



Video Game-based Digital Learning in the Development of Vocabulary Knowledge

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Histori Artikel:

Submit: 28 Januari 2023; Revisi: 28 Februari 2023; Diterima: 2 Maret 2023

Publikasi: 14 Maret 2023; Periode Terbit: Maret 2023

Doi: 10.23917/jkk.v2i1.56

Abstrak

The use of technology in learning is a necessity. One of the technologies that can be used in learning is video games because of their proximity to students. This study aims to describe the development of video game-based learning in learning English vocabulary. The approach used in this research is descriptive qualitative. The data in this study were collected by interview method. The findings resulting from this research are in the form of video games that are played by many students and can add to students' English vocabulary, namely video games in the form of online games such as Clash of Clans, RPG Toran online, and PC games in the form of FIFA 23. These games can help students improve vocabulary. English words through the hint language and the notifications that are in it. However, this method has a weakness in the form of unorganized vocabulary that students learn through video games and each student has a different level of vocabulary mastery according to the video game he likes.

Kata Kunci: video game, digital learning, vocabulary knowledge

Introduction

In this modern 21st century world, one of the biggest industries around is the gaming industry. Game in question is a program that was created by programmers and can use a varied device in order to play, such as PC, Xbox, and PS4. Further, they come in a lot of their own genres, and also different modes of play like online or offline game

and multiplayer or single player. Most of the people who like it are often children and even adults. They're usually called 'gamers' and they're in a community called 'community of gamers'. This situation requires teachers to innovate and adapt to the circumstances of students so as to change the learning model that is carried out (Nadia, 2021).



One of the interesting things about gamers from the perspective of linguists and quite possibly English language teachers is gamers' tendency to have mastery of English vocabulary that might be said to be above average than most. It might have something to do with the fact that the games that are famous worldwide often use English by default. And their player base is big, which includes people that don't have English as their native language. For that reason, gamers are more often exposed to and encounter the English language. Beside that, to fully enjoy the experience of playing games, they might start to want to improve their English language because using English feels more authentic. Using games as learning English is a form of integration of technology and learning which is a necessity in the digital era (Asfihana, 2016; Yansyah, 2018).

According to Ebrahimzadeh and Alavi (2017), the ways to teach informally like using video games in the classroom can give a sufficient environment to accommodate the learning of new vocabulary, especially on the part of memorizing and their use in everyday situations. The use of games in learning vocabulary encourages students to learn by doing and they don't feel forced to learn (Farid, 2019).

On this occasion, from the thesis that'll be made here, we'll try to develop further and process the idea that is Video Game-based Learning in the Development of Vocabulary Knowledge.

The language of communication that many nations use in their international diplomatic and other relationships is mainly conducted in English. The influence of the English language can be felt in a lot of field internationally, such as the industry of film, music, and literature. Product that success to reach global market in those field is mostly those that employed the English language. And so is the case with the gaming industry, the more popular video games usually have English as one of their language settings. Modern video games are made with realistic graphics and have interesting narratives, especially for children, so many people are interested in them (Rafidiyah, 2019).

Today's video games are not what they used to be, which were only able to contain minimal programming and as a consequence did not have a lot of content. Now, games can load more complex systems and fill them with interesting plots and gameplay, for example, Elden Rings. D. Rudis (2017) stated that this encourages gamers to interact internationally to discuss the content in the games they play. He also added that certain games like online multiplayer games have a voice chat feature, with this feature players can easily communicate with players in their team directly about how to work together. Overall, video games can provide an environment for absorbing and applying English language. So however varied their play style inside the game, gamers are more than likely



going to be exposed to English vocabulary.

The point above also indirectly says that video games affect the players in terms of their knowledge of English vocabulary. Thus, the role of video games in the acquisition of English vocabulary is worth ruminating over.

Everyone probably has experienced something called nervousness when taking a test. Because the test or exam is formal in nature, the person's mentality will definitely change too. The pressure is much greater. Because some of them seems to have lack of vocabularies, having anxiety and even having kind of grammar pressure when they speak up in English (Murtiningsih, 2018). In a way, that can also be the case of learning in a formal way, for example learning English in the classroom by following certain rules rigidly and not wanting to look for any other alternative path. It will have an impact on the learning process of students. Sometimes using a learning mode that is easier and one that students can enjoy has a good effect on students' learning abilities.

Just take for example, playing video games. Young children at the age of school children more than likely love to play games after school. Games, for most students, have been associated with entertainment to spend free time. They are used to it. If the teacher brings it into the classroom as a tool for learning, it can increase students' interest in learning English. For example, for students who like to read, games that

have stories in them will encourage students to read the dialogues throughout the game, and end up learning sentences and vocabulary. Even more so in the case of online games, which because of their own desire to communicate with other players, will require them to learn English to be able to communicate. And because these desires come from within themselves and therefore formed by their own will, it becomes easier because there is no coercion from other people.

