



The Effect of TTW With Mobile Games in Learning Vocabulary for English Students of UNIPA Kampus Blitar

M. Alimul Huda⁽¹⁾, Annisa Rahmasari⁽²⁾, Feri Huda⁽³⁾

Universitas PGRI Adi Buana Kampus Blitar, Indonesia

E-mail: ⁽¹⁾alimulhuda75@gmail.com, ⁽²⁾annisarahmasari87@gmail.com,
⁽³⁾hudaferi@gmail.com

Received: 11 November 2023; Revised: 26 November 2022; Accepted: 28 November 2022

Abstract

Teaching English for English students of Unipa Kampus Blitar is based on vocabulary approach that involves worksheet. The problem is they have low vocabulary mastery. This project aims to investigate the potential of Think Talk Write (TTW) mobile games for language instruction. It was conducted to find out its effectiveness. The method used is quasi-experimental. The result shows $F = 27.108$. The probability (P) TTW with Mobile game shows 0.000. Class using TTW with Mobile Games shows mean 74.347 and class learned without treatment shows 59.811. When playing mobile games, the class utilizing TTW has a higher mean value. In conclusion, students can use TTW with Mobile Games to learn English for better vocabulary achievement.

Keywords: effectiveness, learning, mobile games, think talk write, vocabulary

Introduction

Learning English is right choice for present students in this modern era. One needs it at work, at school, in the office, and in various other places to interact with other people from different cultures or other needs. The widespread global use of English in national academic communities therefore poses special challenges for non-native speakers. Some countries, like usually do not use it because English is not used as a second language but in many countries, this language is still a foreign language, for example in Indonesia.

English is rarely used in everyday life in Indonesia because even though it is taught in schools from elementary school to high school, it is nowadays officially called 'the first foreign language of the country. This matter causes students face a lot of obstacles, for example due to not to be used in daily life, the four language skills of English language proficiency—listening, speaking, reading, and writing—are challenging for students to acquire.

Most educators believe that vocabulary instruction is critical in any classroom (Allen, n.d.). Vocabulary is an important aspect of language learning. As English is widely used as an

international language, mastering English vocabulary has become essential for non-native speakers of English. Vocabulary knowledge is a crucial element of language proficiency, and it is a vital component in English language learning. A good vocabulary foundation can help learners to communicate effectively and efficiently in English, both in writing and speaking.

Vocabulary also supports all four skills. When people listen to something in English with vocabulary they understand, they can easily understand the meaning of what they hear. Likewise, when students want to communicate an idea or concept, they need a vocabulary from which they can choose to convey it. With the vocabulary that students have mastered, learning to read will be fascinating because they will understand each word used.

The usefulness of the Think Talk Write (TTW) technique for vocabulary acquisition when combined with mobile gaming is the focus of this study. This study is necessary because acquiring vocabulary is a crucial part of learning English.

However, due to time constraints and the sheer volume of vocabulary that needs to be learned, pupils frequently struggle to acquire

English vocabulary. Besides the ways of learning it is less interesting because students learn it traditionally. Therefore, the more effective and efficient learning models are needed to help them strengthen their vocabulary mastery. The biggest obstacle for students in learning the four English language skills is the lack of vocabulary mastery.

Students frequently simply mimic what lecturers and teachers say when they are studying, not understanding the meaning of the phrases they are picking up. Therefore, they need to develop vocabularies which are an important factor in English. When studying English, vocabulary development is an important factor for students. The data is based on the result of the questionnaire given to a number of English students in UNIPA Kampus Blitar. It showed that first, all of students learn English at present. The second, it showed that their age is around 19 to 22 years old. The Third, there are 61.5% who play games are girls and 38.5 are boys. The fourth, most of them are in the fourth semester. The fifth, all of the students have ever played game. The sixth, smart phone is the most used media for playing. The seventh, the problems come due to some factors like those that the method of teaching cannot run well or low motivation in learning and the learning process often looks monotonous.

