

The Effect of Minecraft Video Game on Students' English Vocabulary Mastery

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ABSTRACT

Vocabulary mastery is important to acquire a language. Learning vocabulary has several barriers that slow down the progress. Minecraft application is used as a new method of learning English vocabulary. The goal of this research was to investigate whether there is a significance positive effect after used Minecraft application on students' vocabulary mastery for 5th grade elementary students. A quasi-experimental method was used in this research with 63 students of SDN Poris Plawad 1 Tangerang, which separated into an experimental group (n=31) and a control group (n=32). The results revealed that Minecraft has better score result than the conventional method. Besides, the students' behavior also resulted to be better than the conventional method. The survey also revealed that the students agreed that Minecraft was making the learning easier, less boring, less stressful and happier. However, the results could not be generalized due to the small sample taken in this research.

Keywords: *English learning, improvement, minecraft, quasi-experiment, vocabulary mastery*

Introduction

Language is an important aspect in human civilization. It acts as the foundation for all learning and core content for children to know (Pandey, 2013) It is one of the human products that plays the role of the messages carrier from the sender to the receiver. Those messages contain meanings that can be understood. The language that one wishes to learn after his mother language is termed second language (L2). In order to understand a language that human produce which can be either L1 or L2, one surely must have a sufficient vocabulary (Bajohb Jafarian & Shoari, 2017; Alavi & Pourhosen, 2019). Vocabulary is one of the most essential in language learning. Many researchers agreed that vocabulary acts as a core, central to the language and one of the most important aspect of language (e.g. Nikoopour & Kazemi, 2014; Salehi, 2017; Alqahtani, 2015)

It is emphasized that vocabulary acts as the vital organ and the flesh of the language. It is also stated that learning grammar is less important than the vocabulary (Aslanabadi & Rasouli, 2013) By having sufficient vocabulary,

one can be able to produce language either spoken or written. Sufficient vocabulary is needed since the vocabulary is the main aspect of the language, like bricks, which we can build either houses, offices, or anything else. Therefore, we can conclude that without sufficient vocabulary, we cannot learn other parts of the language such as grammar.

Educators and parents believe that the Language in Europe especially English are more prestigious which could take the learners educationally further (Pandey, 2013). English language has a great size of vocabulary. According to Brysbaert et al. (2016) the average native speakers of English American approximately know 42.000 lemmas and 4.200 non-transparent multiword expression whose age 20 years old in average. This number is extremely shocking to the Indonesian students who wish to learn English vocabulary, making the process of the vocabulary learning frustrating. Besides, learning English vocabulary is considered as the difficult part of English learning by the English Learners (Derakhshan & Davoodi Khatir, 2015). Based on the statements

above, what makes the learning vocabulary difficult is the process of the learning which time-consuming.

In this era which the digital worlds and computers become the part of our life with no exception (Aghlara & Tamjid, 2011), the teachers in this case, should be able to find suitable method then apply it for vocabulary learning especially for Indonesian students who are considered as EFL learners. Using unsuitable method (e.g. traditional method) can lead to the students' negative perception about learning vocabulary (e.g. students found it too difficult and make them bored easily). It does not make the memorization lasts long as well (Wahyuni et al., 2018).

By using suitable methods, it does not mean the vocabulary learning become easier. Instead, the students feel more comfortable, less boring and less stressed. Students also do not realize that they are actually studying while using the video games for improving their vocabulary mastery. One of the methods of increasing vocabulary mastery is using video games. By using the multimedia such as video games, students' performance in learning language is significantly increased (Salehi, 2017), make the players pick up the necessary vocabulary as they perceive certain tasks to be completed (Begg et al., 2005). The students could concentrate well on the vocabulary acquisition in the contextual usage (Salehi, 2017) which speed up the learning process of vocabulary mastery (Pérez et al., 2018). Besides, video games make the environment friendly competitive, collaborative (Sorayaie-Azar, 2012), motivating (Ebrahimzadeh & Alavi, 2017), interesting and effective as well. One of the researchers (Nikoopour & Kazemi, 2014) stated that students can freely use video games to improve their vocabulary mastery outside of the classroom.

This paper used Minecraft as a medium for improving English vocabulary for elementary school students. Minecraft is a sandbox video game which is developed by Mojang and was launched to public in May 2009. This video game can be played either in PC or mobile phones (Minecraft: Pocket Edition). Minecraft lets the players explore a blocky world in which they can survive in either single-player or multiplayer mode. The players may be able to explore the infinity terrain. The Minecraft has two main game-mode namely: *survival* & *creative*. In survival mode, the

players must struggle to survive by gathering raw resources such as cutting trees, farming, herding, and mining, crafting the resources into something useful as well as completing several tasks.

