Can Wordwall Application Improve Students’ Arabic Mastery?

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Abstract

Wordwall is one of the applications that is widely used in learning foreign languages. In Arabic language learning, wordwall is still studied and researched only at the level of qualitative research or only at describing its application process in learning. However, no one has tested it in the framework of the experiment to see its effectiveness. This study investigates the effectiveness of learning Arabic using Wordwall based on learning outcomes. It uses a pre-experimental One-Group Pretest-Posttest Design. It recruited 72 first-year students in the Arabic language reinforcement program under UIN Raden Mas Said Surakarta Language Development Center. The primary data is collected using pretest and posttest results, and then the results are analyzed using the t-test. Findings revealed that using Wordwall in the Arabic learning process effectively improved the student’s Arabic skills.

Keywords: Arabic Language Learning, Arabic Mastery, Wordwall Application

Abstrak

INTRODUCTION
The policy of learning from home during the COVID-19 pandemic caused changes to the learning system in Indonesia. Schools, universities, and other educational institutions are competing to find effective patterns to use in learning during the pandemic. Universities and schools have developed a web to use effectively in learning. In contrast, other universities, schools, and other educational institutions use the existing service providers such as communication and conference media in learning on WhatsApp, Telegram, Google Meet, Zoom, and other social media applications. Others use online learning system service providers known as Learning Management Systems (LMS), such as Google Classroom, Moodle, Schoology, and Edmodo (Lie et al., 2020). LMS provides more facilities that can be utilized in online-based learning.

At the beginning of the pandemic, schools and institutions used communication media such as WhatsApp and Telegram as learning media (Atsani, 2020). Even though these communication media are not made explicitly for learning, they promote communication between individuals and groups with text, image, sound, and video features. Teachers force learning by using these applications without considering other methods and proper learning model in advance. Therefore, teachers only give assignments to students, which causes boredom to the students. In addition, a study state that using WhatsApp in learning is less effective because of students’ difficulty understanding the material, which affects in unsuitable learning models or tendency as assigned-only tasks (Wahyuni, 2018). Furthermore, students are not focused when studying, so the learning objectives are not met.

Arabic language learning also experiences the same problem because it does not use technology optimally. Arabic language learning before the pandemic still used physical media, and teachers still relied on textbooks as the primary medium and learning resource in the learning process. In addition, many teachers still maintain the grammar-translation method in the learning process. The activities using this method are still limited to reading texts and then translating it into Indonesian. Students only translate Arabic texts, so learning Arabic seems to be only about translating Arabic texts.

Such learning model raises problems for students. They consider Arabic a complex language to learn (Mubshirah, 2021). It is perceived as the language of texts translation, not a language for communication. They believed that Arabic could not be used directly in everyday life. Therefore, it becomes the cause of low motivation and enthusiasm for learning (Asy’ari, 2019). It can be proven by seeing the quality of school graduates who are still relatively low in the Arabic proficiency. The evidence is seen in the competence in skills (listening, speaking, reading, and writing) and the mastery of language elements (vocabulary, morphology, and syntax) (Hizbullah & Mardiah, 2015). To study at the next level in universities, especially in Arabic Language Education or Literature Major, they must first master the basics of the Arabic language’s basic systems, such as vocabulary, morphology, and syntax.
Nevertheless, students have not reached the standard level to enter college (Hendra, 2013). Students at the Islamic Senior High School (MA) level still have not reached the basic Arabic standard to continue at college level, and neither is at the Islamic Junior High School level (MTs). One of the reasons is that they do not choose a linear school under the same ministry. Students who previously went to elementary and junior high schools under the Ministry of Education and Culture continued their studies in MTs and MA under the Ministry of Religious Affairs. At the same time, it must be noticeable that the curriculum is different. The Ministry of Religious Affairs school curriculum has religious and Arabic courses. Meanwhile, schools under the Ministry of Education and Culture do not offer Arabic material in the school curriculum. Efforts are needed to overcome the problem of students who continue across to achieve the specified standards at that level.

