The Use of Video Games on Vocabulary Learning in English as Second Language Context

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Abstract

Vocabulary acquisition is a fundamental aspect of language learning, and the search for effective strategies to facilitate vocabulary development is ongoing. This study explores the potential of video games as tools for vocabulary acquisition in language learners, considering the impact of individual differences. The systematic literature review methodology is employed to analyze previous studies on the topic. The review highlights the advantages of video games, such as their motivational qualities, cooperative learning environments, and real-world contexts that enhance students' communicative skills. Video games provide a safe virtual environment for learners to experiment, receive immediate feedback, and be rewarded, fostering effective vocabulary learning. The review also reveals that context-embedded approaches, motivation, word frequency, game design, and instructional strategies are significant factors influencing vocabulary acquisition through video games. Additionally, learners' individual differences, including age, gaming experience, and language proficiency, affect the effectiveness of video game-based vocabulary learning. These findings underscore the importance of considering instructional design and learner characteristics when incorporating video games into language education. By integrating video games into vocabulary learning, language classrooms can offer engaging and effective instruction that promotes vocabulary acquisition.

Keywords: Gamified learning, Language proficiency, Vocabulary acquisition

Introduction

Vocabulary is the fundamental building block of language learning, as words are arranged within a grammatical structure to convey messages effectively (Kang, 1995). Second or foreign language learners often encounter difficulties in acquiring an adequate vocabulary, and despite numerous methods employed to assist learners in this aspect, no definitive strategy has emerged as the most effective. Consequently, ongoing research aims to discover the most efficient path to vocabulary development. In the realm of education, computers have revolutionized people's lives, and video games have emerged as an integral part of this digital transformation.

Video games offer distinct advantages and prove to be effective tools for vocabulary acquisition. They possess inherent motivational qualities, often involving friendly competition and fostering a cooperative learning environment where students have the opportunity to work together (Sorayaie-Azar, 2012). Moreover, video games enhance students' communicative skills by providing them with opportunities to use the target language in a practical and engaging manner. By incorporating real-world contexts into the classroom, vocabulary games facilitate flexible and communicative usage of English, thereby enriching the language learning experience. The pivotal role of games in teaching and learning vocabulary cannot be denied.

Research from various disciplines, including psychology and education, has increasingly recognized the potential of video games as tools for advancement and improvement (Kirriemuir, 2003). Numerous studies have yielded positive and beneficial findings, further highlighting the value of video games in language learning. For instance, James Paul Gee (2007), an influential researcher in the field, emphasizes the potential of video games to promote deep learning experiences. He argues that good video games, with their complex narratives and problem-solving challenges, provide opportunities for players to engage in active and meaningful learning, including vocabulary acquisition.

Video games offer a safe virtual environment that encourages experimentation and exploration, allowing learners to engage with the language in a dynamic and immersive manner. Players are often required to read and comprehend instructions, dialogue, and character interactions within the game, thereby encountering new vocabulary in context (Gee, 2007). This contextualized learning approach can enhance vocabulary retention and comprehension, as learners see words used in meaningful situations. Additionally, video games frequently employ audio-visual elements, such as voice-overs, sound effects, and

interactive dialogues, which can reinforce vocabulary acquisition through multiple sensory channels.

Furthermore, video games often provide immediate feedback and rewards, which are essential elements for effective learning. As players progress through the game, they receive feedback on their performance, allowing them to identify areas of improvement and adjust their strategies accordingly. This instant feedback helps reinforce vocabulary learning and motivates players to continue engaging with the game (Sorayaie-Azar, 2012; Elsa Rosalina et al., 2023; Fauziah & Nasrullah, 2023; Mu'in et al., 2023; Nasrullah et al., 2020; N Nasrullah & Rosalina, 2019; Nasrullah Nasrullah, 2021). The element of gamification, with its intrinsic rewards and achievements, adds an extra layer of motivation for learners, making the vocabulary acquisition process enjoyable and immersive.

Despite the growing body of research on the effectiveness of video games for vocabulary learning, there still exists a research gap regarding the specific types of video games and game-based activities that are most beneficial for vocabulary acquisition. While previous studies have shown positive outcomes, more research is needed to identify the features, mechanics, and design elements of video games that maximize vocabulary learning outcomes. Additionally, further investigation is required to understand the role of individual differences, such as learner preferences and aptitudes, in relation to the effectiveness of video games as vocabulary learning tools.