Not all students can get adequate attention from the teacher when they attend the lesson in a classroom that uses the traditional method of learning. The theory that came out in recent decades is to apply lessons through digital video games. Abdulrahman Alamri (2016) writes that video games provide students with a safe environment where they can explore and apply practical experience in acquiring the English language. Furthermore, using video games as a teaching tool means the students can learn by themselves, or also known as student-centric. Given that the teacher knows how to give directions to the students in how to manage their learning, this is actually a great way to teach English vocabulary.

Students can play video games during school time during class hours and then continue at their homes. Naturally, the video games referred to here have content that is rich with English vocabulary, such as games in the adventure genre. With stories that are easy to understand and relatable,



students will discover vocabulary that they can use in their daily activities. After that, in the classroom, materials can be carried out that will use the vocabulary that has been obtained. Or even do the opposite, in the classroom first the new material is explained, and then students will be given suggestions for video game titles that have the vocabulary they need.

Therefore, the requirements to utilize this method of learning English vocabulary is the proficiency and familiarity of both students and teachers in managing their learning using video games.

Like stated previously, not all students' needs can be met in the traditional classroom. To address that, one of the methods that can be applied is by using video games. This method, for example, can help students that are afraid to speak up in the classroom to study by themselves. Video games are also the right place for them to start using their vocabulary knowledge in communicating with other people in real time.

Cabraja (2016) has done research on the effect of video games on receptive vocabulary proficiency. Receptive vocabulary refers to all the vocabulary that a person has the knowledge of in their mind, including spoken, written, or sign language. The method used is quantitative analysis from the data that they gathered by asking participants to take a part in a questionnaire and vocabulary levels test. The result is that

participants that spend more time playing video games have higher proficiency levels of vocabulary than those that do not spend much time on it. This research shows that video games do have its benefits in linguistics, as opposed to the negative effect that it may also be said to have.

Another research is done by Irfan, Ihsan, & Petrus (2016). Their participant is the eighth grader of SMP LTI IGM Palembang and the objective of the research is to find if there's improvement on their vocabulary after using rpg video games as teaching media and their opinion of using rpg video games in their learning. The method used in this study is single-subject and 18 series of meetings, which include a pre-test, two progress tests, and a post-test on the subject's vocabulary knowledge. The result shows significant improvement in the students' vocabulary achievement and the students like the teaching method used. Although some students still need help from the teacher and dictionary to understand the new vocabulary that they acquired, it also shows that video games is a legit teaching tool to use in the classroom.

Further research is conducted by Camacho Vásquez, G., & Ovalle, J. C. (2019) on the influence of video games on vocabulary acquisition of English course students. They ask the student to play two games, which is a puzzle action game and a real-time strategy game, respectfully. These two games were chosen for the direct vocabulary and reference vocabulary that they offer.



Direct vocabulary is the words that appear in the gameplay visually and interactively and the player has a need to know the meaning, like puzzle words. Reference vocabulary is the words that appear in the game to give explanation, like character's dialogue. They found students in the classroom to be more interactive and active, and the game can hold their attention. But, it matters for the teacher to be aware of what kind of vocabulary that they want to teach so as to find suitable games for it. For example, short conversation vocabulary can be found in games that have a modern setting and slice of life genre.

After the topic of this paper is decided, soon other previous research and journal is found for reference purposes. The one thing that stood out is the fact that almost all of them are done by asking teenagers and school students for research subjects. But, learning stops at only the twelve grade. Young adults and perhaps even adults can probably benefit from vocabulary learning based on using video games. Further, according to an internet article *Gamer Demographics: Facts and Stats About the Most Popular Hobby in the World* by Bojan Jovanovic (2022), the majority of gamers is adults, young adults, and then children under eighteen. Therefore, the participants of this paper are decided to be young adults as the middle demographics.

Method

The method used in this paper is descriptive qualitative. According to Kumar (2011), "a study in which the

main focus is on description, rather than examining relationships or associations, is classified as a descriptive study. A descriptive study attempts systematically to describe a situation, problem, phenomenon, service or programme, or provides information about, say, the living conditions of a community, or describes attitudes towards an issue". Participants will be divided into two groups, those who play video games in English language and those who do not. Both will be given some choice questions to determine their vocabulary knowledge proficiency.

