

# The Effectiveness of Wordwall Online Games as Technology-Based Learning on Grammar Quality among Junior High Students

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## Abstract

*In accordance with 21st century learning, conventional learning methods become unattractive and result in poor student participation in class. Wordwall online games are used as a tool to improve the quality of grammar in the ESL class. Using Wordwall online games in this study aims to determine the effectiveness and perceptions of Wordwall Online Games as Technology – Based Learning among junior high school students in learning grammar. This study administers quasi experimental design. The accessible population of this study was the students of class 7A and 7B of MTs Ma'arif Sidomukti in 2021/2022 academic year. The experimental class was class 4A which consisted of 30 students while the control class was class 30 which also consisted of 30 students. The experimental class was accompanied with Wordwall online games and the other was control class without Wordwall online games. The research instruments used to collect the data in this study was grammar multiple-choice test. The Data analysed using independent sample t-test with SPSS version 25. The result shows that probability value of both groups is 0.002 meaning that the probability value is higher than the level of significance 0.05 ( $0.002 < 0.05$ ). It indicates that Wordwall online games significantly influence students' grammar quality.*

## Keywords

wordwall online games; technology – based learning, students' grammar quality



## I. Introduction

The current generation of students is so close to the presence of technology. Any gadget is no longer considered a foreign object to them. Technology and their daily lives are very connected. They must be kept up to date. This extraordinary condition makes them prefer to use online media. learning should adapt to technological developments by using digital learning tools where teachers and students alike can create their own interactive timelines. It supports the Class-Based Assessment currently used in the Indonesian education system which considers student progress in learning through various media to reduce exam-oriented assessments. So that teachers and students should adapt by utilizing most important foreign language, and the learning and assessment of English grammar are considered as fundamental components of English language courses in some countries. It is technology in learning English which some students consider difficult to learn, especially about grammar. In numerous non-native English-speaking countries, English is taught as a very complex phenomenon and although the learner may find it difficult to master it. Making students aware of it, however, is only the first step in teaching grammar, and the activity can be done in a variety of ways.

The difficulties in general fall into three categories. Firstly, the lack of interest. Students feel bored in class, which reduces their involvement in the learning process and ultimately makes it difficult for students to understand grammatical concepts and their applications. Learning grammar can be more difficult, more complex, and even more tedious, especially for junior high school students. Recent studies have shown that teaching grammar is very important and effective for both students and teachers, but they admit that grammar is not their subject of choice. In other words, student retention and motivation in the L2 program can be influenced by grammar learning, which is considered necessary but “oh so boring” (Jean & Simard, 2011). One reason is that teachers are too concerned in communication skills but do not pay attention to grammar rules (Zuhri, et al., 2021). The results of other studies show other reasons why students learn English grammar, usually through textbooks and worksheets, by completing sentences in the correct grammatical format, or through teaching methods in school and after school. As a result, they become passive learners, often silent and not interested in learning English.

Second, the teacher's method of explaining the material has not changed much. Mohammed (2011) found that many teachers try to create relaxing and useful grammar lessons based on the English curriculum. Some teachers use different and innovative methods. However, some teachers still use the traditional method which is monotonous and difficult to understand. This makes studying uncomfortable and boring. Such problems certainly need to be resolved as quickly as possible. Therefore, teaching English grammar is still a challenge for teachers. Teachers need to find other ways to make implementation easy and fun.

the learning process in the classroom must keep up with technological advances, and in this technological era, students always prefer to use media in their learning practice as a daily activity using mobile phones (Davis et al., 2015). Encouraging learners to learn grammar using technology such as games, funny stories, pictures, and real-world content related to learners' lives has become an important issue for English teachers and scholars. (Castaneda & Cho, 2016). Therefore, learning innovation is needed to increase the enthusiasm and understanding of junior high students towards grammar (Maruf, & Anjely, 2020; Zuhri, et al., 2021). By following the development of technology and supporting media to carry out the English learning process. Because of these concerns, the Wordwall online games can help and enrich students' experiences in learning English. This game is designed with colorful pictures to attract the player's attention, word associations with pictures, strengthen memory and support direct and indirect grammar understanding. Wordwall online games design encourages the use of mobile learning in the classroom as a teaching aid and serves as supplementary material to encourage fun and independent learning outside the classroom. This game is also considered because the teacher can develop it with materials that can be adapted to the needs of students.