The players can also create anything they want from the "blocks". In the video game, the players may interact with "villagers" if they find any villages. In survival mode, the players can be attacked, slain by the enemy that is called "hostile mobs". Contradicts to the survival mode, the creative mode allows players to play freely without any harm of the mobs or environmental hazards. The world in Minecraft is made realistically as it has several geographical features such as different biomes, caves, mines, dungeons, etc. It has also several kinds of weather features such as rain, thunder, day-night cycle, and snow.

Minecraft is highly popular around the world. According to Warren (2020) Minecraft is the most played video game with 126 millions of players monthly as its copies has been sold for more than 200 million. Since it is released, the Minecraft has won 7 awards from various gaming forum. (Minecraft Fandom, 2020). The writer chose this video game because it has extremely high content of vocabulary from different topics and its popularity. Recent study of Davis et al. (2018) investigated the students' practices in using Minecraft. Ten middle school students aged 11-13 participated in this research. The result showed that using Minecraft highly promoted collaboration and communication among the students. The students also participated more actively, more engaging and happy.

It is supported by Šajben et al. (2021) investigated the outcomes of Minecraft as an educational tool. The participant was 20 of 10-14 years old. The result showed that students become more focused to the study. The material given by using the Minecraft proven to be more effective and helpful. The interview resulted that the students agreed the Minecraft was very good, better than the teacher him-self and could promote the active involvement.

Method

This paper employed a quantitative method of research. To be able to solve the problem in this paper, the writer used a quasi-experiment with pre-posttest control group approach. The pre-posttest control group approach is a method that can compare the result between the pre-test and the post-test. The

purpose of this research is to reveal the effect of students' English vocabulary mastery by using a video game. The treatment for this research was using the video game: *Minecraft*.

There were 63 students of 5th grade elementary school participated in the research. The students were separated into two classes namely 5A (n=31) and 5B (n=32) which were experimental group and control group respectively. The writer conducted the pre-test to both group in order to ensure that both group has no significance difference.

The test consisted of 20 questions, which separated into 4 parts. Each part measures one of the four of vocabulary mastery indicators such as *meaning*, *writing*, *usage* and *pronunciation*. Each indicator has 5 questions. All of the questions were in form of written, while the *pronunciation* was in form of spoken. A test of questions validation conducted before the pre-test in order to obtain valid questions of pre-posttest. After a test validation, there were two main tests namely: the pre-test and the post-test. The pre-test was employed in order to discover the initial knowledge of the vocabulary. In order to get valid results, the mean score of both group should not significantly different.

The next step was the writer gave the survey to the students. This survey employed online with Google Form. The survey was employed in order to know the students' characteristics such as students' identity and parents' socioeconomic status. The writer then prepared the instruments of the research. Before the pre-test conducted, a validation of the test was employed. After that, the writer then conducted the pre-test to both group in order to ensure that both group has no significance difference.

After pre-test is conducted, the writer then taught both experimental group and control group. The writer made the RPP (teaching plan) for each group. The duration of teaching of both group was 2 x 30 minutes. The experimental group used the treatment, which was *Minecraft* application downloaded through the students' smartphones. The control group used the conventional method for teaching vocabulary. Due to the COVID-19 pandemic, the writer separated each group into 4 sessions that consisted of 7-10 students per session. The writer also employed an observation to the students' behaviors during the treatment namely: *participation*, *response* and *enthusiasm*. It was

done in order to reveal the difference of students' behavior for each group.

After the treatment conducted, the post-test and a survey then employed. The survey was done in experimental group which was asking about the students' experiences after using *Minecraft*. Then, the result of pre-test, post-test, observation and survey collected. The writer also inputted the data to Microsoft Excel 2013 for further analyzing by using SPSS version 255 program. The data was used to find out the learning outcomes in playing *Minecraft*. The last step was analyzing and calculating the data statistically in order to reveal the significance.