Research Question: What types of video games and game-based activities are most effective in facilitating vocabulary acquisition in language learners, and how do individual differences influence the effectiveness of these games?

In conclusion, video games have emerged as powerful tools for vocabulary acquisition in language learning. Their motivational qualities, cooperative learning environments, and real-world contexts enhance students' communicative skills and promote the use of the target language. Video games provide a safe virtual environment for experimentation and offer immediate feedback and rewards, facilitating effective vocabulary learning. As researchers continue to explore the potential of video games in education, it is clear that incorporating games into language learning classrooms can bring about engaging and effective vocabulary instruction.

Method

To explore the relationship between vocabulary learning and video games in the context of language education, this study employed a systematic literature review methodology. A systematic literature review is a research method that involves the comprehensive collection, evaluation, and synthesis of relevant previous studies (Baumeister & Leary, 1997; Tranfield et al., 2003). This approach

ensures a rigorous and structured process for identifying and analyzing empirical evidence on the topic of interest.

The systematic review process followed established guidelines and principles for conducting a comprehensive and unbiased review of the literature (Liberati et al., 2009). The systematic review method involves a well-thought-out search strategy that has a specific focus on answering the questions made and identifying the type of information you want to know. This method is used to collect previous findings with a narrow research question which is What types of video games and game-based activities are most effective in facilitating vocabulary acquisition in language learners, and how do individual differences influence the effectiveness of these games.

This study used twenty-one previous studies as a data collection tool that discusses similar topics with the keywords Gamified learning, Language proficiency, Vocabulary acquisition. The data has been collected using search engines such as Google Scholar, ScienceDirect,ScienceGate,and JSTOR.

The primary goal was to identify and critically appraise previous studies that examine the impact use of video games on vocabulary learning in english as second language context.

Finding and Discussion

The data extraction and analysis process revealed several key findings regarding the impact use of video games on vocabulary learning in english as second language context.

Effectiveness of Context-Embedded Approaches: Many studies highlighted the effectiveness of context-embedded approaches in video game-based vocabulary learning. Incorporating new words within meaningful contexts, such as dialogue or narrative within video games, facilitated better comprehension, retention, and application of vocabulary. Learners exposed to context-embedded vocabulary learning interventions demonstrated improved vocabulary acquisition compared to traditional vocabulary instruction methods.

Motivation and Engagement: Video games were found to enhance learners' motivation and engagement in vocabulary learning activities. The immersive and interactive nature of video games captured learners' attention and fostered a sense of enjoyment and autonomy in the learning process. This heightened motivation contributed to increased vocabulary retention and improved overall learning outcomes.

Word Frequency and Context: The frequency of word occurrence and exposure to diverse contexts within video games influenced vocabulary learning

outcomes. Studies indicated that video games containing a rich variety of vocabulary, including both general-service and special-purpose words, provided learners with sample opportunities to encounter and practice new vocabulary items. Exposure to a wide range of contexts enabled learners to develop a more robust vocabulary repertoire.

Game Design and Instructional Strategies: The design elements and instructional strategies employed in video games had a significant impact on vocabulary learning. Games incorporating features such as visual cues, immediate feedback, repetition, and adaptive difficulty levels were found to enhance vocabulary acquisition. Additionally, explicit vocabulary instruction within the game environment, such as pop-up definitions or interactive glossaries, supported learners in building vocabulary knowledge.

Individual Differences: Learners' individual differences, such as age, prior gaming experience, and language proficiency, influenced the effectiveness of video game-based vocabulary learning. Younger learners and those with higher gaming proficiency tended to exhibit greater vocabulary gains. Additionally, learners with higher language proficiency were more adept at transferring vocabulary knowledge acquired from video games to real-world language use.

These findings provide valuable insights into the potential benefits of integrating video games into vocabulary learning approaches and underscore the importance of considering instructional design and learner characteristics when implementing video game-based vocabulary interventions in language education.

The findings presented in this study shed light on the use of video games for vocabulary learning in a contextualized manner. The importance of vocabulary acquisition in second language proficiency has been widely acknowledged, and video games offer a unique and engaging platform to enhance this crucial aspect of language learning.

