an educational device can no longer be avoided (Clough et.al., 2008; Sachs and Bull, 2012). Some 4.0 technology features including mobile phones have provided many benefits in language learning, including a) portability of smartphone devices that can be taken to different locations; b) social interactivity for users of this mobile device who can collaborate and exchange information with others; c) context sensitivity that allows mobile phone owners to use it to collect real data or simulations that are appropriate to a particular location, environment and time; d) connectivity that enables users to connect to data collection devices, other devices, and to network; and e) individuality for users who can provide scaffolding for learning tailored to their needs (Klopfer, 2002). In other words, the comfort, usefulness, and currentness of this mobile device allow students to learn the right things at the right time in the right place Seppälä & Alamäki, 2003; Peng et.al., 2009)

The writer is constrained by a lack of study or research that discusses the difficulties of using smartphones as a medium of learning Arabic. Indeed, an article was found that discussed the obstacles to integrating smartphones in learning. The constraints in question include small screen size, high costs, speed of access, smartphone intelligence level, technical difficulties for the owner, and lack of integration of existing smartphones with e-learning (Chen-Chung et.al., 2009; Tai & Ting, 2011; Gong & Wallace, 2012).

Another challenge in using smartphones as learning supporting media is the impact of this technology regarding interaction. The interaction referred to in this article is a reciprocal relationship that requires at least two objects and two actions. Interactions occur if objects and events influence each other (Wagner, 1997). Moore (1989) mentions three types of interactions are often discussed, namely the interaction between the instructor and students, the interaction between students and students and the interaction between students and teaching material. The interaction between instructors and students is intended to strengthen students' understanding of teaching material including the meaning of the teaching material Thurmon (2003). The interaction between instructors and students is the main factor or key factor in motivating students to learn and maintain students' interest in learning any material (Moore, 1989). Moreover, the interaction between students and students is interpreted as the relationship between students and students with and or without instructors (Thurmond, 2003). The study of peer interaction becomes important especially about the application test and evaluation of learning material (Moore, 1989).. The interaction between students and learning content is the attitude and behavior of students in understanding teaching material (Thurmond, 2003).

The writer identifies that there is still less research or study on the impact of smartphone technology on interaction (as discussed earlier). That is why this article is presented to bridge the scarcity in this study. In connection with this, this study has two fundamental questions, namely:

1. How do Arabic teachers use a smartphone in teaching to improve students' Arabic vocabulary mastery?
2. What challenges were experienced by the Arabic language teachers and students in doing the interception through smartphones as a learning medium?

## 2 METHODS

The participants in this study are students of the Arabic Study Program and who are enrolled in the academic year 2015 and 2016. Students of 2016 programmed the Arabic Language Proficiency course and those of 2015 scheduled Translation courses. Students of 2015 used smartphones as one of the daily learning media while those of 2016 either they used it or not. The department has prepared a computer laboratory that facilitates students' access to the Learning Management System (LMS).

In this study, two methods of data collection were used, namely interviews and analysis of participants statements uploaded on the LMS discussion forum menu. Both of these techniques were carried out to compare the results of the vocabulary memorization of the participants of these two courses. This technique is also intended to explore the relationship or interaction between fellows, between lecturers and students, and between students and learning materials.

Data from interviews were analyzed by using a verbal analysis method (Chi, 1997). Data collected from interviews, was arranged according to the same characteristics, ideas, concepts, arguments and discussion topics. Data that was considered unnecessary was then removed from the database.

This data was used to see the relationship between the achievement of students' Arabic vocabulary test results (quantitative data) and their statements in interviews (qualitative data). This was done to assist the writer in interpreting the results of the participants' vocabulary test and their statements in the interview.

To enrich the validity of the interpretation of the interview results, the sharpness of analysis is needed. To strengthen this argument, of course, we need quotations for various statements obtained in the interview. The writer used interview citation techniques (Merriam, 1998).

## 3 RESULT AND DISCUSSION

The learning materials for these two subjects were uploaded on the Unhas LMS. This LMS is prepared as an official media supporting lectures. All Unhas students, including this participant, have an account to log in to at Unhas LMS. Students have access to download lecture materials, do assignments, work on closed questions, send in assignments, conduct class

discussions and group discussions both synchronously and asynchronously.

The writer prepared lecture materials, especially lists of vocabulary that must be mastered by the participants of both courses. Regarding the material for mastering Arabic vocabulary, students of 2015 were directed to optimize smartphones. Lecturers prepared special applications for daily vocabulary input. Translation course participants were advised to upload at least 15 memorized vocabularies per day. They input this vocabulary through their respective smartphones.

The list of vocabulary that must be mastered by the participants was also prepared in an interactive form. The participants chose the theme of Arabic vocabulary, for example, vocabulary relating to the house and its contents, the theme of food, fruit and vegetables, and so on. Lecturers provided this Arabic vocabulary test using the Hot Potatoes application (Baso, 2009).

The evaluation of vocabulary mastery skills between 2015 and 2016 class participants is different. In the 2016 class, the vocabulary mastery ability was tested with oral test through the layout. While in 2015 class participants, it was tested through interactive test using smartphones. Class participants were required to input a minimum of 15 Arabic vocabulary per day.

The lecturer prepared an Arabic vocabulary input application through Google Application Form. The vocabulary inputted was the vocabulary memorized that day. So only the memorized vocabulary was allowed to be input in this application.