Some researchers have showed that the implementation of TTW were effective to learning English. (Amalia, 2019) said Think Talk Write is effective in developing SMP Datuk Sulaeman Putri Palopo students' English vocabulary. (Undikma, 2020). She has said The Think-Speak-Write strategy has a positive impact on first grade students' ability to master vocabulary SMPN 5 Praya 4. Before the existence of internet, students usually studied with media that were not connected to the internet, in other words, generally in learning English vocabulary, it was done using manual books, magazines, newspapers, dictionaries, etc. Technology is now very fast and makes many ways to learn English vocabulary more varied. This can be known by the existence of many electronic library sites that provide millions of reading resources that can be accessed easily. Mostly these sites provide learning resources, both free and paid. On the other hand, the development of this technology affects students' learning patterns, including how to learn vocabulary.

As an example, the internet is a tool that

has become very important for students to access something like video games. Lately, more and more people, especially, start playing various video games. At first, video games are not very useful in the process of obtaining new vocabulary, due to the fact that first, the game consists mostly of a group of shapes created just to move towards another object, without any depth in the game other than just reflexive test. For example, every student at school or campus has a cell phone. Apart from being a communication tool nowadays, cell phones can be used to learn English. On the other hand, many of them have their own ways to learn English with different media, for example through mobile games because they like games a lot. There are many games that make students are willing to learn English because in the game there are a lot of new vocabularies that makes them add new words in using English. For instance, puzzles in English or games where you have to guess the meaning of words. These games can make students learn new vocabulary in English. In the world of education, students cannot be separated from the use of gadgets such as laptops, cell phones, tablets, and others. Most of them bring a cell phone wherever they are like at school, campus, or at home. This can be used as one the reasons that learning English vocab can be done by using this media. It cannot be denied that the development of technology has an effect on changing the method of student learning now.

There are various ways to learn vocabulary. One of them is using Think Talk Write (TTW) with mobile games. This is a teaching strategy that combines writing, discussion, and reflection to enhance students' understanding and comprehension. This learning method requires students to read a specific text or reading material, then they are asked to think about the main ideas related to the reading material and talk with their partners to strengthen their understanding of the topic discussed. After that, teacher asks students to write the topic that they have learned. In this research, the TTW learning method will be used together with mobile games to strengthen students' understanding of English vocabulary. This research will evaluate whether the use of this learning method can be used effectively to learn vocabulary. Mobile games, on the other hand, have gained popularity as an effective tool for learning due to their engaging and interactive nature. In earlier research, the use of mobile games for language acquisition was examined. For ex-

ample, Furthermore, (Huang et al., 2017) stated that mobile games could facilitate learners' engagement and motivation in English learning. Despite the positive findings, there is limited research examining the effects of TTW with mobile games in vocabulary learning for university students, especially in Indonesia.

Based on the identified problems related to English vocabulary, a research study is conducted to evaluate the effects of using Think Talk Write with mobile games in learning English vocabulary for English students in UNIPA Kampus Blitar.

Materials and Method

Material

Learning vocabulary is essential to learning English. It is the component that ties together the four abilities of writing, speaking, listening, and reading. (Huyen & Nga, 2008) A strong vocabulary is necessary for learners to grasp all of these skills. Students absorbing a sufficient number of words will help them easily master English skills.

If students have a strong vocabulary, they will be able to express their thoughts both orally and in writing and comprehend what others are saying.

If all of your time is spent on grammar, you won't get much better at English. Acquiring knowledge of terms and expressions will accelerate your growth (Thornbury, 2002). This can be explained that when a student wants to improve the four English language skills, he should spend much of his time to learn words and expressions. Having a lot of words mastery will enable students to speak or to write expressing their thoughts although they might make some mistakes grammatically. Having a lot of words also enable the students to understand some reading materials such as magazine, on line journal, news, reports etc. in which they are important to improve their English overall. Grammar is something that relatively few people can discuss, although words are necessary for speech. These proverbs demonstrate how crucial vocabulary is to learning a language. Vocabulary has an equally significant role in this situation as grammar.

Students who lack vocabulary will find it difficult to communicate their ideas clearly, which will make learning English very tough. As a result, vocabulary plays a crucial part in the acquisition of English since it enables stu-

dents to master language abilities.