The finding reveals that vocabulary can be classified into general service vocabulary and specialized vocabulary, and each category requires different teaching methods (Nation & Kyongho, 1995; Elsa Rosalina et al., 2023; Fauziah & Nasrullah, 2023). This highlights the need for targeted approaches in vocabulary instruction within video games. Studies, such as that of Kang (1995), suggest that a contextual integrated approach, where new words are presented in meaningful contexts, can be highly effective. This approach allows learners to encounter and practice new vocabulary items within the immersive environment of video games, enhancing comprehension and retention.

Moreover, the findings emphasize the relationship between vocabulary size and reading comprehension. Zhang and Anual (2008) found that knowledge of approximately 2,000 to 3,000 high-frequency words is required to understand texts containing low-frequency vocabulary. Therefore, building a large vocabulary

is essential for learners to function effectively in the target language (Schmitt, 2008). Video games offer an opportunity to expose learners to a wide range of vocabulary, including specialized terminology, through authentic and interactive contexts, thereby facilitating the development of a robust vocabulary repertoire.

The significance of video games in learning extends beyond vocabulary acquisition. The finding highlights that video games provide an immersive and interactive learning environment, promoting active engagement and motivation. Players are required to solve puzzles, overcome challenges, and progress through different levels, which fosters problem-solving, critical thinking, and decision-making skills (Gee, 2005). These transferable skills can benefit language learning by aiding learners in adapting to new contexts, understanding linguistic patterns, and effectively communicating in the target language.

Furthermore, video games often present authentic language use and cultural contexts, exposing learners to natural language patterns, expressions, and cultural references (Steinkuehler, 2010). Learners can observe and analyze language used by characters, engage in interactive dialogues, and interpret cultural cues embedded within the game. This exposure enhances learners' understanding of the target language and culture, promoting more authentic and contextually appropriate language production. Video games also offer collaborative learning opportunities through multiplayer online experiences, allowing learners to communicate, negotiate, and collaborate with individuals from diverse linguistic and cultural backgrounds. Such interactions foster language practice and skill development while cultivating essential interpersonal skills (Thorne, Black, & Sykes, 2014; Rusmanayanti & Nasrullah, 2020; Nasrullah Nasrullah et al., 2021, 2023; Putri & Nasrullah, 2023).

The findings from the data extraction and analysis process provide further insights into the impact use of video games on vocabulary learning. Context-embedded approaches within video games have been found to be effective in enhancing vocabulary acquisition. By integrating new words within meaningful contexts, learners benefit from better comprehension, retention, and application of vocabulary (Smith et al., 2017; Chen & Kao, 2019). The motivation and engagement stimulated by video games positively influence vocabulary learning outcomes (Lee & Hammer, 2011; Li & Tsai, 2019). The frequency of word occurrence and exposure to diverse contexts within video games also contribute to vocabulary development, enabling learners to build a robust vocabulary repertoire (Chung et al., 2015; Lu, 2018).

The design elements and instructional strategies employed in video games play a significant role in vocabulary learning. Visual cues, immediate feedback,

repetition, and adaptive difficulty levels have been identified as effective features for enhancing vocabulary acquisition (Gonzalez-Fernandez & Knezek, 2014; Ma & Wang, 2017). Additionally, explicit vocabulary instruction within the game environment, such as pop-up definitions or interactive glossaries, supports learners in building vocabulary knowledge. However, individual differences, including age, prior gaming experience, and language proficiency, need to be considered. Younger learners and those with higher gaming proficiency tend to exhibit greater vocabulary gains, and learners with higher language proficiency are more adept at transferring vocabulary knowledge from video games to real-world language use (Lee & Park, 2012; Cheng et al., 2020).

Conclusion

To sum up,the findings o this study highlight the potential benefits of utilizing video games for vocabulary learning in a contextualized manner. Video games offer an immersive and interactive platform that enhances learners' motivation and engagement, facilitates the acquisition of vocabulary within meaningful contexts, and promotes the development of transferable skills. Furthermore, video games provide opportunities for exposure to authentic language use, cultural understanding, and collaborative learning.

By considering instructional design and learner characteristics, educators can harness the potential of video games to enhance vocabulary learning and promote effective language acquisition. Further research and exploration in this area can contribute to the development of innovative and engaging language learning approaches.

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