

The Effectiveness of Game-based Learning Strategies on Primary ESL Learners' Vocabulary Learning

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Abstract

Vocabulary is an essential component in learning English. This is the foundation for all other skills, such as reading, listening, speaking and writing. Vocabulary is a crucial tool for primary ESL learners who want to use English successfully. They cannot fully understand and communicate their views and ideas if they lack vocabulary. Teaching vocabulary through conventional chalk and talk is challenging. Nonetheless, past research has shown that teaching vocabulary using traditional chalk and talk method is difficult. Pupils are demotivated to learn and fail to remember the words learnt. As a result, games are widely used in the classroom to teach vocabulary. Therefore, this paper presents a systematic literature review on the effectiveness of game-based learning strategies on primary ESL learners' vocabulary learning. This paper aims to highlight the challenges faced by the pupils in learning English vocabulary and their perceptions on the use of game-based learning strategies in learning English vocabulary. This systematic literature review analysis used Khan et al. (2003)'s five-phase reviewing process to examine 16 journal articles published between 2014 and 2022. The findings revealed that game-based learning strategies are beneficial and practical in enhancing pupils' English vocabulary learning. The challenges are limited learning resources, problems in pronouncing and understanding meaning of English words, influence of the pupils' native language and lack of ongoing professional training among teachers. By taking into account all of the challenges and benefits advanced. would contribute to educators to incorporate educational games in the classroom to help pupils in vocabulary learning.

Keywords: Challenges, English, Game-Based Learning Strategies, Primary ESL Learners, Vocabulary

Introduction

In the 21st century, English has spread across the world as lingua franca (Fang, 2017) and taken on a new role as a requirement of the globalising world. It is prominent for everyone to learn the English language because of its domination in all parts of life. Non-native speakers have commonly used English as a communication medium for persons who

speak a variety of native languages. Thus, learning English is pivotal for Malaysian students from an early age.

English is taught as a compulsory and core subject in Malaysia, where it is considered a second language. As stated in Malaysian Education Blueprint 2013-2025 (Ministry of Education, 2018), the significance of teaching English as a second language is greatly emphasized and teachers must ensure that their pupils can communicate in English fluently to remain globally competitive. A rich vocabulary knowledge might be asserted as the key for effective communication (Argit et al., 2020). According to Elmahdi and Hezam (2020), second language learners rely heavily on vocabulary knowledge as it plays an important role in language use. Inadequate knowledge of vocabulary is one of the causes of failure of pupils in educational institutions (Anil, 2011). Hence, English teachers play a crucial role in helping the pupils to acquire sufficient vocabulary to comprehend.

In fact, primary ESL learners face several challenges in vocabulary learning. Myriads of attempts have been made to aid the learners in overcoming the difficulties they face when learning vocabulary. Difficulties in retaining new vocabulary, limited access to learning resources and lack of interest and motivation due to drilling teaching strategies and rote memorisation are the drawbacks of effective learning. Bakhsh (2016) highlighted that the use of games to teach vocabulary has become increasingly vital for English language learners because they retain excitement and interest in learning while also fostering courage and creative use of the language. Jassim and Dzakiria (2019) asserted that children are able to remember all the vocabulary without difficulty. Hence, the focus of this literature review will be on the effectiveness of employing game-based learning strategies to help primary pupils to learn vocabulary more efficiently.

Research Objectives and Research Questions

The main objective of this systematic review is to present to researchers a synthesis of empirical evidence found in previous related studies on the teaching and learning of vocabulary particularly on the challenges encountered by primary ESL pupils in learning vocabulary and their perceptions on the use of game-based learning strategies in learning vocabulary so that more intervention development and research can be done in this area. The purpose of this research is to answer two research questions as follow:

- 1. What are the challenges faced by primary school pupils in learning English vocabulary?
- 2. What are the pupils' perceptions on the use of game-based learning strategies in learning English vocabulary?