But the methods used to teach vocabulary now are not just a resurgence of those used fifty years ago. Lexical forms are no longer considered lengthy, tedious lists of words to learn and memorize, but rather as essential components of meaningful, contextual language. (Brown, 2000) Since learning vocab is not easy for years, and the finding the effective method for teaching it is also hard work, the present model of learning can still be used in such a way by combining with the development of advanced technology. There are a number of study guides with modern media that can be applied to the communication process in vocabulary teaching; Set aside dedicated study time for vocabulary learning in the first place. Next, assist students in learning vocabulary in context. Thirdly, reduce the importance of bilingual dictionaries. Fourthly, encourage students to develop word meaning comprehension strategies. Fifth, engage in "unplanned" vocabulary instruction.

In general, vocabulary is the understanding of word meanings. The fact that words exist in at least two formats—oral and written—complicates this definition (Helwig et al., 2005). Oral speech is the vocabulary form used when someone speaks or reads aloud. On the other hand, vocabulary will emerge in printed form when someone writes or reads silently. Additionally, they mentioned that language is divided into two categories: receptive and productive. These kinds are described below;

A person's effective vocabulary is the collection of words they can utilize in both writing and speech (Helwig et al., 2005). When someone says or writes something, they often use familiar words to express their thoughts. The quality of expression will depend to someone mastery of vocabulary. If he has a lot of words choice during communication, someone usually will also use appropriate word diction to make his communication better. These are common, well-known, and commonly used term (Hatch & Brown, 1995). Although Hatch and Brown contend that words that children can comprehend, pronounce accurately, and utilize effectively in speaking and writing are part of an effective vocabulary (Hatch & Brown, 1995). This means that when students can have these abilities in using words when speaking and writing, they have been categorized as productive students in using vocabulary.

The collection of words to which a person can give meaning when reading or listening is known as their receptive vocabulary. These are

uncommon terms that pupils frequently don't know well (Helwig et al, 2005). Words that pupils recognize and comprehend when they appear in context but are unable to appropriately express are included in their receptive vocabulary (Hatch & Brown, 1995).

Teachers and scholars are paying close attention to game-based learning in the twenty-first century. According to Qian and Clark, game-based learning techniques can be useful for fostering development. develop students' skills in the 21st century. College students participating in this experimental study will learn English vocabulary through a mobile application that combines game-based learning with integrated mobile learning.

Teachers and scholars are paying close attention to game-based learning in the twenty-first century. According to Qian and Clark, game-based learning techniques can be useful for fostering development, develop students' skills in the 21st century. College students participating in this experimental study will learn English vocabulary through a mobile application that combines game-based learning with integrated mobile learning. The use of educational games or different software programs that include games in lessons or improve learning efficacy is known as "game-based learning" (GBL). The Think Talk Write method is a strategy that integrates three stages: think, talk, and write. This method of collaborative learning entails students coming up with ideas, talking about them with classmates, and writing them down. The TTW method is aimed at developing students' critical thinking, communication, and vocabulary skills to enhance their learning motivation and engagement. In the first stage, students are given a topic or problem and are asked to think and brainstorm individually. They are urged to come up with as many concepts as they can about the subject. In the second stage, students share their ideas with their peers in small groups or pairs. They are given the opportunity to discuss their ideas, clarify their understanding, and learn from their peers' perspectives. In the final stage, students write their own responses or essays based on the ideas and discussions they have had. Numerous investigations have documented the efficacy of the TTW approach in enhancing pupils' writing abilities. For instance, Prastiwi has demonstrated the efficacy of the think talk write technique in facilitating vocabulary instruction. Conversely (Prastiwi, 2018). Qomariyah asserts that Think-Talk-Write

(TTW) is efficacious due to the observed differences in pre- and post-test scores between the experimental and control groups, as well as the evident impact of TTW on students' vocabulary knowledge (Qomariyah, 2020).