From the various problems explained earlier, it can be inferred that the issue of learning Arabic does not only come from the students but also from multiple extrinsic problems, such as the lack of creativity of teachers in managing classes (Sari, 2020). The lack of technology-based learning media use (Nurkholis, 2014) and the lack of appropriate learning resource selection to attract students to learn Arabic also become issues that need to be addressed. Other problems include the classroom, which lacks learning facilities and creates problems for students in learning Arabic (Hizbullah & Mardiah, 2015). Not all students come from affluent families, so they cannot buy learning equipment during the pandemic, such as smartphones and laptops. The problems students met, such as having smartphones during pandemic, have begun to be resolved. The reason is that parents have started buying smartphones for their children to learn online. For that reason, digital-based learning using smartphones can be implemented and can be assessed for effectiveness in Arabic learning.

Seeing several levels of education that experience problems due to the linearity of students in choosing schools at a certain level raise the problem of competency gaps in students both in the form of language element mastery and language competence (Rahmina, 2018). Appropriate solutions must be immediately sought. Technology is one of the solutions that can be implemented in pandemics because technology is not limited to distance and space, so learning can be carried out without fear of contracting the virus. The interaction can be done in digital or virtual worlds. Furthermore, many studies mention that the use of technology in language learning is effectively carried out and applied today, especially for Arabic.

The use of technology in Arabic language learning is quite promising because of the opportunities arising from the pandemic around the world. However, technology is challenging because Arabic learning rarely integrates with existing technology. Lately, several practitioners and researchers have tried to use and develop technology to improve Arabic teaching and learning, such as the use of video (Salahuddin, 2020) and android app development (Kesuma et al., 2021) (Rosada, 2018), and the use of available gamification media like quizziz (Putri et al., 2021), Kahoot! (Fiani, Ahsanuddin, 2021) (Mubarok, 2020) and Wordwall (Azizah, 2020) (Fakhruddin et al., 2021) (Yahya et al., 2021). In recent times, learning Arabic using the gamification system has become the primary choice for teachers and researchers. The reason is that they can take advantage of the
facilities provided by the service provider without dealing with the system development. As a user, the teacher only enters the material into the application and does simple set ups for the application, and after that, carries out the implementation in their respective classes.

Some research on the use of gamification systems in Arabic language learning and mastery of Arabic is focused only on the process of using such applications in Arabic language learning. Meanwhile, only few studies try to experiment with quantitative methods. Therefore, this study aims to obtain quantitative data that can be measured with certainty and calculate the effectiveness of using an application in Arabic language learning. On that account, the objective of this study is to find the answer to the question, "Is Wordwall effectively used to improve the mastery of the Arabic language?"

**METHOD**

*Research Design*

This research uses experimental research to determine the relationship between the variables (Humaini, 2018). It focuses on the effect of using a media that uses a game system called Wordwall on student learning outcomes. Experimental research is a type of research to find the influence of one variable on other variables with strict control. This research used the Pre-Experimental One-group pretest-posttest design. In this design, there is only an experimental class without a control class for comparison. The compared aspects are independent variables or free variables before treatment (pretest) and after treatment (posttest). After obtaining pretest and posttest data and action using the Wordwall application, the effectiveness is calculated per application.

*Data Collection and Analysis Technique*

The experiment was carried out on the 72 first-semester students of UIN Raden Mas Said Surakarta in the academic year of 2021/2022. These students were given Arabic materials in the form of YouTube videos and Wordwall applications three times with three varied materials. The students were asked to play Wordwall games without restrictions on the number according to their individual needs. After completing three meetings with different materials, students were asked to do a posttest.

Data were collected using pretests and posttests method. The data would be processed using SPSS with T-TEST analysis. After that, the calculation results were analyzed to find the effectiveness of using the Wordwall application. The following were the hypotheses in this study.

H0: Wordwall can improve students' mastery in Arabic.
H1: Wordwall cannot improve students' Arabic skills.

**RESULTS**

Table 1 explains the data of the range and the minimum and maximum values obtained by students from the experimental class descriptively.
Table 1 Range, Minimum and Maximum Scores in the Experiment Class

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Valid</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Range</td>
<td>95</td>
<td>80</td>
</tr>
<tr>
<td>Minimum</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Maximum</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

It can be seen from Table 1 that there is a significant difference in grades between the minimum score and the maximum score of students in the pretest. Many students get a score of 5 in the pretest, and some get 100, which is the maximum score. This striking difference indicates that the class has a relatively noticeable ability to speak Arabic because the range appears up to 95. Meanwhile, after learning with Wordwall, the range of values between the lowest and highest is reduced to 80. Although the difference in the range has changed, it is still in a low stage because the range between the pretest and posttest is only 15.