Literature Review

Teaching and Learning of Vocabulary

When learning a language, vocabulary knowledge is considered the foundation since it allows people to create a mental dictionary in which words come out naturally when articulating any notion (Buenano et al., 2022). Indrivani and Sugirin (2019) mentioned that vocabulary is imperative to be acquired by the learners. It gives you a thorough comprehension of what you're reading and writing. It also allows pupils to be well-versed in the target language if they have sufficient vocabulary. Yokubjonova (2020) affirmed that without developing it, almost no one can achieve success in language learning. Therefore, vocabulary learning is one of the prerequisites for language acquisition.

Furthermore, in order to master a language, one must first master the fundamentals of words and meaning. This is particularly important for young children who are learning their first language. According to Cornwell (2017), children will frequently deduce speech sounds with meanings from their experiences and environment during the early stages of language learning. Children grow consciousness and knowledge of words they are learning as these speech sounds and meanings evolve. Primary pupils benefit from learning vocabulary since it allows them to recognise words and use them appropriately. Hence, in order to learn other skills mainly listening, speaking, reading and writing, they must first develop their vocabulary.

Students will be better equipped to interpret and communicate language if they have a wider repertoire of vocabulary. In accordance with that, vocabulary is the most important aspect of language proficiency since it provides the foundation for how well learners can listen, talk, read and write (Mashhadia and Jamalifar, 2015). As a result, primary pupils should be given more emphasis on vocabulary study, as it is crucial in the acquisition of a second language.

Game-based Learning Strategies in Teaching and Learning of Vocabulary

Educators have used games in the classroom for ages. A game should not be viewed as a supplemental activity to fill in the gaps when the teacher and students have nothing else to do. Hazar (2020) affirmed that games could be an effective way to engage pupils more in the learning process. Traditional games such as chess, shogi and checkers had been implemented way back in the days to teach strategic thinking, analytical skills, leadership skills and sharpen concentration (Sousa and Rocha, 2019). Game-based learning strategy is a kind of instructional activity, which incorporates games into teaching for educational purposes (Zhang, 2018). It is to help and teach the pupils how to learn through repetition, failure and goal achievement in a fun, meaningful and purposeful way. According to White and McCoy (2019), most game-based learning strategies are compatible with education curricula as learners are working towards a goal, selecting suitable learning activities and experiencing the outcome of the learning actions. This offers an active learning environment in which pupils can practice and learn effectively.

Ramadhaniarti (2016) affirmed that games are useful and effective tools that should be used in vocabulary classes. There were various past studies conducted using game based strategy. Lukas et al. (2020) conducted one of the important studies by introducing a card game called "U-NO-ME". Results from the study proved that by employing the "U-NO-ME" game, pupils will be able to learn and retain new vocabulary quickly. Learners were also found to be more motivated to learn new vocabulary. In addition, Razali et al (2017) conducted another unique game-based learning vocabulary game. In their study, the learners were exposed to a card game "GOT IT!" which stands for Group-oriented Thematic Interactive Technique. The learners were found to be actively playing cards and spelling out the words as learning vocabulary is conducted in an enjoyable and incidental manner. It is proven that "GOT IT!" can be assertive of classroom teaching where it helps pupils to retain the words learnt.

Apart from card games, digital games have become increasingly popular in the 21st century. Digital games, based on Wu et al (2020), are games that are created and constructed using computer technology and are played in variety ways, including digital board games, video games, internet games and mobile games. Digital games are new ways to promote literacy. Different sorts of digital games provide distinct types of language learning situation, resulting in vocabulary acquisition and retention. Due to the pressure-free environment,

greater attention and engagement, and the transition from incidental learning to incidental self-directed learning, the use of digital games has a positive impact on vocabulary acquisition and retention (Qasim, 2021). Games also have the power of engaging people in fun ways, giving interaction and problem solving opportunities, enticing storylines among others while promoting creativity and participation (Tebeweka, 2021). Hence, game-based learning strategies can be used to enhance vocabulary learning among primary pupils.