Think Talk Write

Think Talk Write is an educational technique that improves students' thinking and writing skills. Here are some general steps to teach TTW: first, Think: Begin by giving students a prompt or a question related to the topic being studied. Students should spend some time thinking about their responses to the prompt. Second Talk: Next, students discuss their responses to the prompt in pairs or small groups. This step helps students clarify their ideas and develop their speaking skills. Third, Write: Students then write a short paragraph or essay based on their discussions. This step allows students to practice their writing skills and express their ideas in a written form. Fourth, Share: Finally, students share their written work with the class, either by reading their work aloud or by displaying it on a projector. This step provides an opportunity for students to receive feedback and learn from their peers.

Think Talk Write (TTW) can be taught using a variety of methods, including through the use of mobile games. Here are some general steps to teach TTW using mobile game: First, Select a game that is related to the topic being studied. The game should have features that allow students to engage in critical thinking and promote discussion. Second, have students play the game individually or in pairs. Encourage them to think about the game's content and how it relates to the topic being studied. Third, After playing the game, have students discuss their thoughts and ideas with their classmates. This step promotes discussion and provides an opportunity for students to clarify their ideas. Fourth, ask students to write a short paragraph or essay based on their discussions. This step allows students to practice their writing skills and express their ideas in a written form. Fifth, finally, have students share their written work with the class. This step provides an opportunity for students to receive feedback and learn from their peers.

Using mobile games to teach TTW can provide a fun and engaging way for students to learn and practice critical thinking, speaking, and vocabulary and writing skills. It also allows students to use technology that they are familiar with and can be easily integrated into classroom lessons.

Table 1. Pretest-Posttest Design for Non-randomized Control Group

Group	Pre-test	Treat-ment	Post-Test
Experimental Group (C sem4)	Y1	X1	Y2
Control Group (A sem4)	Y1	-	Y2

Table 2. Test of Between-Subject Effects

Tests of Between-Subjects Effects					
Dependent Variable: posttest					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1348.624 ^a	3	449.541	4.952	.006
Intercept	6985.486	1	6985.486	76.957	<.001
techniq	23.397	1	23.397	.258	.615
pretest	1001.327	1	1001.327	11.031	.002
techniq * pretest	12.137	1	12.137	.134	.717
Error	3086.218	34	90.771		
Total	208986.000	38			
Corrected Total	4434.842	37			

a. R Squared = .304 (Adjusted R Squared = .243)

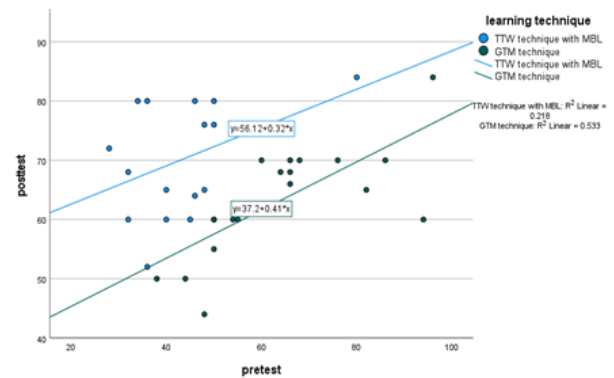
Table 3. Levene's Test of Equality of Error Variances^a

Levene's Test of Equality of Error Variances ^a			
Dependent Variable: post test			
F	df1	df2	Sig.
1.500	1	36	.229
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + pretest + technique			

Table 4. Tests of Between-Subjects Effects

Tests of Between-Subjects Effects					
Dependent Variable: post-test					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1719.737 ^a	2	859.869	15.966	.000
Intercept	5396.061	1	5396.061	100.191	.000
pre-test	1135.500	1	1135.500	21.083	.000
technique	1460.006	1	1460.006	27.108	.000
Error	1885.026	35	53.858		
Total	174589.000	38			
Corrected Total	3604.763	37			

a. R Squared = .477 (Adjusted R Squared = .447)

**Figure 1.** Scatter Plots**Table 5.** Leaning Technique**Leaning Technique**

Dependent Variable: post-test				
Learning technique	Mean	Std. Error	95% Confi-	
			Lower	Upper
TTW technique with	74.347 ^a	1.835	70.623	78.072
GTM technique	59.811 ^a	1.835	56.086	63.535

a. Covariates appearing in the model are evaluated at the following values: pre-test = 54,92.

