

The Impact of Gaming on English Language Learning among University Students

Muhammad Iman Marhalim, *Wardah Ismail, Doreen Azlina Ab.Rahman

Akademi Pengajian Bahasa, Universiti Teknologi MARA

*Corresponding Author

DOI: <https://doi.org/10.47772/IJRISS.2026.102100090>

Received: 10 July 2026; Accepted: 15 July 2026; Published: 25 July 2026

ABSTRACT

Video games have become one of the world's most popular forms of entertainment, attracting many people including teenagers and young adults. However, there has been a lack of research regarding video game usage in language learning among university students particularly UiTM students. This study aims to investigate the impact of video games on learning the English language among university students specifically targeting LG240 students from Universiti Teknologi MARA (UiTM), Shah Alam. The study used a quantitative method through an online questionnaire that was distributed to 54 students. The study aims to identify the video game genres that help improve English proficiency, students' attitudes in learning English using games and their relationship. The findings showed that video game genres have no significance in improving language proficiency. However, students portrayed positive attitudes after playing video games, therefore, motivation and enjoyment are strongly related to students' perception of language improvement. Despite this, distinct analysis methods are suggested to be used in future studies in order to strengthen the findings.

Keywords: (video games, language, learning, perception, motivation)

INTRODUCTION

English is used widely as an international language for communication such as to transfer information and conduct business. Considering the importance of English, it is crucial for students to master this language in order to prepare themselves for the real world. Educators perceive the potential of using games as a tool for learning therefore, plenty of research on this topic has been done back in the 17th century. This is supported by John Amos Comenius, who acknowledges the value of games for education (Hellerstedt & Mozellius, 2018). In addition, Li et al. (2024) establish that digital educational games have gained significant attention within the realm of education especially in English language education. Digital games have become increasingly popular especially in the Southeast Asia region which has grown to a market size of USD 14.80 billion, providing an engaging platform that may also facilitate language acquisition (Research and Markets, 2024).

In Malaysia, English is widely accepted as the country's second language (Nor Hashimah, 2008; Gill, 2002), following Bahasa Melayu, the national language. This linguistic landscape intersects with digital gaming, as many popular games such as Genshin Impact, Final Fantasy and Call of Duty are primarily available in English, often lacking a Malay language option. As a result, Malaysian players frequently interact in English by default, making gaming a potential avenue for language exposure and learning.

Given that a majority of these popular digital games are not localised in Bahasa Melayu, young players are often required to navigate the game's content in English. This scenario suggests that gaming might have an impact on English language acquisition, especially among university students who are deemed to be active gamers. The following study seeks to examine this phenomenon, investigating the ways in which digital gaming may support or influence English language learning among Malaysian university students, especially UiTM students.

Problem Statement

Video games have become one of the most popular forms of entertainment among students, especially in Malaysia. Most video games are primarily in English especially user interaction in the menus, dialogue and audio. The potential of video games to be used as a tool for second language acquisition lacks exploration, especially within the Malaysian ESL context. Therefore, this study aims to address this gap by examining the effectiveness of video games in learning English within the context of university students, particularly UiTM students.

This study focuses on a few key areas about how gaming links to English learning among UiTM students. These areas form the basis of the research questions, they are:

Research questions:

1. What types of video game genres help students to improve their English proficiency?
2. What are students' attitudes in learning English using games?
3. What is the relationship between students' attitudes in gaming and learning English?

LITERATURE REVIEW

This research uses Krashen's (2013) Second Language Acquisition Theory, which mainly has five hypotheses that summarise the theory on language acquisition. These include: 1) The Acquisition-Learning hypothesis, 2) The Natural Order hypothesis, 3) The Monitor hypothesis, 4) The Comprehension hypothesis and 5) The Affective Filter hypothesis.

To establish relevance, the second language acquisition theory fits well with this research due to playing video games acting as an activity in which players subconsciously learn a new language. This aligns well with Krashen's Comprehension hypothesis, which suggests that language acquisition occurs when students are exposed to learning input that is understandable but slightly above their current proficiency level, especially in the context of video games, where players are exposed to the English language through gameplay, especially game features like dialogues, menus, and objectives. This exposure help students acquire vocabulary, reading comprehension, writing skills, and speaking skills.

Furthermore, the study connects with Krashen's Affective Filter hypothesis, which focuses on low anxiety and high motivation to help with language acquisition. The majority of students in this study reported feeling more motivated and less pressured when playing games, which suggests that playing video games can create a low-stress and high-engagement environment that supports language learning in a natural way.