Challenges in Teaching and Learning of Vocabulary

Bakhsh (2016) mentioned that vocabulary acts as the most basic component of English language learning and it is a key element to learn any language. Vocabulary is a basic element of language. One has to have sufficient vocabulary to communicate with others. Inevitably, teaching vocabulary is not as easy as ABC. Although various teaching strategies have been employed to aid primary pupils in learning vocabulary, it is a difficult challenge for English language teachers to provide appropriate vocabulary to them (Yunus et al., 2020). Language learners often complain that they forget new words soon (Elmahdi and Hezam, 2020). They face difficulties in retaining the newly learned words in long-term memory and recall them at will. This is because incidental vocabulary learning is limited due to a lack of second language input, and most words are learned through classroom instruction (Elmahdi and Hezam, 2020). As a result, pupils face difficulties in retaining the vocabulary learnt.

In addition, in Malaysia, teaching and learning of vocabulary in the English language begins in Primary 1 and continues through Primary 6 (Ministry of Education, 2017). The main source for teaching and learning vocabulary through different language skills of listening, speaking, reading and writing has been the English language textbook (Chai and Yunus, 2020). Uninteresting and dull learning activities and materials pose challenges in vocabulary learning. English language textbooks and workbooks provided the government the main source to teach and learn vocabulary especially the schools in rural areas (Chai and Yunus, 2020). Nevertheless, technology barriers also cause difficulties in integrating and implementing Information and Communication Technology (ICT) into teaching and learning. As technology has rooted its way into our day-to-day existence, education has been going through changes from time to time in order to alter current learning situations and needs. In this technological savvy era, learning resources are no longer confined to textbooks and they are available in various forms like reference books, workbooks, worksheets, web-based learning materials, computer-based learning materials and audio-visual aids. Learning is now boundless with information at the tips of our fingers. Hence, the boring and dull learning activities such as rote memorisation, drilling and conventional chalk-and-talk teaching strategies are indeed a stumbling stone for the students to learn vocabulary. Memorising the spelling without further applying the words in the later lessons would definitely give rise to meaningless lessons. Materials like flashcards should no longer be the main teaching and learning aids as these limited resources will definitely demotivate them from learning vocabulary. Thus, students should be given chances to learn vocabulary in a fun, meaningful and purposeful way that runs away from rote memorisation without practicing which will diminish students' interest to learn. Rachmawati (2018) further supported that various strategies must be employed to teach and learn vocabularies effectively especially for primary pupils.

Methodology

16 papers related to game-based learning strategies in vocabulary learning and challenges faced by the pupils in learning it throughout the last decade were gathered and analysed. Articles from ERIC and Google Scholar were chosen for this systematic study. The researcher applied the five steps proposed by Khan et al (2003) to conduct this systematic review as shown in Figure 1. This strategy was employed in original research and could assist researchers with difficult idea analysis, evaluation and synthesis (Khan et al., 2003).

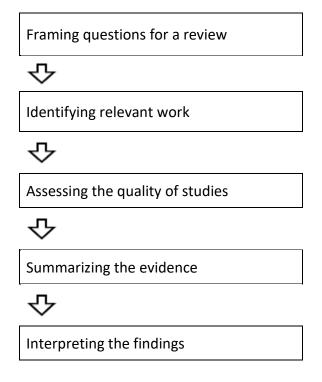


Figure 1: Steps of Systematic Literature Review Step 1: Framing Questions for a View

Vocabulary is the core element of English language learning. Hence, this paper is going to examine the pupils' perceptions and challenges on the use of game-based learning strategies in vocabulary learning, published from 2014 to 2022. The research questions are as follow:

- 1. What are the pupils' perceptions on the use of game-based learning strategies in learning English vocabulary?
- 2. What are the challenges faced by primary school pupils in learning English vocabulary?