There are great benefits to the use of mobile learning in education, students' perceptions of the ease of use of online educational games are taken into consideration to ensure the effectiveness and success of the implementation of online games in education (Maruf, & Anjely, 2020). After all, this game is designed for their language learning. Although Hasram et al., (2021) states that Wordwall online Games are able to increase pupils' comprehension and understanding of vocabulary, thus far, there are still limited studies conducted in investigating students' perception and grammar learning. In this study, the researchers focus on Present tense verb because it is relatively difficult to be mastered by young EFL learners because one may be confused as to when to add 's' to verbs, mainly when the grammar system of their native language does not require so

(Purwantoro, et al., 2021). This rule is somehow intertwined with plural forms, in which the letter 's'/'es' is needed to be incorporated into nouns. The participants of this study are also found to be facing this issue as indicated by their past performance through grammatical mistakes of such nature in written assignments. Thus, the purpose of this study is to examine the effects of Wordwall online games on students' grammar quality.

## **II. Review of Literature**

### **2.1 Technology Based Learning**

It is well known that new technologies will greatly assist pedagogy and make the learning process easier, more realistic and simpler. However, the benefits and versatility of technology are not as evident as it is with teaching and learning English. In addition, the use of appropriate technology can increase educational and learning opportunities (Maruf, & Anjely, 2020).

Due to the excessive use of digital technology inside and outside of school, the function of tutors is changing in the classroom. According to Jenkins (2009), the presence of new technology will change the relationship between tutors and students. connection will no longer use with conventional instruments such as "pencils, rulers and pens". The experience of the teacher has a significant role in making decisions. In addition, teachers should always improve their teaching experience and continuously develop their teaching methods. The teacher's knowledge includes his experience in mastering subjects and teaching methods (Purwantoro, et al., 2021). In addition, in addition, teachers also need to have special experience in certain subjects to teach certain students in certain situations. According to (Koehler et al., 2013), teachers must have extra knowledge, and this knowledge must be mixed with their schemes to be able to use modern technology.

In this 21st era, technology also has an impact on language education in the areas of listening, speaking, reading, and writing skills as well as all competencies (grammar, discourse, sociolinguistics, and strategic). Given its role in all of these areas, teaching grammar with technology offers unique challenges and opportunities. Teaching grammar using technology can be an interesting option to consider. One useful strategy to encourage foreign language learning is to use language games. Learning grammar is a difficult task that can sometimes be frustrating for students. Continuous effort is required to understand, produce and manipulate the target language. Well-chosen games are invaluable because they give students time off and at the same time allow students to practice language skills. Furthermore, they use meaningful and useful language in real contexts. They also encourage and enhance cooperation. (Mubaslat, 2012).

### **2.2 Wordwall Online Games**

Digital games have gained recognition from many educators due to the significant role of technology in language education. For example, Wordwall Online Game. Wordwall is a free online tool for creating learning activities. it is a web application that contains interesting educational and interactive quiz-based games. This application can be an exciting learning resource, media and assessment tool for students. Wordwall also provides examples of the creativity of teachers to make it easier for new users to use and create the materials provided on the media. With this tool, teachers can enter the topic that they would like to cover in class into the Wordwall and receive a variety of ready-made, fully customizable activities such as Quiz, Match Up, Open the Box, Find the Match, Group Sort, Missing Word, Gameshow Quiz, Wordsearch, and many others. Therefore, the

variety of games that can be made can be more diverse so that students will not quickly feel bored in playing the game.

Wordwall is one of the concepts of gamification, which is the latest and most modernized learning approach. Gamification is a reliable and relevant idea or concept to be applied in mastering English. Several studies have been conducted in the past that examine the influence of utilising the Wordwall tool in ESL, such as the publications by Magasvaran, et al., (2021). They found that as a result of the improvement in score, C&K as one of Wordwall activities appeared to have a favorable impact on students' ESL grammar quality. Moreover, Wordwall is the perfect game platform for drilling practicing vocabulary (Hasram, et al. 2020) as it provides a variety of game formats that are useful to the selected crowd of pupils, in this scenario primary school pupils. "Teachers can use Wordwall to facilitate word analysis, provide models of word misspelling, and increase the vocabulary of their field of study," says (Brabham & Villaume, 2021).