By focusing on students' attitudes toward English language learning through video games and analysing their favourite game genres, this study pulls from Krashen's idea, which mentions that language is best acquired when students are engaged with high motivation and low anxiety. The survey questions measured students' favourite game genres, motivation, attitudes, and perceived language improvement, which were designed to reflect the framework. Therefore, Krashen's second language acquisition theory not only focuses on using video games as a learning tool but also showcases the research objectives, research design, and results.

In line with these theoretical foundations, Rajendran et al. (2024) studied the increase of video game usage in education in boosting students' engagement and found out that there was a positive effect on language development, especially in communication competence and language skills. In addition, Rajendran et al. (2024) reported, no video game genres were found to be beneficial for language acquisition, however suggested that video game elements like storytelling and dialogues contribute significantly to students' language improvement. Besides that, Toufik (2020) proposed that online games had a positive effect on EFL learners, and he also found that video games could be used as a tool in helping language acquisition for students. Adipat et al. (2021) also demonstrated that students' motivation and engagement were improved through the usage of video games. Even

so, teachers should provide appropriate supervision if educational games are used for education (Adipat et al., 2021).

Besides that, video games have been recognised as tools that facilitate the development of language acquisition in terms of vocabulary, speaking, writing and reading skills (Yudintseva, 2015).

In relation to vocabulary acquisition, Vnucko et al. (2024) revealed that there was an impact between digital gaming and English vocabulary. Liu et al. (2024) also contended that video games may help students' language acquisition and motivation while also assisting teachers in teaching. The findings from the study concluded that playing video games could bring positive attitudes to students by assisting in vocabulary improvement.

Apart from that, with regard to speaking, Jamili et al. (2024) reported that there is an improvement in speaking skills for those who acquire English through video games. The claim is backed by a study done by Soyoof (2019), who found that video games help to build communication skills, particularly among English language learners.

Moreover, in terms of writing skills, Hai (2022) concluded that teachers should include games in ensuring students are able to learn grammar better due to their effectiveness, while He (2023) found out that video games can be used to increase motivation and reduce boredom in the learning process for students, especially in repetitive writing lessons. Khasawneh (2024) investigated the use of video games in enhancing English skills such as writing and speaking, and the research concluded that video games help to improve students' writing skills particularly in English language.

In the context of reading, Komala (2021) who studied the utilization of a video game and whether it can improve students' reading comprehension, revealed that video games can strengthen their skills with intuitive games. Marsa (2021) also stated that the usage of a game like "Kahoot!" teaching reading skills through games is enjoyable and engaging for students.

As a whole, these studies illustrate that video games assist and act as a multifaceted tool for second language acquisition, facilitating vocabulary growth, reading comprehension, writing and speaking skills. By integrating Krashen's theoretical framework, the literature emphasizes that motivation can be fostered through video games. Therefore, showing that video games are effective instruments in language learning.

METHODOLOGY

Research Design

The study utilizes a quantitative research method. According to Munther (2024), the advantage of using a quantitative method is that researchers can enhance the reliability and accuracy of the findings by reducing subjectivity and bias through standard procedures and numerical measurements. Researchers can also assess connections between variables and test theoretical claims using statistical analysis and hypothesis testing. In addition, Munther (2024) mentions that in large-scale research projects, quantitative methods offer potential for automation and scalability. He also added that online questionnaires are examples of automated data collection tools that simplify research procedures, which helps save time and reduce the materials needed for the data collection process. This method fits well for this research as it allows respondents to participate remotely without the need for a face-to-face session. Furthermore, the questionnaire could be completed anonymously, which helps protect students' privacy and reduce bias.

Sampling

The population for this research is Malaysian undergraduate students who are studying at Universiti Teknologi MARA (UiTM), Shah Alam. This group was selected because UiTM is one of the public universities, and students from public universities are commonly exposed to the English language most of the time, as their courses mostly utilize English language as the communication medium. In addition, the identified undergraduate students were in their third semester or above as they had received more extensive exposure to the English language as compared to the first and second semester students. In other words, the age range of the involved

participants were between 18 to 30 years old. A total of 54 UiTM students from the LG240 course took part in this study in which they were given a questionnaire using Google Form. A simple random sampling approach was adopted to assist in reducing bias since the likelihood of selecting participants with specific characteristics that could affect the results is minimised, which leads to a more representative sample.