Finding and Discussion

Students' Mastery of English Vocabulary

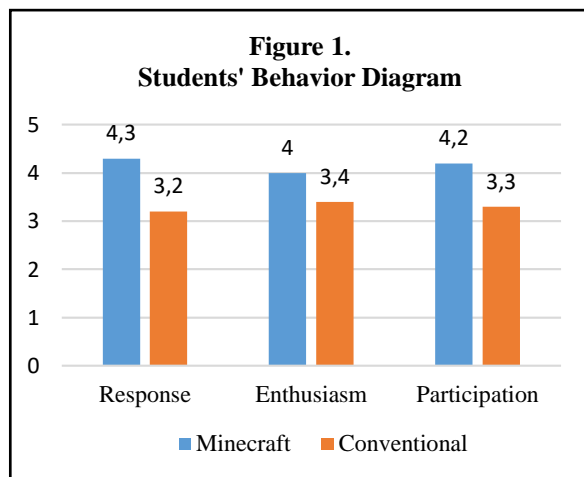
This analysis is to answer to the question "to what extent the students have been able to master their English vocabulary prior to this study begin?" based on the viewpoint of statistical analysis, theoretical perspective and relevant previous researches. In order to find it out, the writer pre-tested both experimental and control group. The test resulted mean score 41 & 40 for experimental and control group respectively. It indicated that the students' vocabulary mastery in SDN Poris Plawad 1 grade 5 was low prior to this research conducted. According to the score range category mentioned before, it was found that the mean pre-score of both groups were categorized as *insufficient*, which ranged 40-55. The result also showed that there were no students passed the Minimum Criteria of Mastery (KKM) in the pre-test. This revealed that, the method that used by the teacher was not effective enough to make the students master their vocabulary. The level of mastery of the students in both groups prior to the treatment were relatively homogeneous. This means that the higher post scores achieved by students in the experimental group is attributable to the treatment given in this study.

Several factors regress the students' vocabulary mastery. One of them has been stated by Aristya (2018) that the students do not learn the vocabulary at home. They lacked of interest and lacked of motivation in learning vocabulary. In this case, using a video game such as *Minecraft* could speed-up the students' vocabulary mastery. *Minecraft* could be played at home easily even without internet connection. It could improve the students' motivation and enjoyed learning without being forced as well.

That means, using a video game such as Minecraft could speed up the students' vocabulary mastery especially elementary school students.

Students' Perception after using a video game

The following analysis is to answer to the second research question "How are the students' perceptions after using a video game as a learning medium for mastering English vocabulary?" based on the statistical analysis, theoretical perspective and relevant previous researches point of view. To answer it, the writer conducted a behavior observation and a survey. It resulted that the students' behavior score in experimental group was higher than the control group. It was observed by the observer who is in 8th semester of English Education Department of UNIS Tangerang. The aspects observed consisted of three types of behaviors namely *response*, *enthusiasm*, and *participation*. Each indicator's score ranged from 1-5 categorized as *very bad*, *bad*, *enough*, *good*, *excellent* respectively. Experimental group students' behavior were averagely scored 4 which categorized as *good*. Meanwhile, the control group was averagely scored 3 which categorized as *enough*. The data was

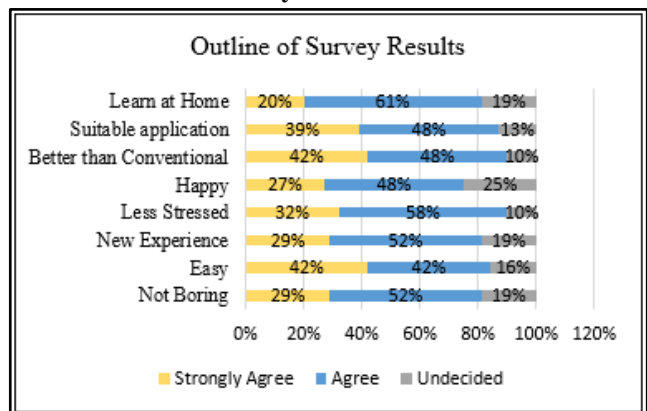


obtained by observing while the treatment stage.

As stated in previous chapter, response is the students' reactions during and at the end of learning. Enthusiasm is the students' motivation to have a good interest in learning without being forced. Meanwhile the participation is the students' awareness in participate actively and involved initiatively. Because each session could only be attended by small amount of students, the observer could observe the students more detail and accurately. The result indicated that using Minecraft, the students' behaviors were

better performed than the control group. Therefore, the writer concluded that Minecraft could improve the students' positive behaviors.

Figure 2
Survey Result



Based on the survey, more than 80% of the students agreed that using Minecraft made them less bored when learning vocabulary. They felt that using it could make the learning feel easier than the conventional method. 90% of the students also agreed that it was their first time using Minecraft as a medium for learning vocabulary at school. They also agreed that the method was better than the conventional one, and it was the suitable application for learning vocabulary while they were having fun, which can be played at home as well. Most of the students agreed that they felt less stressed when learning vocabulary because of the fun environment made them study happier. It indicated that using Minecraft could improve the students' positive perspective.