Other study from Safitri et al., (2022), what they found indicated that the use of Wordwall has succeeded in increasing students' learning motivation. They added that this game is also considered attractive by combining problems that exist in the real world into a game. The implementation of digital educational games can also increase student learning interest. Therefore, educators must utilize and develop this digital game as the latest learning media innovation. Wordwall, on the other hand, has a wide variety of games, and teachers must be aware of the "how" in managing a gamified learning environment that is both helpful and productive for young students.

### III. Research Method

This research applies an experimental design. There are two cluster of samples (groups), they are experimental group, the group who will receive treatment of Wordwall Online Games as Technology-Based Learning, and control group, the group who will receive traditional learning method without Wordwall Online Games as Technology-Based Learning.

The samples of this research are 30 students for experimental group and 30 for control group. All of them were around 13 years old and their mother tongue is Indonesian. They are chosen through convenience sampling, as they were easily accessible to the researcher and generally possessed a similar level of English proficiency, which was intermediate.

Pre-test is administered before the application of treatment to experimental group, and control group, and post-test is administered at the end after the treatment is given. This research is conducted in 10 meetings included of treatment, pre and posttest.

The instrument applies is Grammar test. This grammar test is administered to the both groups, experimental and control groups. The format of the test is in multiple choices since this format is quite familiar to the students, easy to administer, and it could be scored quickly. It is modified from Betty Schramper Azar's book. This grammar test is administered to the participants/samples before treatment as pre-test, and after the treatment as post-test. It consists of 25 items. Before giving pre-test and post-test, the researchers tried out the items measure the validity and reliability of the test to make sure that the test valid. The data is analysed using Independent sample t-test to determine whether there are significant differences between experimental and control group after the treatment. The researchers used SPSS version 25 to compute descriptive statistics. Meanwhile the questionnaire is applied to experimental group which aimed to find out students' perception on the implementation of Wordwall Online Games.

## IV. Results and Discussion

The post-test aims to figure out whether there is significant difference of student's grammar quality between the students who learn by using Wordwall online games and without Wordwall online games. The posttest scores are analyzed to measure the students' grammar quality after the two groups received the experimental treatments. The summary of the post-test result taken both from experimental and control class are shown in table 1. It consists of the highest and the lowest score, the mean of the scores, standard deviation and the variance (from experimental class and control class).

**Table 1.** Mean score and Std. Deviation on Post - test

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
GRADE	WOW	30	23.4000	2.25297	.41133
	WITHOUT WOW	30	21.4000	2.58110	.47124

The table 1 above shows that the mean gained by the experimental class are higher than the control class. It indicates that the treatment given is successfully increased students' grammar quality. However, in order to see the significance of the mean difference, independent t-test computation was conducted. t-test was calculated to find out the comparison of two means between experimental group and control group as shown in table 2 below:

**Table 2.** Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
GRADE	Equal variances assumed	1.702	.197	3.197	58	.002	2.00000	.62551	.74790	3.25210
	Equal variances not assumed			3.197	56.960	.002	2.00000	.62551	.74742	3.25258

The above table 2 shows that probability value of both groups was 0.197 meaning that the probability value lower than the level of significance 0.05 ( $0.002 < 0.05$ ). In other word, there was significant difference between the experimental and the control groups. So we can reject the null hypothesis. Therefore, there was a significant difference between the two groups. This result implied that the experimental class and the control class were different in their ability after the treatment. As the average score of experimental group 23.4 was higher than control group 21.4. There is significant difference on the use of Wordwall online games on student's grammar quality between experimental and control groups. Base on what have been stated above, there is significant difference on grammar



quality between the seventh grade students of MTs Ma'arif Sidomukti who learn by using Wordwall online games and the seventh grade students of MTs Ma'arif Sidomukti who learn without Wordwall online games. Therefore, it can be concluded that Wordwall online games significantly influence student's grammar quality.

Based on those results above, researchers then conclude that wordwall online games can significantly influence students' grammar quality. It is also recognised by Hashim (2019) in which mentions that using gamified-learning is effectively uses in learning grammar. Furthermore, study conducted by Cuesta (2020) reveals that the use of digital games helped the participants improve their grammar and vocabulary knowledge as they showed better performance. In addition learning grammar through the use of online language games, makes students get better results.