Research Instrument

The questionnaire is the main instrument used for the data collection in this research. It was adapted from Vnucko et al. (2024) and Yudha (2021) which consists of three different categories:

- Part A: Consisting of demographic items, which contains questions related to age, gender and current semester
- Part B: Involving questions in accordance with the research objectives
- Part C: Mainly concerning suggestions and comments from participants.

Data Procedure

A questionnaire consisting of 25 questions was converted into a Google form considering the online format facilitated the efficient distribution to students. The questionnaire was divided into multiple sections, including demographic information, gaming habits, favourite video game genres, and attitudes toward learning English language through playing games.

The Google Form link was distributed through platforms such as WhatsApp and Gmail as both platforms have high accessibility especially among LG240 students. Participation was voluntary and participants were given a disclaimer that their responses would remain confidential and would be used only for academic purposes.

The data collection period lasted for two weeks, during which a total of 54 responses were collected. After the data collection was completed, responses from Google Forms were exported into Microsoft Excel and filtered by removing irrelevant data or incomplete entries, for example, unfulfilled email addresses and duplicate submissions, which allows the data analysis in SPSS to be effective.

Data Analysis

SPSS was used to analyse the data gathered for statistical insights that aligned with the research objectives. Descriptive analysis was also incorporated to identify trends in students' responses, along with Cronbach's Alpha for the purpose of analysing the internal consistency of attitude-related items. Besides, as to determine the relation of distinct genres with language improvement, ANOVA was combined with Pearson correlation in order to explore the relationship between students' gaming attitudes and English language perception.

Reliability and Validity

This study underwent a peer review process in order to attain its reliability and validity. Concerning data analysis, Cronbach's alpha coefficient, particularly descriptive statistics, was implemented as a way to assess reliability by comparing the amount of shared variance or covariance among the items that make up an instrument to the amount of overall variance. According to Collins (2007), Cronbach's Alpha is similar to taking the average of all possible split-half reliabilities, which most computer software today, such as SPSS, can compute. This is often used to examine what Cronbach's Alpha becomes after a particular item is deleted, and if the value of Cronbach's Alpha goes up considerably upon deletion of an item, it shows that the item does not belong in the measure, which assisted in identifying the students' attitudes when learning English through video games.

In addition to descriptive statistics, other methods such as one-way ANOVA and Pearson correlation were used to gather data based on different groups and relationships between different variables to meet the research objectives.

FINDINGS AND DISCUSSION

Research Question 1: What types of video game genres help students to improve their English proficiency?

95% Confidence Interval for Mean								
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
1	13	4.38	.650	.180	3.99	4.78	3	5
2	10	4.30	.823	.260	3.71	4.89	3	5
3	11	3.91	.701	.211	3.44	4.38	3	5
4	7	3.71	.951	.360	2.83	4.59	3	5
5	12	4.00	.853	.246	3.46	4.54	3	5
Total	53	4.09	.791	.109	3.88	4.31	3	5

Table 1: 1=Role-Playing, 2=Shooters, 3=MOBAs, 4=Strategy, 5= Others

Table 1 shows the one-way ANOVA results that compares video game genres. The highest mean is recorded to be the Role-Playing genre with a score of $M=4.38$. Followed by Shooters with a mean of $M=4.30$ and Others with a score of $M=4.00$. Multiplayer Online Battle Arena or also known as MOBAs has a mean of 3.91 and the lowest score is recorded to be Strategy games genres. This shows that many students preferred to play Role-Playing games the most.

On top of that, according to the survey questionnaire employed in this study, students tended to agree that playing video games had affected their English performance, given that one of the respondents mentioned, “Yes, there are some English words that I have never seen or heard before that I can include in my vocabulary”. This is also supported by other respondents who shared a similar perspective. Additionally, another respondent also mentioned that “Well you see in games, the instructions are in English and for some games there will be a storytelling that is also in English” which depicts that video games such as one with storytelling elements helps students to learn new words other than they were able to understand the instructions given in the video games that they play.

Thus, students who play Role-Playing games tend to understand English better as it consists of storytelling elements along with some unfamiliar terms that are rarely used in real-life scenarios which consequently help to improve English proficiency skills.

Research Question 2: What are students’ attitudes in learning English using games?