Study of Davis et al. (2018) investigated the students' practices in using Minecraft. There were 10 middle school students aged 11-13 participated in this research. Most of the students have experience in using Minecraft. The result showed that using Minecraft highly promoted collaboration and communication among the students. The students also participated more actively, more engaging and happy. Related research such as Tsai & Tsai (2018) revealed that using video game in learning vocabulary could help motivate and enhance the learning effectively. It is stated that using a video game the students became more self-motivated and learning in an environment with less pressure.

Şajben et al. (2021) investigated the outcomes of Minecraft as an educational tool. The participant was 20 of 10-14 years old. The result showed that students become more focused to the study. The material given by using

the Minecraft proven to be more effective and helpful. The interview resulted that the students agreed the Minecraft was very good, better than the teacher him-self and could promote the active involvement. Even though, the usage of Minecraft was highly time-consuming. It means that using a video game in learning vocabulary such as Minecraft could promote better students' perspective.

The Effect of Minecraft video game on students' vocabulary mastery

The following analysis is to answer to the third research question "Does Minecraft video game have any statistically significant positive effect on students' vocabulary mastery?" on the basis of the statistical analysis, theoretical perspective and relevant previous researches point of view. In order to obtain the third research question's answer, the writer conducted pretest, treatment and posttest. It resulted that Minecraft as the treatment of learning English vocabulary was better than the conventional one.

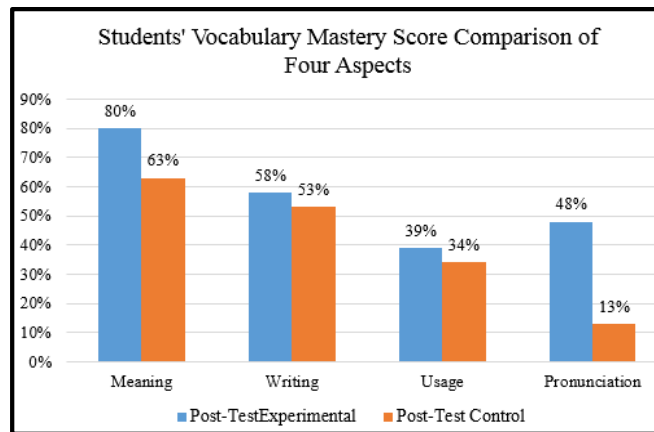
Based on the results, 39% of the students in experimental group passed the KKM criteria score which was 71. The mean score of posttest was 70.49, which categorized as *good*. It also increased significantly and 72% higher than the pretest mean score. The students who passed the Minimum Criteria of Mastery was 12 out of 31 students.

In contrary, only 15% of the students in control group passed the KKM criteria score. The posttest mean score was 64.50, which categorized as *enough*. It also increased significantly and 63% higher than the pretest mean score. The students who passed the Minimum Criteria of Mastery was 5 out of 32 students, which was 15% of the total amount of the students as stated before. This indicated that using Minecraft as a media for learning and mastering English vocabulary especially for the 5 grade students of SDN Poris Plawad 1 outperformed the conventional method as the percentage of the KKM achievement was more than twice higher.

Furthermore, the result of Independent Sample T-Test shown that the Sig. (2-tailed) was lower than 0.05 (.000) which means the H_a was accepted. It also showed that the Sig. was $0.08 > 0.05$ that can be indicated the data was homogenous. It revealed that there was a significance difference of mean score after using Minecraft as a learning method in mastering vocabulary. The gain score of students in experimental group was also better than the

conventional method. The efficacy of experimental group was 48% while the control group was 37%. However, both result of efficacy was categorized as medium efficacy.

Figure 2. Result Comparison of Students' Vocabulary Mastery Score



The students' vocabulary mastery score comparison that obtained from four aspects namely: *meaning*, *writing*, *usage*, and *pronunciation* can be seen on the graph above. The result obtained that 80% of the students in experimental group had score 80 or higher in *meaning* aspect while the control group had only 63%. It means that 37% of the students in control group got scores below 80 while only 20% in

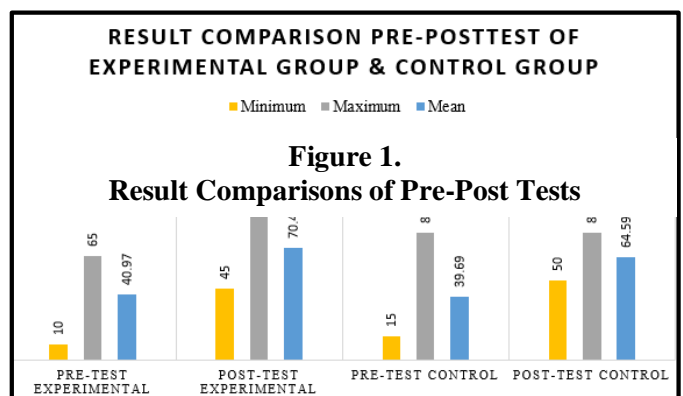


Figure 4. The Result on Comparison experimental group. The students' score in writing and usage aspects were not significantly different. The result showed that the *writing* aspect from both experimental and control group was 58% and 53% respectively. It means that almost a half of the amount of the students from both group had score lower than 80.