The 2015 class participants also sometimes tested their vocabulary skills about 15 minutes before the translation class began. Lecturer displayed pictures or words in Indonesian followed by choice of Arabic vocabulary. The participants got unique cards each. When the questions were displayed on the LCD, the participant raised and showed his/he unique card. This unique card was given letters A, B, C, and D on each side. If a student wanted to answer the letter D for the question displayed by the lecturer on the LCD, then the D side of the unique card must be shown upright. The lecturer then raised his smartphone also to record the unique card of the lecturers. This recording was directly stored in the lecturer database folder.

In this way, it was expected that the participants would always maintain memorization of their vocabulary at least 15 words per day. This process also shows that both 2015 and 2016 class participants must always access LMS and practice mastering their Arabic vocabulary. Following this stage, they had to

try to memorize the vocabulary. At this stage, there are differences between the two academic years. 2016 class tried to memorize the vocabulary and at the same time prepared to be tested face to face. 2015 class students had to do another stage that was different from that of 2016 class, which inputted a minimum of 15 vocabularies memorized per day through smartphones and prepared to be tested per week through a unique card and lecturer's smartphone.

The answer to the second question consists of two parts, namely the challenge for the teacher and the students in 2015 and 2016 classes. For the challenges of students, the two academic years also experienced different levels of challenges.

The implementation of learning involving media in networks and smartphones is related to three main things, namely brainware, hardware, and software. Lecturers are a part of brainware of this research. The writer, as well as lecturer in these two subjects, experienced several challenges including challenges in preparing lecture materials which were expected to improve vocabulary of participants, conduct interaction processes with, revise vocabulary content and challenges in conducting tests or evaluating the achievement of students Arabic vocabulary mastery.

The preparation of teaching materials, especially Arabic vocabulary training material in an interactive network drained the energy, time and mind of the course leader of this subject. Time must be arranged to adjust with a family schedule where they are usually ignored to have a sort of recreation and leisure moments. This schedule must be discussed with family members and had to be posted on the wall at home. This schedule was posted so the rest of the family members understood the schedule and agreed to it. This schedule would act as the reference in arranging family leisure time.

Teachers must have extra time, energy and patience in preparing this course material. They must be connected to the LMS network all the time. They must follow the semester learning plan and prepare exercises to support the improvement of the Arabic vocabulary of the participants. Uploading this course material must sometimes be carried out at home. This is done because the material cannot be completed on campus because of other schedules that also require time. This is where the challenge is when the time provided to prepare this material is insufficient and collides with family schedules.

The interaction between lecturer and participants was done in several ways, including through the LMS discussion forum and smartphone menus. Students felt more comfortable communicating via

smartphones than through the LMS forum menu. In response to this, participants were directed to install telegram social media applications on their smartphones. The reason is that telegram application is very light to access, either through smartphones or laptops. Data is stored either in cloud, text or video based. Each telegram group was created.

At this stage of interaction, sometimes the participants sent messages regardless of the time for example in the morning or midnight. The instructor of the course has warned them from the beginning of the class about the times that properly to send messages. However, because of worries and anxieties, some participants forget the time agreement.

Their worries or anxieties are caused by failure to access the LMS or late inputting memorized vocabulary per day. This condition made the participants less concerned about sending messages, primarily through their telegram. The other side learned in this condition was that the participants could learn about when was the proper time to send messages to their lecturers. This process teaches many lessons not only to lecturers but also to the participants or students especially in writing ethics using correct and proper Indonesian language.

Another challenge was the revision of learning material and interactive questions on the network and revision of smartphone-based questions. Often learning material has been prepared. However, because there were other references considered better to support the vocabulary mastery skills of the participants, it took times to upload the information on the LMS.

Memorizing achievement of participants (n = 29) of 2015 class which involves smartphones as the main media in the learning process is better than the achievement of Arabic vocabulary memorization of the participants (n = 31) in 2016 class. The comparison of the achievement of these two vocabulary memorization on average (1436: 532 vocabulary).

Other data shows that 62.07% of the 2015 participants had memorized vocabulary above 1750 words for one semester. This achievement has exceeded the minimum target limit of 1560 words (one month is only 26 inputting days). On the contrary, 2016 participants have not achieved the minimum vocabulary memorization in one semester. This condition can be seen in the following graph. The name of the participant was removed to maintain confidentiality.

The duration of the study was not analyzed. The study duration might affect the mastery level of

Arabic vocabulary. 2015 students took more than a year to study Arabic compared to those of 2016. However, in the Arabic Language proficiency courses, there were three students of a previous academic year who, despite re-taking the subject, found themselves in the very low level of mastery in 2016 class .

The factor that needs to be observed is the treatment of the access to LMS between the two academic years, which was not much different. They could access learning materials and interactive Arabic exercises at any time. The only difference was the frequency of smartphone usage in the memorization of at least 15 vocabularies per day. As for 2016 class , it was only recommended to memorize at least 15 words per day, but they were not obliged to input their memorization every day via a smartphone.

## 4 CONCLUSION

The use of smartphones as learning media is quite effective and efficient. The use of smartphones to improve the ability to master Arabic vocabulary is sufficient enough as an evidence. The design of the use of smartphone media is also quite easy for the instructor in conducting evaluations and tests of vocabulary mastery skills.

The preparation of interactive training for vocabulary mastery course materials takes a lot of energy, tenacity and patience from the lecturers. Teachers must consider supporting facilities, especially hardware and software supporting the smooth use of this media. In addition, the lecturers must also consider whether or not students afford smartphones.

This article advises educators and instructors to be keen in addressing the development of current 4.0 technology. The era of disruption can no longer be avoided. This condition seems to force educators and teachers to utilize 4.0 technology, including smartphones.

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