	N	Minimum	Maximum	Mean	Std. Deviation
R2_Q1	54	1	5	3.83	.947
R2_Q2	53	2	5	4.13	.833
R2_Q3	54	2	5	4.09	.830
R2_Q4	53	1	5	3.58	1.183
Valid N (listwise)	53				

Table 2: Mean Scores and Standard Deviation of Descriptive Statistics

R2_Q1 = I feel more confident speaking English after playing video games

R2_Q2= Playing video games affects your enjoyment towards the English language

R2_Q3= I feel motivated learning English when playing video games

R2_Q4= English is difficult to learn

As illustrated in Table 2, the question with the highest mean is R2_Q2 which is Playing video games affects your enjoyment towards the English language with the score of $M=4.13$. This shows that many students agreed playing video games influenced enjoyment in English learning. Besides, the standard deviation, $SD = 0.833$ showed a low level of disagreement towards the statement which shows that the majority of the responses were consistent. Followed by R2_Q3: I feel motivated learning English when playing video games that scored $M=4.09$ with the standard deviation of $SD = .830$. Apart from that, R2_Q1 scored $M=3.83$ with the standard deviation of $SD = 0.947$ and lastly, R2_Q4: English is difficult to learn had the lowest mean score of $M=3.58$ with the standard deviation of $SD = 1.183$.

In the open-ended questions section, a student mentioned that “Yes, I do think playing video games affect my English academic performance. Playing video games that use English has increased my comfortability to speak with my peers and lecturers in English in academic contexts.” This statement proves that by playing video games, it can improve a student’s confidence in speaking English. Another student mentioned that “Yes, it drives me to learn more vocabulary to help understanding games' missions” which demonstrates that video games made them want to learn more vocabulary in order to understand the requirements imposed by video games. Hence, students exhibited positive attitudes towards English learning through video games.

Research Question 3: What is the relationship between students’ attitudes in gaming and learning English?

Pearson correlation was used to examine the relationship between students’ attitudes in gaming and learning English language as this method allows researchers to compare different variables to find whether there is a significant positive relationship between several attributes. The Correlation analysis was conducted between the four attribute items (R2_Q1, R2_Q2, R2_Q3 and R2_Q4) and four English improvement questions from the questionnaire. The results indicated that the first three items which are, I feel more confident speaking English after playing video games (R2_Q1), Playing video games affects your enjoyment towards the English language (R2_Q2) and I feel motivated learning English when playing video games (R2_Q3), demonstrated a significant and positive correlation with all four English improvement items. The four mentioned English improvement items are: 1) Improve_Proficiency, 2) Improve_Read, 3) Improve_write and 4) Learn_write. The Pearson correlation depicted that there was a perceived improvement in English proficiency together with writing and reading skills. Meanwhile, item number four or Learn_write, also considered as a vocabulary attribute (I can learn new English words while playing video games) indicated that there was a slight correlation but at a lower level.

Lastly, the attribute English is difficult to learn, (R2_Q4) did not show any significant correlation which may suggest that the negative statement of English language being hard to learn is not strongly related to students’ perceived benefits from gaming.

With regard to the questionnaire, a student responded “Yes , usually video games use advanced English so I think I can add some new phrases or words that I just learned during class, presentation and test” which indicates that students are willing to use new words that they learn from playing video games and apply them in their lessons. In addition, another respondent also said that “Yes, I do think playing video games affects my English academic performance. Playing video games that use English has increased my comfortability to speak with my peers and lecturers in English in academic contexts” which depicts that playing video games help students to be more comfortable in speaking English with their peers and lecturers especially in academic context.

DISCUSSION

Research Objective 1: To identify the types of video game genres that help students to improve their English proficiency

To respond to the first research objective, Role-playing games had the highest average score among other genres, which shows that students perceived them as the most helpful genre in teaching English language, the ANOVA test showed that there was no statistically significant difference across genres. This implies that the perceived benefit does not change strongly by genre or that students learn language in different ways depending on the type of games they play. Nevertheless, the Role-Playing game genre often includes extensive dialogue and story elements which may align with Krashen's (2013) Input hypothesis which mentions that exposure to meaningful and understandable language input is the key to language acquisition.

Research Objective 2: To determine students' attitudes in learning English using games

Apart from that, to answer the second research question, the results showed positive responses especially for items related to motivation and enjoyment. However, Cronbach's Alpha score was relatively low, which suggests there was a lack of internal consistency. This is due to the differences in how students answered each question or the small number of items used in the analysis. Despite this, the findings can be related to Krashen's Affective Filter Hypothesis which emphasizes the role of confidence, motivation and low anxiety in language acquisition. Playing video games could increase their confidence and enhance their willingness to learn the English language.