## V. Conclusion

The purpose of the study was to find out the significance of Wordwall online games influence grammar equality junior high students. The research question is answered by comparing the achievements of grammar test between the groups in which Wordwall online games are applied and the other one is without Wordwall online games. The present study used pre-test to see students' initial ability in grammar quality. Based on the pre-test, both classes' achievement were equal. After the pre-test, different treatments were given to each group. After that, post-test was administered to find out the achievement between two groups after treatments. In details, the result of post test showed the sig. value of both groups was 0.002. It was indicated that the probability value higher than the level of significance 0.05 ( $0.002 < 0.05$ ). In other words, there was significant difference between two groups.

From the statistic finding, it could be concluded that Wordwall online games used in experimental group is more influential than without Wordwall online games in the control group in grammar quality. In other word, wordwall online games significantly influence student's grammar Quality.

## References

- Asari, S., & Maruf, N. (2022). Organizational Method of EFL Undergraduate Students' Academic Essay Writing with and Without Pre-Determined Topic. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 5(3).
- Brabham, E. G., & Villaume, S. K. (2001). Questions and answers — building walls of Words (vol.54). US: International Literacy Association.
- Byrne-Davis, L., Dexter, H., Hart, J., Cappelli, T., Byrne, G., Sampson, I., ... & Lumsden, C. (2015). Just-in-time research: a call to arms for research into mobile technologies in higher education. *Research in Learning Technology*, 23.
- Castañeda, D. A., & Cho, M. H. (2016). Use of a game-like application on a mobile device to improve accuracy in conjugating Spanish verbs. *Computer Assisted Language Learning*, 29(7), 1195-1204.
- Castillo-Cuesta, L. (2020). Using digital games for enhancing EFL grammar and vocabulary in higher education. *International Journal of Emerging Technologies in Learning (iJET)*, 15(20), 116-129.
- Hasram, S., Nasir, M. K. M., Mohamad, M., Daud, M. Y., Abd Rahman, M. J., & Mohammad, W. M. R. W. (2021). The effects of wordwall online games (Wow) on

- english language vocabulary learning among year 5 pupils. *Theory and Practice in Language Studies*, 11(9), 1059-1066.
- Jenkins, H. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century* (p. 145). The MIT Press.
- Koehler, M. J., Mishra, P., & Cain, W. (2013). What is technological pedagogical content knowledge (TPACK)?. *Journal of education*, 193(3), 13-19.
- Magasvaran, V., Ukat, J., & Yunus, M. M. (2021). "Catch and Keep" Through Wordwall in Improving Vocabulary Mastery among Year 3 Pupils. *Research & Design in Challenging Environment*.
- Maruf, N., & Anjely, A. M. R. (2020). Utilizing Cooperative Integrated Reading and Composition (CIRC) with mobile learning to enhance students' reading comprehension. *British (Jurnal Bahasa dan Sastra Inggris)*, 9(2), 10-19.
- Mohammed, D. A. (2011). The effect of using a program based on functional Grammar on enhancing EFL pre-service Teachers' Grammatical competence, oral communicative competence and cultural awareness. *Unpublished doctoral dissertation, Minia University*.
- Mubaslat, M. M. (2012). The Effect of Using Educational Games on the Students' Achievement in English Language for the Primary Stage. *Online Submission*.
- Purwantoro, A., Asari, S., & Maruf, N. (2021). The effectiveness of E-Learning madrasah in English teaching and learning. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 4(3), 5234-5244.
- Safitri AMN, Mustiningsih, Timan A, Dwi KR, Ghasa F, Argadinata H and Fahmi, AK (2020) Curriculum Management Strategies as Efforts to Improve the Effectiveness of Early Childhood Learning during the Covid-19 Pandemic. 1st International Conference On Information Technology And Education (ICITE 2020) (pp. 326-331). Indonesia: Universitas Negeri Malang.
- Simard, D., & Jean, G. (2011). An exploration of L2 teachers' use of pedagogical interventions devised to draw L2 learners' attention to form. *Language Learning*, 61(3), 759-785.
- Zuhri, S., Anwar, K., & Maruf, N. (2021). The Correlation Between Extensive Reading, Critical Reading, and Self-Esteem in Students' Reading Abilities. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 4(3).