The procedure is mostly done through online data gathering to reach out to more participants. Using phone calls, and chatting via social media. The procedure is decided because most gamers usually spend a lot of their time every day online. This way, it is hoped that this research can be conducted in a more socially friendly atmosphere.

The participants in this paper are, as discussed above, young adult gamers. Who, according to data, is the demographics with the most gamers after adults themselves. The participants have to be young adults, gamers, and available to contact via online.

Hasil dan Pembahasan

The finding of this study using interviews with several college students is that they like to play games when they have free time outside of school hours and if they're not busy. This makes learning more enjoyable and doesn't feel like work that they must do. The games that they play are mostly mobile online games like Clash of Clan and RPG Toram Online. One of them even plays games on PC like EA SPORTS FIFA 23.



Sometimes, when playing they come across new English vocabulary that they haven't learned before. They describe it as just a happenstance when they dedicated their time playing video games. They don't purposely search for it, but during the activity when they play they inevitably encounter the language that's programmed inside the game. This is proof that technology, especially video games, can help vocabulary learning (Murtiningsih, 2021).

Unfortunately, while they did learn vocabulary from playing video games, those words can be very specific and they don't quite have the environment and opportunity to use them in their everyday life. In the classroom itself, the knowledge might come useful but because they learn by themselves and not directed toward specific purpose the vocabulary might not be useful right away.

Furthermore, based on the interviews, the participants derive quite a satisfaction from learning through playing video games. Because the point of playing video games in itself is to find entertainment and learning vocabulary is just a beneficial by product. Although the learning comes across difficulty sometimes, because when they find a new vocabulary that'll mean a word that they don't know the meaning of yet.

And lastly, even though learning vocabulary through video games is not easy, the participants stated that they find it easier than learning from the traditional method in the classroom. It is

because of the difference in the way to obtain the vocabulary, in the classroom it is usually more confined to a curriculum and they have to do tasks while playing video games is a more relaxing activity.

Based on the interviews done with participants, video games are likely seen as an entertainment to do when people have free time. Because of that nature, people are more motivated and less encumbered by having this method to learn as opposed to doing tasks in the classroom. That's in line with a previous study done by Ebrahimzadeh, M., & Alavi, S. (2017), which is because the atmosphere created by playing digital video games is more comfortable and relaxing, it lead into less anxiety and seems to enhance learning in students.

This finding is also in line with the findings of Gok (2021) which shows that video games have the potential to be integrated with learning. Such integration will result in learning that is more innovative and varied as well as more interesting. Adhiana (2022) also proves that the use of technology in the form of games in learning can improve student learning outcomes. So that video games can help students achieve learning goals. Even games in the form of puzzles according to Sanjaya's (2023) findings when played at the beginning of learning can increase students' concentration in learning. So that learning can run optimally.

But it has to be considered that, most gamers usually only play games that interest them and as a consequence



are less focused than the learning that has a curriculum in the classroom.

Conclusion

Video Game-based Learning in the Development of Vocabulary Knowledge is a study focused on the effect of video games on the acquisition of English language vocabulary. The participants are young adults that play video games. The result is that learning through video games is easier and more enjoyable than the traditional method in the classroom, but it lacks direction and the implementation of the new vocabulary is less effective if not helped by a teacher. It might be worth it to do further research into that area to find suitable video games to enhance the learning inside the classroom

Reference

- Adhiana, V. I., Yuniawatika, Y., Ahdhianto, E., & Wantoro, J. (2022). Interactive Media Development Using Articulate Storyline-Based Instructional Games for Teaching Fractions. *Profesi Pendidikan Dasar*, 9(1), 15-27. <http://dx.doi.org/10.23917/ppd.v9i1.16927>
- Alamri, A. (2016). Should Video Games Be Included in the Learning Process? *International Journal of Education*, 8 (1), 23. <http://dx.doi.org/10.5296/ije.v8i1.8388>.
- Asfihana, R., & Yansyah, Y. (2018). Attitudes, Problems, and Factors Influencing the Use of E-Learning (Learning Management System) At Iain Antasari. *Journal MELT (Medium for English Language Teaching)*, 1(1), 78-91. <http://dx.doi.org/10.22303/melt.1.1.2016.78-91>.
- Cabraja, A. (2016). *The effects of video games on the receptive vocabulary proficiency of Swedish ESL students*. Swedish: Stockholm University.
- Chen, H. J. H., & Yang, T. Y. C. (2013b). The impact of adventure video games on foreign language learning and the perceptions of learners. *Interactive Learning Environments*, 21(2), 129-141. <http://dx.doi.org/10.1080/10494820.2012.705851>.
- 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. <https://eric.ed.gov/?id=EJ1140688>.
- Farid, R. N., & Yansyah, Y. (2019). Improving teaching and learning process through language games. *Comment: An International Journal of Community Development*, 1(3), 57-60. <http://journal.greenvisioneers.org/id/index.php/comment/article/view/45>
- Gök, M., & İnan, M. (2021). Sixth-grade students' experiences of a digital game-based learning environment: A didactic analysis. *JRAMathEdu (Journal of Research and Advances in Mathematics Education)*, 6 (2), 142-157. <https://doi.org/10.23917/jramathe.v6i2.13687>
- Horowitz, K. A. (2019). Video Games and English as a Second Language: The Effect of Massive Multiplayer Online Video Games on The Willingness to Communicate and Communicative Anxiety of College Students in Puerto Rico. *American Journal of Play*, 11 (3), 379-410.