Research Objective 3: To identify the relationship between students' attitudes in gaming and learning English

Lastly, based on the third research question, there was a strong positive correlation found between motivation, enjoyment, confidence and students' beliefs. This proved that video games can improve their English language. The findings were also aligned with Krashen's Affective Filter Hypothesis which reinforces the idea that emotional factors like enjoyment and motivation can positively affect second language acquisition.

Overall, the findings indicate that while video game genres may not be a significant factor, students' attitudes, especially their enjoyment and motivation, play an important role towards their perception of English language improvement through playing video games. The findings above highlight the potential of video games that can provide fun and low-pressure environments to help students learn language in informal methods.

Limitations

This study is limited to a small sample size of only 54 students, which restricted the findings from being generalized to a wider population. Because the sample was drawn exclusively from LG240 students at UiTM Shah Alam, the results may not represent other fields from different faculties as well. Apart from that, the reliance on quantitative research design may not fully address the variation in ways students utilized video games as a means for language acquisition. Lastly, the absence of qualitative data such as interviews or focus groups limits the depth of insights behind students' motivation, enjoyment and perceived language improvement.

Implications

Despite the limitations, this research still highlights several important implications on how video games can support English learning among Malaysian students. In video games, language learning benefits are not confined to specific game genres, rather, depend on in-game features such as dialogue, storytelling, and player engagement, which provide meaningful input consistent with Krashen's Comprehension hypothesis. Besides that, positive attitudes toward learning English are portrayed among participants which focuses on low-anxiety and high-motivation environments, supporting Krashen's Affective Filter Hypothesis. The role of video games in enhancing vocabulary, speaking and reading skills is also established by prior studies. In addition, Adipat et al. (2021) and Rajendran et al. (2024) also indicate the importance of motivation and emotional engagement in

language learning. Overall, this demonstrates that video games can assist to build positive attitudes and meaningful learning experiences which contribute to improvements in English proficiency.

RECOMMENDATION

This study can open more opportunities to use diverse games in language learning despite no significant difference being found between genres. Rather than focusing strictly on genre, educators and researchers might look into the usage of dialogue interactions in games, reading-style tasks and dialogue interaction and vocabulary context-driven in games. The positive attitudes expressed by the students suggest that using video games can be used as tools to help teach students language outside of traditional teaching methods. Educators could encourage students to explore English-focused video games or track their own learning progress during their free time by turning gaming sessions into meaningful language practice. As supported by Adipat et al. (2021), students' motivation and engagement are improved through the usage of video games. It is also recommended that future studies shift their focus on game features, students' attitudes and interactive experiences rather than focusing entirely on traditional materials or categorizing games by genre alone. Educators could encourage students to explore English-focused video games while future studies should also incorporate reflective tasks and qualitative insights to improve understanding of how gaming reinforces language acquisition.

ACKNOWLEDGEMENTS

The authors extend their gratitude to the Akademi Pengajian Bahasa, UiTM, Shah Alam for the support in facilitating the publication process and to the anonymous reviewers for their contributions to the manuscript review.

REFERENCES

1. Adipat, S., Laksana, K., Busayanon, K., Asawasowan, A., & Adipat, B. (2021). Engaging students in the learning Process with Game-Based Learning: The fundamental concepts. *International Journal of Technology in Education*, 4(3), 542–552. <https://eric.ed.gov/?id=EJ1311472>
2. Collins, J. (2007). *Statistical concepts for the behavioral sciences*. Mahwah, NJ: Lawrence Erlbaum Associates.
3. Gill, S. K. (2002). Language policy and planning in Malaysia: Managing English–Malay relations in a globalized world. *Current Issues in Language Planning*, 3(4), 405–423. <https://doi.org/10.1080/14664200208668043>
4. Hai, N. T. (2022). The effects of games on learning English grammar of tenth graders at Dien Hai High School, Bac Lieu Province, Vietnam. *European Journal of Applied Linguistics Studies*, 5(1), 1–12. <https://doi.org/10.46827/ejae.v5i1.1234>
5. He, W. (2023). The influence of online games in English language learning. *Journal of Education, Humanities and Social Sciences*, 22, 264–270. <https://doi.org/10.54097/ehss.v22i.12433>
6. Al-Jamili, O., Aziz, M., Mohammed, F., Almogahed, A., & Alawadhi, A. (2024). Evaluating the efficacy of computer games-based learning intervention in enhancing English speaking proficiency. *Heliyon*, 10(16), e36440. <https://doi.org/10.1016/j.heliyon.2024.e36440>
7. Hellerstedt, A., & Mozelius, P. (2018). From Comenius to Counter-Strike: 400 years of game-based learning as a didactic foundation. *Proceedings of the 12th European Conference on Games Based Learning*.
8. Khasawneh, M. A. S. (2024). Investigating the use of video gaming technologies in enhancing language skills of FL students. *Research Journal in Advanced Humanities*, 5(2). <https://doi.org/10.58256/6qmtcj38>
9. Komala, A. S., & Rifai, I. (2021). The impacts of The Cherry Orchard video game on players' reading comprehension. *Procedia Computer Science*, 179, 368–374. <https://doi.org/10.1016/j.procs.2021.01.018>
10. Krashen, S.D (2013). *Second language acquisition: Theory, Applications, and Some Conjectures*. Cambridge University Press. https://www.sdkrashen.com/content/articles/krashen_sla.pdf
11. Li, Y., Chen, D., & Deng, X. (2024). The impact of digital educational games on student's motivation for learning: The mediating effect of learning engagement and the moderating effect of the digital environment. *PLOS ONE*, 19(1), e0294350. <https://doi.org/10.1371/journal.pone.0294350>