Table 2 describes the data of the mean, median, and mode obtained from the experimental class descriptively.

Table 2 Mean, Median, and Mode in the Experiment Class

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Valid</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>50.49</td>
<td>77.64</td>
</tr>
<tr>
<td>Median</td>
<td>52.50</td>
<td>85.00</td>
</tr>
<tr>
<td>Mode</td>
<td>25</td>
<td>95</td>
</tr>
</tbody>
</table>

It can be seen from the table that there are positive results after the students receive learning treatment using the Wordwall application. The mean score/average student has increased by 27.15 points. Likewise, the median value increased by 32.50 points and experienced a significant increase of 70 points. This significant increase can be a positive and good indicator of the effectiveness of using Wordwall applications to improve the mastery of Arabic.

To further strengthen the results of the data description and simple interpretation above, the researcher tried to compare the average of the results of the pretest and posttest and produced correlation values in the following Table 3.

Table 3 Correlation between Pretest and Posttest

<table>
<thead>
<tr>
<th></th>
<th>Pretest &amp; Posttest</th>
<th>N</th>
<th>Mean</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td>72</td>
<td>27.153</td>
<td>.519</td>
<td>.000</td>
</tr>
</tbody>
</table>

The table shows that the correlation value between the pretest and posttest variables is 0.519 with a probability level (sig.) of 0.000. It explains that there is a
significant improvement between students before obtaining treatment using the Wordwall application and after receiving treatment because the probability value is <0.05.

Table 4 describes the comparison of t-test results between the average values of pretests and posttest:

<table>
<thead>
<tr>
<th>Pair</th>
<th>Pretest – Posttest</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>27.153</td>
<td>22.949</td>
<td>2.705</td>
<td>32.545 – 21.760</td>
<td>10.040</td>
<td>71</td>
<td>.000</td>
</tr>
</tbody>
</table>

There is a significant difference between the pretests and posttests scores with M -27.153, SD 22.949, and t -10.040 with a probability of 0.000. Because the probability value from the table above is less than 0.05, it can be concluded that Wordwall is a practical application to improve students’ mastery of Arabic.

DISCUSSION
Digital Language Learning

The word digital is closely related to computer and internet technology, which implements Information and Communication Technology (ICT). It can be interpreted as all technical equipment used to process and convey essential information (Pratiwi & Ubaedillah, 2021). In addition, Mullamaa mentioned the benefits of using this in English language learning. For instance, the material is conveniently accessible, there is no need to use paper, there is a possibility of using modern methods, and teachers can decide the material according to needs/levels/interests. In addition, integrating ICT can also improve the quality of language learning carried out by teachers and foster student motivation in learning languages (Mullamaa, 2010).

One example of a form of ICT integration in language learning in the initial stages is the use of computers. This language learning model is called CALL (Computer Assisted Language Learning). CALL significantly contributes to improving the quality of the language learning process (Ambrose & Palpanathan, 2018), where the use of computers can improve language mastery significantly. In the next stage, CALL is used as the foundation for mobile-based learning development where researchers began to develop language learning using cell phone features. This model is called MALL (Mobile Assisted Language Learning) (Miangah & Nezarat, 2012). At first, MALL was only limited to the use of voice calls and SMS to provide instructions to students to learn the material. The use of smartphones in language learning began to accelerate, and it resulted in complex
application features. MALL even became a promising learning model with several experiments showing successful outcomes. It coincides with the COVID-19 pandemic, which requires using technology and internet in language learning.

**Gamification**

One form of digital-based language learning is gamification. Gamification is the use of game attributes outside the game context to influence behaviors and attitudes related to learning (Jusuf, 2016). Gamification can be also defined as a learning approach using elements in a game or video game to motivate students in the learning process and maximize feelings of enjoyment and involvement with the learning process. Besides, this medium can capture things that interest students and inspire them to continue learning (Pradnyana et al., 2020). Gamification uses game elements to be customized in certain areas that aim to make them more attractive, understandable, and creative (Ariani, 2020).