Meanwhile, the result obtained from the *usage* aspect from both experimental and control group was 39% and 34%. Although it was not significantly different, the experimental group in *writing* and *usage* aspects was 5% higher than

the control group. Lastly, 48% of the students in experimental group had score 80 or higher in *pronunciation* aspect while the control group had only 13%. This result showed that the score of *pronunciation* of experimental group was more than three times better than the control group. Based on the result obtained, the writer concluded that using Minecraft as a medium of learning vocabulary for 5 grade students in SDN Poris Plawad 1 had better result than the conventional method. Therefore, the writer concluded that Minecraft had statistically positive significant effect on students' vocabulary mastery.

Study conducted by Sundelin (2019) that Minecraft could help students of 4-6 grade learn a specific subject as it could give many ways to learn it. Using Minecraft could help promote collaboration when playing in multiplayer. It was suitable as a complementary in curriculum. Minecraft was also easy to use and easy to learn the navigation. The result also showed that using Minecraft could help the students improve their English four skills.

In addition, Salehi (2017) investigated an instructional video game in learning vocabulary. The participants were 60 pre-intermediate students chosen as the experimental group (25 males & 35 females). The result showed that using an instructional video game had significant effect on students' vocabulary mastery. It also revealed that using it could promote the students' motivation and better learning environment. That means using a video game had positive effects on students' vocabulary mastery, and it could improve the students' motivation and learning environment.

Based on the explanation above, it can be concluded that using Minecraft could be a helpful method in learning English especially vocabulary. It also improved students' learning behavior to be more positive. Even though, there is no perfect method of learning. There were some disadvantages in using Minecraft such as time-consuming method, and it needed a sophisticated media such as a smartphone. However, Minecraft is suitable as a complementary way of teaching vocabulary especially for elementary school students.

Conclusion

Based on the formulation and explanation above, it can be concluded that the students' mean score in experimental was higher than the control groups. In the pre-test, no students from both groups passed the KKM (Minimum Criteria

Mastery) which was 71. In post-test result, the students passed the criteria in experimental group was more than twice amount as the control group. However, there were still more than a half of the students in the experimental group did not pass the KKM. This means that several factors could affect the results such as the duration of the treatment.

It is then concluded that Minecraft could make the students in learning become better with respect to the behaviors based on the results of students' observation, their reaction to the Minecraft application-based vocabulary learning was even much better than that of the conventional method. The survey indicated that most of the students in experimental group agreed that learning vocabulary with Minecraft was better than that with conventional method of teaching. Most of the students also agreed that using Minecraft has been making the learning easier, faster, exciting-and happier. It is finally concluded that there was a positive effect in students' perspective after used Minecraft in learning vocabulary of 5 grade in SDN Poris Plawad 1 Tangerang.

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Reference

- Acquah, E. O., & Katz, H. T. (2020). Digital game-based L2 learning outcomes for primary through high-school students: A systematic literature review. *Computers and Education*, 143(August 2019), 103667. <https://doi.org/10.1016/j.compedu.2019.103667>
- Aghlara, L., & Tamjid, N. H. (2011). The effect of digital games on Iranian children's vocabulary retention in foreign language acquisition. *Procedia - Social and Behavioral Sciences*, 29(2010), 552-560. <https://doi.org/10.1016/j.sbspro.2011.11.275>
- Alavi, G., & Pourhosen, G. A. (2019). *The Effectiveness of Games in Enhancing Vocabulary Learning among Iranian Third Grade High School Students*. 16.
- Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, 3(3), 21-34.