Method

In this study, quantitative research was applied. This study also used a non-randomized pretest-posttest control group design.

Description:

- Y1 : Pre-test observation
- Y2 : Post-test observation
- X1 : Treatment on TTW Method with mobile game

The table 1 are the research procedures: First, identify the population and sample; second, set up the research instrument; third, test the instrument; fourth, administer a pre-test to both the experimental and control groups; fifth, use TTW for experiment group instruction and GTM for control group instruction; sixth, administer a post-test to gather information on students' vocabulary skills; and seventh, compare the means of the treatment and control groups to determine whether different teaching strategies will yield different outcomes. Eighth, determining the importance of the outcome of the various treatments by statistical analysis of the data. TTW effect significance analysis following learning model implementation.

Because this study employed a non-randomized pre-test-post-test control group design, the ANCOVA formula was utilized by the investigator to support the hypothesis. (Julie Pallant, 2001) she further claims that in order to account for pre-existing disparities between groups, the pre-test results are handled as a covariate.

Results and Discussion

Due of the non-randomized pre-test-post-test control group design of the study, the investigator utilized the ANCOVA formula to support the hypothesis. Pallant states that prior to performing an ANCOVA, the researcher should have tested at least two assumptions: the linearity of the relationship between the covariate (pre-test) and dependent variable (post-test) and the homogeneity of regression slopes (J Pallant, 2005). The entire findings of the tests for linearity, homogeneity of regression slopes, Levene's test of error variances, hypothesis testing, and research assumptions are discussed in the following paragraphs.

To investigate the hypothesis, there would be a linear relationship between the covariate (pre-test) and the dependent variable (post-test).

The result of linearity presents in the figure 1.

Based on the scatter plots in figure 1, the R-squared values indicated the strength of the relationship between the covariate (pre-test) and dependent variable (post-test). It displayed each group's linear, or straight-line, relationship. Pallant suggests that if the results show a curvilinear relationship, the researcher should think twice before using the covariate. As an alternative, they might attempt altering the variable and rerunning the scatter plot to see if it is helpful. If the data did not follow a curvilinear pattern, the research quality was adequate. For this reason, in summary, the linearity assumption was maintained. Between the pre- and post-test, the score rose, according to the straight linear.

The relationship between the covariate (pre-test) and the dependent variable (post-test) for each group is the focus of the homogeneity of the regression slope test. It is employed to determine whether the treatment (an independent variable) and the covariate have a statistically significant interaction. The Table 2 provides a statistical evaluation of this premise.

Pallant states that the study has violated the premise if an interaction is significant at the 0.05 alpha level (J Pallant, 2005). In this case, the pur-

pose of the study is not to achieve a vital result. If not, a significance value greater than 0.05 is required to perform ANCOVA.

A significant value of 0.717 was obtained from the Group*Pre-test data, suggesting an output above the 0.05 level. The idea that the regression slope was homogeneous was refuted by this investigation. It suggests that the result did not defy the assumption. This discovery allows for the processing of ANCOVA analysis as the next step.

Levene's Test of Equality of Error Variances can be used by the researcher to confirm that she has not violated the equality of variance assumption. (J Pallant, 2005) According to her, the significant value for the outcome must be higher than 0.05. The variances are not equal and the result has broken the assumption if this number is less than 0.05, which indicates that it is significant. The result can be shown in Table 3.

Since the significant value of Levene's Test of Error Variances was 0.229, which was much higher than the 0.05 cut-off, the study's outcome was deemed adequate. The investigator may assert that there has been no violation of the assumption.

Finding the results of the hypothesis test was the next stage in analysing the study's findings. When the significant value is less than 0.05, there is a significant difference between the two groups in this research: the experimental group using TTW with a cell phone and the control group using GTM. (J Pallant, 2005). Additionally, she claimed that, after adjusting for results on the Fear of Statistics test given before the intervention, there is a significant difference in the respondents' Fear of Statistics scores between the two groups if the result is less than 0.05 show in table 4.