Step 2: Identifying Relevant Work

It is critical to do a thorough search incorporating multiple sources on the focused topic. The articles chosen must meet the selection criteria for inclusion and exclusion. To make it easier to compare sources, the search was limited to full-text publications and journal articles (Baran, 2014). Google Scholar and ERIC were the databases employed by the researchers as a complete data collection strategy in this article. The researcher utilised phrases such as game-based learning in learning vocabulary, effectiveness of game-based learning and challenges faced in vocabulary learning to find relevant papers. Apart from that, numerous

parameters were used during the search including "open access", "articles only", and "publications from 2018 to 2022". If the researcher comes across an article that is very relevant to the focus of the study, the researcher clicks "similar articles" to find more.

Step 3: Assessing the Quality of Studies

To ensure the validity of this systematic review, the researcher must be meticulous in the selection of articles. When researchers are looking for appropriate papers, the inclusion and exclusion criteria serve as a guide. Both inclusion and exclusion criteria must be included in a solid study methodology. There are a total of 6 significant features for both inclusion and exclusion criteria while looking for appropriate publications that could answer the study objectives.

Table 1

Inclusion criteria	Exclusion criteria	
Learning vocabulary with game-based learning strategies	Learning English without game-based learning strategy	
Research methodologies: quantitative, qualitative and mixed method	No data collection or findings	
Samples from various countries and levels	Samples from the same countries and levels	
The studies perceive learning vocabulary using game-based learning strategy	The studies perceive learning vocabulary not using game-based learning strategy	
Challenges in vocabulary learning	No challenges in vocabulary learning	
The articles were published between 2014- 2022	The articles were not published between 2014-2022	

Inclusion and exclusion criteria

Step 4: Summarising the evidence

Google Scholar and the ERIC database both have all of the necessary papers. With the keywords "pupils' perceptions on the use of game-based strategies in vocabulary learning" and "challenges faced in vocabulary learning" Google Scholar and ERIC discovered a total of 1100 articles. Following the researcher's selection and sorting of articles based on the inclusion and exclusion criteria, and ultimately 16 articles that were chosen to be included in this work. The relevant data was then tabulated.

Step 5: Interpreting the findings

Finally, the researcher interpreted and analysed the data. After the screening process, 16 papers are selected to address pupils' perceptions on the use of game-based learning strategies in learning English vocabulary and challenges faced by pupils in learning it from 2014 to 2022. All the selected articles are analysed and tabulated as shown in Table 2 and Table 3.

Results

Sixteen studies reported on the challenges faced by primary ESL pupils in learning vocabulary and their perceptions on the use of game-based learning strategies in English vocabulary learning from the year 2014 to 2022 had been identified as shown in Table 2 and Table 3.

Table 2

Author & Year	Research objective	Methodology	Findings
Susanto (2021)	 To investigate the students' troubles in learning English vocabulary 	 Analytical research 	 Students struggle with pronouncing words, writing and spelling them correctly, and using them in grammatical patterns.
Kovács & Gábor (2021).	 To identify the challenges that have arisen in motivating learners to develop their English vocabulary in the twenty-first century 	 Mixed method research Questionnaire 	 Learners' motivation and interest in learning vocabulary is greatly dependent on the motivation strategies employed by the teacher. Implementing technology to teach vocabulary is the biggest challenge for teachers. Students struggle with pronouncing words and understanding their definitions, as well as acquiring synonyms and antonyms.

Challenges faced by primary ESL pupils in learning English vocabulary

Elmahdi & Hezam (2020)	 To investigate the challenges for methods of teaching English vocabulary to non-native students 	 Qualitative research Record keeping method 	 Language learners frequently lament the fact that they forget new words quickly. Students are waiting for their teachers to translate words into their native language. Lack of multimedia project teaching and learning system, the absence of English language Clubs financial constraints are the challenges in acquiring English vocabulary. Lack of ongoing professional training on teaching methodology among teachers has a significant impact on the teaching of English vocabulary.
Chai & Yunus (2020)	 To identify the challenges encountered by primary pupils in learning vocabulary. To identify the benefits of using game-based learning strategies in enhancing primary pupils' vocabulary learning. 	• Literature Review	 Limited knowledge in vocabulary Textbooks as the main source has demotivated the pupils to remember the vocabulary learned. The use of drilling methods failed to arouse pupils' interest to learn vocabulary.