12. Liu, F., Vadivel, B., Rezvani, E. and Namaziandost, E. (2021). Using games to promote English as a foreign language learners' willingness to communicate: Potential effects and teachers' attitude in focus. *Frontiers in Psychology*, 12, 762447. <https://doi.org/10.3389/fpsyg.2021.762447>
13. Marsa, S. S., Kuspiyah, H. R., & Agustina, E. (2021). The effect of Kahoot! game to teaching reading comprehension achievement. *Journal of English Teaching*, 7(2), 133–149. <https://eric.ed.gov/?id=EJ1300238>
14. Munther, M., Zyoud, M. M., Tahani, R. K., & Dweikat, K. (2024, April 8). Quantitative Research Methods: Maximizing Benefits, Addressing Limitations, and Advancing Methodological frontiers. ResearchGate. https://www.researchgate.net/publication/379655878_Quantitative_Research_Methods_Maximizing_Benefits_Addressing_Limitations_and_Advancing_Methodological_Frontiers
15. Nor Hashimah, J. (2008). *Language and nationhood: Language policy in Malaysia*. Bangi: Universiti Kebangsaan Malaysia Press.
16. Rajendran, M., Ray, M., Ilangovan, A., Chokkalingam, V. K., & Singh, A. B. (2024). Commercial games for developing English language skills: A systematic literature review. *Language Teaching Research Quarterly*, 45, 57-85. <https://doi.org/10.32038/ltrq.2024.45.04>
17. Research and Markets. (2024, March 14). Southeast Asia gaming—Market share analysis, industry trends & statistics, growth forecasts 2019–2029. *GlobeNewswire*. <https://www.globenewswire.com/>
18. Soyoof, Ali & Mclay, K. (2019). The Impact of video game intervention on reducing stress and enhancing language achievement and communication skills. *International Journal of Pedagogies and Learning*. 14, 45-58. https://www.researchgate.net/publication/338216416_THE_IMPACT_OF_VIDEO_GAME_INTERVENTION_ON_REDUCING_STRESS_AND_ENHANCING_LANGUAGE_ACHIEVEMENT_AND_COMMUNICATION_SKILLS
19. Toufik, G. M., & Hanane, S. (2021). Investigating the potential of online video games in enhancing EFL learners' communication skills. *Universal Journal of Educational Research*, 9(2), 292–298. <https://doi.org/10.13189/ujer.2021.090205>
20. Vnucko, G., Kralova, Z., & Tirpakova, A. (2024). Exploring the Relationship Between Digital Gaming, Language Attitudes, and Academic Success in EFL University Students. *Heliyon*, e33301. <https://doi.org/10.1016/j.heliyon.2024.e33301>
21. Yudha, H. T. & Mandasari, B. (2021). The analysis of game usage for senior high school students to improve their vocabulary mastery. *Journal of English Language Teaching and Learning*, 2(2), 74-79. <https://doi.org/10.33365/jeltl.v2i2.1329>
22. Yudinseva, A. (2015). Synthesis of research on video games for the four second language skills and vocabulary practice. *Open Journal of Social Sciences*, 3, 81–98. <https://doi.org/10.4236/jss.2015.311011>