- <https://eric.ed.gov/?id=EJ1220304>.
Irfan, I., Ihsan, D., & Petrus, I. (2016). Using RPG Video Games to Improve English Vocabulary Achievement of The 8th Graders of SMP LTI IGM Palembang. *Sriwijaya University Learning and Education International Conference*, 2 (1), 591-606.
<http://conference.unsri.ac.id/index.php/sule/article/view/49>.
- Jovanovic, B. (2022). Gamer Demographics: Facts and Stats About the Most Popular Hobby in the World (online). <https://dataprot.net/statistics/gamer-demographics/#:~:text=Key%20Gamer%20Demographics&text=The%20average%20gamer%20is%2035,of%20American%20gamers%20are%20female>.
- Murtiningsih, T. (2018). Teaching Speaking Through Substitution Drill Technique. *TEFLA Journal (Teaching English as Foreign Language and Applied Linguistic Journal)*, 1(1), 18-23.
<https://doi.org/10.35747/tefla.v1i1.195>
- Murtiningsih, T., Yansyah, Y., & Nadia, H. (2021). The Using of Google Form for Digital Evaluation for Senior High School English Teacher Association, Hulu Sungai Utara, South Kalimantan. *Comment: an International Journal of Community Development*, 3(2), 24-27.
<http://greenvisioneers.or.id/journal/index.php/comment/article/view/102>
- Mutiara Sofa. (2020). Strategi Pembelajaran Eyl (English For Young Learners) Di Sekolah Dengan Metode Song And Games. *Adz-Zikr: Jurnal Pendidikan Agama Islam*, 3(2), 51-64.
<https://doi.org/10.55307/adzzikr.v3i2.15>.
- Nadia, H., Yansyah, Y., Kailani, A., & Rafidiyah, D. (2021). English Teachers' Perception and Use of Technology During the COVID-19 Pandemic. *IJECA (International Journal of Education and Curriculum Application)*, 4(3), 150-158.
<https://doi.org/10.31764/ijeca.v4i3.4906>
- Rafidiyah, D., Adhitama, M. S., & Wianto, D. A. (2019). VIDEO Games: an Innovative Way to Master English. *TEFLA Journal (Teaching English as Foreign Language and Applied Linguistic Journal)*, 1(2), 15-19.
<https://doi.org/10.35747/tefla.v1i2.311>.
- Rasti-Behbahani, A. & Shahbazi, M. (2020). Investigating the Effectiveness of a digital game-based task on the acquisition of word knowledge. *Computer Assisted Language Learning*, 35 (8): 1920-1945.
<https://doi.org/10.1080/09588221.2020.1846567>.
- Rudis, D., & Pošćić, S. (2018). Influence of Video Games on The Acquisition of The English Language. *Verbum*, 8 (8), 112-128.
<https://www.journals.vu.lt/verbum/issue/view/1002>
- Sanjaya, Raden B. Y. G., Rahardian K., Sri M., Kukuh E. N. C. P., Restu R. (2023). Serious Game to Training Focus for Children with Attention Deficit Hyperactivity Disorder: "Tanji Adventure to the Diamond Temple". *Khazanah Informatika: Jurnal Ilmu Komputer dan Informatika*, 9 (1).
<https://doi.org/10.23917/khif.v9i1.18393>
- Vásquez, G. A., & Ovalle, J. C. (2019). The Influence of Video Games on



Vocabulary Acquisition in a Group of Students from the BA in English Teaching. *Gist: Education and Learning Research Journal*, 19: 172-192.

<https://eric.ed.gov/?id=EJ1237366>.

Yansyah, Y., Rafidiyah, D., & Nadia, H. (2018). Workshop on Technology for Autonomous Learning for

English Teachers and Lecturers in Indonesia. Comment: an International Journal of Community Development, 1(1), 12-17. <http://journal.greenvisioneers.or.id/index.php/comment/article/view/28>.