- Alshaiji, O. A.** (2015). Video Games Promote Saudi Children'S English Vocabulary Retention. *Education*, 136(2), 123–132. <http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=111972214&site=ehost-live>
- Andreani, W., & Ying, Y.** (2019). “PowPow” interactive game in supporting English vocabulary learning for elementary students. *Procedia Computer Science*, 157, 473–478. <https://doi.org/10.1016/j.procs.2019.09.005>
- Arikunto, S.** (2006). *Prosedur Penelitian Suatu Pendekatan praktik*. Rineka Cipta.
- Arjoranta, J.** (2019). How to Define Games and Why We Need to. *The Computer Games Journal*, 8, 109–120. <https://doi.org/s40869-019-00080-6>
- Ary, D., Jacobs, L. C., Sorensen, C., & Razavieh, A.** (2010). *Introduction to Research in Education* (8th ed.). Wadsworth - Cengage Learning.
- Aslanabadi, H., & Rasouli, G.** (2013). The effect of games on improvement of Iranian EFL vocabulary knowledge in kindergartens. *International Review of Social Sciences and Humanities*, 6(1), 86–195.
- Bajohb Jafarian, R., & Shoari, E.** (2017). The Effect Of Games On Iranian Young Efl Learners’ Vocabulary Learning. *European Journal of English Language and Literature Studies*, 5(5), 12–24.
- Bakhsh, S. A.** (2016). Using Games as a Tool in Teaching Vocabulary to Young Learners. *English Language Teaching*, 9(7), 120. <https://doi.org/10.5539/elt.v9n7p120>
- Begg, M., Macleod, H. A., & Dewhurst, D.** (2005). Game-Informed learning: applying computer game processes to the higher education. *Innovate: Journal of Online Education*, 1(6).
- Brewster, J., Ellis, G., & Girard, D.** (2002). *The primary English teacher’s guide* (2nd ed.). Penguin Books.
- Brown.** (2003). *Language Assesment Principles and Classroom Practice* (3rd ed.). Pearson Longman.
- Brysbaert, M., Stevens, M., Mander, P., & Keuleers, E.** (2016). How many words do we know? Practical estimates of vocabulary size dependent on word definition, the degree of language input and the participant’s age. *Frontiers in Psychology*, 7(JUL), 1–11. <https://doi.org/10.3389/fpsyg.2016.01116>
- Chen, H. J. H., Hsu, H. L., Chen, Z. H., & Todd, A. G.** (2020). Investigating the Impact of Integrating Vocabulary Exercises Into an Adventure Video Game on Second Vocabulary Learning. *Journal of Educational Computing Research*. <https://doi.org/10.1177/0735633120963750>
- Chien, Y.-C.** (2019). The Language of Massively Multiplayer Online Gamers: A Study of Vocabulary in Minecraft Gameplay. *The Electronic Journal for English as a Second Language*, 23(3).
- Coady, J. Ohio U., & Huckin, T.** (University of U. (1998). Book Review: Second Language Vocabulary Acquisition: a Rationale for Pedagogy. *RELC Journal*, 29(1), 148–151. <https://doi.org/10.1177/003368829802900109>
- Damayanti, E.** (2019). *Makalah statistika induktif Uji paired sample t test, uji independent sample t test, Dan uji wilcoxon*.
- Davis, K., Boss, J. A., & Meas, P.** (2018). Playing in the Virtual Sandbox: Students’ Collaborative Practices in Minecraft. *International Journal of Game-Based Learning*, 8(3), 56–76. <https://doi.org/doi:10.4018/ijgbl.2018070104>
- Derakhshan, A., & Davoodi Khatir, E.** (2015). The Effects of Using Games on English Vocabulary Learning. *Journal of Applied Linguistics and Language Research*, 2(3), 39–47. www.jallr.ir
- Dickinson, P.** (2018). *In Kahoots: Learning Vocabulary with Learner-created Quizzes*. January, 2015.
- Ebrahimzadeh, M., & Alavi, S.** (2017). The Effect Of Digital Video Games On Efl Students’ Language Learning Motivation. *Teaching English with Technology*, 17(2), 87–112.
- Effendy, I.** (2016). Pengaruh Pemberian Pre-Test dan Post-Test Terhadap Hasil Belajar Mata Diklat HDW.DEV.100.2.a pada Siswa SMK Negeri 2 Lubuk Basung. *Jurnal Ilmiah Pendidikan*, 1(2), 81–88.
- Endacott, R., Benbenishty, J., & Seha, M.** (2010). Preparing research instruments for use with different cultures. *Intensive and Critical Care Nursing*, 26(2), 64–68. <https://doi.org/https://doi.org/10.1016/j.iccn.2009.12.005>
- Esposito, N.** (2005). *A Short and Simple Definition of What a Videogame Is*. <https://www.utc.fr/~nesposit/publications/esposito2005definition.pdf>
- Fajriah, I.** (2013). *Peningkatan Penguasaan Kosakata Bahasa Inggris Melalui Penggunaan Media Kartu Gambar Pada Siswa Kelas II SD Muhammadiyah Purwodiningratan 2 Yogyakarta*. Universitas Negeri Yogyakarta.
- Fraenkel, J. R.** (2012). *How To Design and Evaluate Research in Education* (8th ed.). McGraw-Hill.
- Fraenkel, J. R., & Wallen, N. E.** (2012). *How to Design and Evaluatte Research in Education*. McGraw-Hill.
- Gani, I., & Siti, A.** (2015). *Alat Analisis Data: Aplikasi Statistik untuk Penelitian Bidang Ekonomi dan Sosial*. Andi Publisher.
- Gee, J. P.** (2003). What Video Games Have to Teach Us About Learning and Literacy. *Technology Pedagogy and Education*, 1(1). <https://doi.org/10.1145/950566.950595>