Rohmatillah (2014)	 To find out kinds and factors of students' difficulties in learning vocabulary 	research • Interview &	• The quantity of words that pupils
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Table 3

Pupils' perceptions on the use of game-based learning strategies in learning vocabulary

Author & Year	Research objectives	Methodology	Findings
Chai & Yunus (2021)	 To enhance the vocabulary skills among the young learners To encourage the young learners to learn vocabularies 	 Survey questionnaire Observation checklist 	 Both teacher and pupils give positive feedback on the use of games on in enhancing vocabulary retention, promoting interest, motivation and more pupils' autonomy in learning new and unfamiliar vocabulary
Hazar (2020)	 To determine the role of digits games on enhancing English vocabulary To compare games with pen and paper practices 	 Pre-test-post-test experimental- control group design Pre-test and post- 	 The learners and teachers believed that the use of digital games in teaching English vocabulary is much more successful than the use of traditional methods.

Chai et al (2020)	 To enhance and encourage pupils to learn vocabulary 	 Quasi- experimental Pre-test, post-test and survey questionnaire Purposive sampling (40 Primary 4 pupils from four rural schools in Sarawak) 	 learning new vocabularies. The teachers show a positive view on the use of games in enhancing vocabulary learning and promoting
Benoit (2017)	 To investigate whether game-based learning or a traditional method of learning academic vocabulary is more effective English language learners To determine if there is any statistical difference in scores based on gender 	 experimental ACCESS & Measure of Academic Vocabulary (MAV) 60 middle school 	 No statistically significant difference between game-based learning and traditional learning methods of academic vocabulary No statistically significant difference in scores based on gender Game-based learning was as effective as learning with traditional strategies
Shabaneh & Farrah (2019)	 To figure out the efficiency of using games inside classrooms 	observation	 lesson when games are used in the classroom. Games inside the classroom have a positive effect on

Argit, Demirel & Köksal (2020)	 To find out whether there is a difference between 4th grades and the 7th grades in terms of teaching vocabulary through games 	 Quantitative research Pre-tests, posttests, course books, workbooks, games and worksheets 115 students (52 primary schools students and 63 secondary school students) 	 efficient than teaching through the current curriculum method for 4th graders. No significant difference between the experimental and control groups for 7th
Lukas et al (2020)	 To unveil the potential of U-NO-ME card game as an educational game in enhancing Primary One pupils' vocabulary acquisition 	 Quasi- experimental research Pre-test, post-test and questionnaire 52 Primary One pupils from 4 different schools in Sarawak 	meaningful English vocabulary learning for primary ESL classroom
Ngu, Die & Yunus (2021)	•	 Pre-test, post-tests observation checklist and survey questionnaire 	 Pupils prefer learning vocabulary through games rather than rote memorisation. Pupils had positive experience in learning and retaining vocabulary through game (VOCA-ME).
Wu, Zhang & Wang (2020)	 To investigate the impact of English vocabulary learning through digital games 	 Meta-analysis 	 Digital games have a significant positive impact on English vocabulary learning. Self-learning based gameaided teaching methods can better promote learning.

Wulanjani (2016)	 To examine the use of games as one of the strategies in learning vocabulary for young learners 	• Literature review	 Students found learning through games is fun and relaxing. Games motivate the pupils to participate actively in learning activities. Games provide platform for pupils to communicate and interact A variety of games that caters to pupils' different learning styles and preferences and time allocation are very much needed to enhance vocabulary learning
Derakhshan & Khatir (2015)	 To review the impacts of employing games in an English as a foreign language or English as a second language environment on enhancing vocabulary learning To guide teachers and students towards a better understanding of vocabularies through educational games 	• Literature Review	 Vocabulary games enable the pupils to use language more communicatively. Games bring fun for learners. Games motivate and improve learners' confidence in learning vocabulary The researcher agreed that pupils became more successful in learning new words using games compared to traditional methods.