The results of this investigation were $F(27) = F 27.108$, $P 0.000 < 0.05$, and they were shown in a table (labeled Group on the SPSS output). This led to a substantial difference in the output produced by the experimental and control groups, and the analysis concluded that the null hypothesis which claims that the two methods TTW with a cell phone and GTM should be rejected.

According to the table 5, students taught using TTW with a mobile phone had an estimated marginal mean of 74.347, while students taught using GTM had an estimated marginal mean of 59.811. These findings provided

an answer to the hypothesis that students taught using TTW on a mobile phone performed better in writing than students taught with Grammar Translation Method.

The assumption of this research stated that the student's writing achievement on descriptive text was influenced by the method applied by the teacher, TTW with mobile phone and GTM, which were supposed to give different influences on the students' English achievement in writing skill were proved right.

Conclusion

The nature of this study was to determine how well language can be learned by playing mobile games with the TTW. When taught with Think Talk Write, the students outperformed those who were taught with GTM. In tests of linearity, homogeneity of regression slopes, and Levene's Test of Error Variances, the ANCOVA output produced a straight line at 0.420 alpha levels, 0.147 in Levene's Test, and so on. Next, when the estimated marginal Means table was 74.347 for the students taught using TTW with mobile phone and 59.811 for the students taught using GTM, the hypothesis test result was $F(27) = F 27.108$, $P 0.000 < 0.05$. The investigation was significant and did not deviate from the assumption, as shown by all of the preceding statistical indicators.

Suggestion

Paying attention at the result in this study, TTW with Mobile Games is a simple and effective method that listens the students' habit in learning that avoid them to learn monotonously. Students don't feel boring because of the media used in this method so they will get better result. When this method applies well in the class, students will understand the learning materials easily. In this case students can have more practice to their vocabulary mastery.

References

- Allen, J. (n.d.). *INSIDE ow*.
- Amalia, Y. (2019). Teaching English Vocabulary Through Think Talk Write Method. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 7(1), 1–7. <https://doi.org/10.24256/ideas.v7i1.733>
- Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (n.d.). *Introduction to research in education*.
- Brown HD - 2000 - *Teaching by Principles.pdf* (p. 377).
- Fraenkel R Jack & Wallen E Norman. (2009). *Design and Evaluate Research in Education*.
- Hatch, E. M., & Brown, C. (1995). Vocabulary, semantics, and language education. In *Cambridge language teaching library* (pp. xii, 468).
- Helwig, N. E., Hong, S., & Hsiao-wecksler, E. T. (2005). *Teaching and Learning Vocabulary*. Lawrence Erlbaum Associates, Inc.
- Huang, Y. L., Chang, D. F., & Wu, B. (2017). Mobile game-based learning with a mobile app: Motivational effects and learning performance. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, 21(6), 963–970. <https://doi.org/10.20965/jaciii.2017.p0963>
- Huyen, & Nga. (2008). *LEARNING VOCABULARY THROUGH GAMES*. 282.
- Pallant, J. (2005). *SPSS SURVIVAL MANUAL: A step by step guide to data analysis using SPSS for Windows (Version 12)*.
- Pallant, J. (2001). *SPSS Survival* (p. 295).
- Prastiwi. (2018). (TTW) IN TEACHING VOCABULARY AT SMP N 1 JENANGAN (TTW) IN TEACHING VOCABULARY AT SMP N 1 JENANGAN Presented to. July, 1–83.
- Qomariyah. (2020). *EXAMINING THINK-TALK-WRITE (TTW) STRATEGY IN STUDENTS' VOCABULARY MASTERY*. 8(1).
- Thornbury, S. (2002). *How to Teach Vocabulary.pdf* (p. 185).
- Undikma, F. (2020). *EXAMINING THINK-TALK-WRITE (TTW) STRATEGY IN STUDENTS' VOCABULARY MASTERY*. 8(1).