- Gelderen, E. van.** (2006). *A history of the english language*. John Benjamins Publishing Co.
- Gyllenstig Serraro, F.** (2016). *Minecraft som pedagogiskt verktyg*. Natur & Kultur.
- Hamidah.** (2020). *The Effect Of Busuu Application Toward Students' English Skills And Learning Interest In English At First Grade Of SMAN 10 Kota Tangerang In Academic Year 2020/202*. Universitas Islam Syekh Yusuf Tangerang.
- Irianto, A.** (2007). *Statistik Konsep Dasar dan Aplikasinya*. Kencana.
- Jambor, P. Z.** (2007). English Language Imperialism: Points of View. *Journal of English as an International Language*, 2, 103–123.
- Joyce, P.** (2015). L2 vocabulary learning and testing: the use of L1 translation versus L2 definition. *The Language Learning Journal*, 46(3), 217–227.
<https://doi.org/10.1080/09571736.2015.1028088>
- Kominfo.** (2017). *Survey Penggunaan TIK Serta Implikasinya terhadap Aspek Sosial Budaya Masyarakat*. Puslitbangaptikaipk Kominfo.
- Kurniawan, A. ., Prastowo, P., Darussalim, & Harahap, L. P.** (2017). Antusiasme Belajar Siswa Kelas X Ilmu Pengetahuan Bahasa Pada Lintas Minat Biologi Di MAN 2 Model Medan. *Jurnal Pelita Pendidikan. JURNAL PELITA PENDIDIKAN*, 5(1), 108–117.
- Kusuma, F. W., & Aisyah, M. N.** (2012). Implementasi Model Pembelajaran Kooperatif Tipe Think Pair Share untuk Meningkatkan Aktivitas Belajar Akuntansi Siswa Kelas XI IPS 1 SMA Negeri 2 Wonosari. *Jurnal Pendidikan Akuntansi Indonesia*, 10(2), 43–63.
- Metacritic.** (2021). *Minecraft for PC Reviews*. Metacritic.
- Minecraft Fandom.** (2020). *Minecraft*. Minecraft Fandom.
- Muhridah, Y.** (2019). *Peningkatan Penguasaan Vocabulary Materi Transportation Melalui Media Mini Book Pada Siswa Kelas V B MI Al-Hidayah Sawotratap Gedangan Sidoarjo*. Universitas Islam Negeri Sunan Ampel Surabaya. Universitas Islam Negeri Sunan Ampel Surabaya.
- Nation, I. S. P.** (2001). *Learning vocabulary in another language*. Cambridge University Press.
- Newman, J.** (2004). *Video Games*. Routledge.
- Nikoopour, J., & Kazemi, A.** (2014). Vocabulary Learning through Digitized & Non-digitized Flashcards Delivery. *Procedia - Social and Behavioral Sciences*, 98, 1366–1373.
<https://doi.org/10.1016/j.sbspro.2014.03.554>
- Nunik, R.** (2012). *Difficulties In English Vocabulary Learning Experienced By The Eighth Grade Students Of SMP Negeri I Borobudur In The Academic Year Of*.
- Oktavianur, A.** (2016). *Pengaruh Penerapan Pendekatan Realistic Mathematics Education (Rme) Terhadap Kemampuan Komunikasi Matematika Siswa SMPN 21 Pekanbaru*. Universitas Islam Negeri Sultan Syarif Kasim Riau.
- Pandey, A.** (2013). Using Mother Tongues as Building Blocks in Childhood Education. *Childhood Education*, 90(1), 61–67.
<https://doi.org/10.1080/00094056.2014.872517>
- Pérez, M. E. de M., Duque, A. P. G., & García, L. C. F.** (2018). Game-Based Learning: Increasing the Logical-Mathematical, Naturalistic, and Linguistic Learning Levels of Primary School Students. *Journal Of New Approaches In Educational Research*, 7(1), 31–39.
<https://doi.org/10.7821/naer.2018.1.248>
- Perwitasari, N.** (2014). *Peningkatan Penguasaan Kosakata Bahasa Inggris Materi Family Melalui Lagu Pada Siswa Kelas V SDN Piyaman II Wonosari*. Universitas Negeri Yogyakarta.
- Putri, R. W. W.** (2013). *Improving vocabulary mastery of VII grade students in SMP 2 Grabag through gams in the academic year of 2012/2013*. Universitas Negeri Yogyakarta.
- Ratnasari, S.** (2017). *Pengaruh Model Pembelajaran Kooperatif Tipe Numbered Heads Together (Nht) Terhadap Peningkatan Keterampilan Sosial Dan Pemahaman Konsep Siswa Dalam Pembelajaran Ipa*. UNY.
- Saddam, I. M.** (2018). *The Effectiveness Of Mnemonics Device In Teaching Students' Vocabulary At Second Grade Of MTsN 2 Tulungagung*. IAIN Tulungagung.
- Šajben, J., Klimova, N., & Lovászová, G.** (2021). *Minecraft: Education Edition as a Game-Based Learning in Slovakia*. *IEEE Global Engineering Education Conference*.
<https://doi.org/10.1109/EDUCON46332.2021.9453953>
- Salehi, H.** (2017). Effects of using instructional video games on teaching English vocabulary to Iranian pre-intermediate EFL learners. *International Journal of Learning and Change*, 9(2), 111–130.
<https://doi.org/10.1504/IJLC.2017.084609>
- Simgih, A.** (2020). *wComparing The Effect Of Advance Organizers And Think-Pair-Share On Efl Learners' Listening Comprehension At Eleventh Grade Of SMAN 3 Kabupaten Tangerang In Academic Year*. Universitas Islam Syekh Yusuf Tangerang.
- Smolčec, M.** (2014). Using Minecraft for Learning English * * * On the Internet * * *. *The Electronic Journal for English as a Second Language*, 18(2), 1–15. <http://tesl-ej.org/pdf/ej70/int.pdf>
- Sorayaie-Azar, A.** (2012). The effect of games on EFL learners' vocabulary learning strategies.