Gamification in education is an approach developed to increase the motivation and engagement of learners by incorporating game design elements in an educational environment (Sunarya et al., 2019). Another definitive of gamification in the industry is the changes in teaching strategy to adopt elements of the game in which, in addition to the learning objectives, the teacher in the classroom will present challenges or quests that players must work on and bring them to the learning experience (Aribowo, 2014). Other researchers define gamification as using game elements, mechanics, features, designs, and structures in a non-gaming environment or context. It is based on the gaming industry's success, social media, and research in psychology.

Based on the description of the definition of gamification above, it can be concluded that it is an attractive and beneficial teaching medium. It uses game elements to motivate students to be directly involved in games and learning so that students get an exciting and enjoyable learning experience. Based on several studies, gamification learning models can improve the quality of learning to optimize language acquisition and learning for language learners. Gamification also influences motivation, satisfaction, effectiveness, efficiency, experience, and mastery of knowledge (Urh et al., 2015). Besides, gamification can increase learning motivation (Alsawaier, 2016). Not only that, several other researchers, such as Öztürk, Rachels, and Krisbiantoro, found that not only does it increase motivation, but it can also improve language acquisition and mastery (Öztürk & Korkmaz, 2019) (Rachels, 2016) (Krisbiantoro, 2020). More specifically, Hosseini et al. reinforce that the results of their research reveal that gamification can improve the quality of task performance (Hosseini et al., 2021). Therefore, gamification in education is needed to improve the quality of learning.

**Wordwall**

Wordwall is a web-based digital platform used to create learning games. Wordwall provides various game models that can be created with existing templates and can be shared directly via Facebook, Google Classroom, Twitter, or WhatsApp groups. The game models in Wordwall are in the form of quizzes, matchmaking, anagrams, random words, grouping, and others. Interestingly, in addition to users being able to provide access to the media they have created online, it can also be downloaded and printed on paper. The application provides
The use of Wordwall in language learning has been widely practiced and has proven effective in improving language mastery. Shiddiq, in his literature review, mentioned that Wordwall is one of the innovative media that is especially useful in learning Arabic and can be used by educators during the pandemic (Shiddiq, 2021). Nissa and Renoningtyas proved the effectiveness of Wordwall by testing it in the classroom and found an increase in students' interest in learning and motivation for learning (Nissa & Renoningtyas, 2021). Several studies have also discovered that the use of Wordwall in learning can improve language acquisition in learning outcomes (pretest and posttest) (Fakhruddin et al., 2021) (Azizah, 2020) (Fithri & Wahyudin, 2021).

The study results show that using Wordwall applications in Arabic language learning effectively improves the mastery of Arabic for UIIN Raden Mas Said Surakarta students. The study results reinforce earlier studies conducted by experts on using Wordwall in language learning where it can increase interest and motivation in learning (Nissa & Renoningtyas, 2021) (Yahya et al., 2021). In addition, other studies also explain that Wordwall can improve student language learning outcomes, as shown by an increase in student pretest and posttest results (Fakhruddin et al., 2021) (Fithri & Wahyudin, 2021).

Unlike the previous research, this research should be able to continue with students' perceptions of using Wordwall with TAM (Technological Acceptance Model) parameters. The use of Wordwall in language learning can be measured not only from the results of pretests and posttests but also by collecting data on factors that influence the Wordwall acceptance in convenience and usefulness. The Wordwall, in the view of students, is easy to use and beneficial for them in learning Arabic. By expanding the focus like this, research will be more meaningful.

CONCLUSION

The focus of this study is to find out students' mastery of Arabic after using the Wordwall application. This problem is essential because there is currently a Covid-19 pandemic where technology is the primary choice in learning. The learning model must be able to adapt to these conditions, especially adapting to technology, to improve the mastery of Arabic. The results show that using Wordwall in Arabic learning through game-based question exercises can improve students' mastery of Arabic. This result follows the theory presented by Öztürk & Korkmaz that Wordwall can improve the acquisition and mastery of the language (Öztürk & Korkmaz, 2019).

This research only touches the surface and needs development, so it is still necessary to research the psychological impact towards students on using Wordwall and whether college students can accept this application psychologically. This expansion of research can strengthen the results of existing research.
REFERENCE


Öztürk, Ç., & Korkmaz, Ö. (2019). The effect of gamification activities on students’ academic achievements in social studies course, attitudes towards the course and cooperative learning skills. *Participatory Educational Research*, 7(1), 1–15. https://doi.org/10.17275/per.20.1.7.1


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