- International Journal of Applied and Basic Sciences*, 1(2), 252–256. <https://doi.org/10.17142/ijbas2012.1.2.10>
- Stahl, S. A.** (2005). Four problems with teaching word meanings: (and what to do to make vocabulary an integral part of instruction). In *Teaching and Learning Vocabulary: Bringing Research to Practice*. <https://doi.org/10.4324/9781410612922>
- Sudijono, A.** (2018). *Pengantar Statistik Pendidikan*. Rajawali Grafindo Persada.
- Sugiyono.** (2011). *Metode Penelitian Pendidikan*. Alfabeta.
- Sundelin, M.** (2019). *Games in Second-Language Teaching: Using Minecraft to Facilitate the Development of Reading, Listening, Writing and Speaking Skills in English*. Mid Sweden University.
- Suryosubroto, B.** (2002). *Proses Belajar Mengajar di Sekolah*. PT. Rineka Cipta.
- Syamsiarna, N.** (2014). Peningkatan Penguasaan Kosakata Siswa Melalui Pembelajaran Bahasa Berbantuan Komputer. *Jurnal Teknologi Pendidikan*, 16(3).
- Uusi-Mäkelä, M.** (2015). Learning English in Minecraft: A Case Study on Language Competences and Classroom Practice. *School of Language, Translation and Literary Studies*, June. <http://tampub.uta.fi/bitstream/handle/10024/97626/GRADU-1435645627.pdf?sequence=1&isAllowed=y>
- Wahyuni, D., Fauzia, A., & Syafei, R.** (2018). The Use Of Action Bingo Game In Teaching Vocabulary To Elementary School. *Journal of English Language Teaching*, 5(1).
- Warren, T.** (2020). *Minecraft still incredibly popular as sales top 200 million and 126 million play monthly*. The Verge.
- Widiyanto, J.** (2010). *SPSS For Windows: Untuk Analisis Data Statistik & Penelitian*. BP-FKIP UMS.
- York, J.** (2016). *Minecraft and Language learning. October 2014*, 179–196.
- Yulianti, L.** (2005). *Pengembangan Program Pembelajaran Berorientasi Standar Proses Pendidikan*. Prenada Media Group.
- Zimmerman, E.** (2004). Narrative, Interactivity, Play, and Games: Four naughty concepts in need of discipline. *First Person: New Media as Story, Performance, and Game*.