Discussion

Challenges Faced by Primary ESL Pupils in Learning English Vocabulary

Undeniably, learning vocabulary is challenging. Learners often forget new vocabulary quickly (Elmahdi & Hezam, 2020) especially when a dull and boring drilling method is used to teach vocabulary as it failed to arouse pupils' interest to learn and remember the vocabulary. (Chai and Yunus 2020). Pupils Limited learning resources also caused the pupils to have low repertoire of vocabulary (Rohmatillah 2014) as textbooks are the main source that has demotivated the pupils' to retain the vocabulary learned (Chai and Yunus, 2020). Besides, problems in pronouncing and understanding the meaning of English words, lack of

understanding of grammatical words and the complexity of word knowledge make learning vocabulary difficult (Susanto, 2021; Kovács & Gábor, 2021). Apart from that, the influence of the pupils' native language also affects vocabulary learning (Rohmatillah, 2014). Incorrect pronunciation of words due to lack of similarity between English and pupils' native language make it hard for pupils to learn vocabulary. In addition, lack of ongoing professional training on teaching methodology among teachers has a significant impact on the teaching of English vocabulary (Elmahdi & Hezam, 2020). When teachers have problems in choosing suitable teaching methodology, they fail to arouse pupils' interest to learn as learners' motivation and interest in learning vocabulary is greatly dependent on the strategies employed by the teacher (Kovács & Gábor, 2021).

Pupils' Perceptions on the use of Game-based Learning Strategies in Learning English Vocabulary

Previous research has focused on learners' perceptions of using game-based learning strategies to learn English vocabulary and the challenges in learning it. The results of the systematic research demonstrate that the majority of pupils agreed that using game-based learning strategies to learn English vocabulary is beneficial (Chai and Yunus, 2021; Hazar, 2020; Shabaneh and Farah, 2019). Using games to teach vocabulary has created a better platform for learners to enjoy learning English vocabulary in a fun and relaxing classroom environment (Derakhshan and Khatir, 2015) and to communicate and interact with their peers (Wulanjani, 2016). Game-based learning strategies also promote interest, motivation, confidence and more pupils' autonomy in learning new and unfamiliar vocabulary without fully dependent on teachers' input and guidance (Lukas et al., 2020). Game-based learning strategies are believed to enhance vocabulary learning and retention compared to conventional rote memorisation (Chai et al., 2020; Ngu et al., 2021; Argit et al., 2020).

Implications

The research findings and discussion showed positive and convincing outcomes on the effectiveness of game-based learning strategies in enhancing pupils' vocabulary learning. It also helps to arouse pupils' interest and motivation to learn English vocabulary as well as participate actively in vocabulary learning. Therefore, English teachers should be more positive in utilising game-based learning strategies as one of the alternatives in teaching and learning of English vocabulary in order to cater to different types of learners: auditory learners, visual learners and kinaesthetic learners. By doing so, pupils can get involved in the lesson actively and be independent learners.

Apart from that, teachers should also be more aware of the challenges faced by the pupils in English vocabulary learning. This is to help the teachers to support their pupils' acquisition of a growing vocabulary by choosing the effective strategies to conduct the lesson to make learning English vocabulary fun, meaningful and purposeful.

Conclusion

Vocabulary acquisition is typically regarded to be tiresome and difficult, especially for young learners. As a result, it is critical to use proper and appropriate approaches for teaching and learning of vocabulary in order to facilitate learners' knowledge acquisition. The use of game-based learning strategies has recently prompted academics all around the world to investigate which would be the greatest fit for their specific conditions or learners. As a result, incorporating game-based learning strategies into vocabulary learning will undoubtedly have

a significant impact on vocabulary learning and acquisition among pupils. The efficacy of game-based learning strategies is clearly demonstrated in this literature review. Most of the students agreed to the usefulness and effectiveness of game-based learning strategies in vocabulary learning. They engage actively in learning vocabulary and have confidence in communicating and interacting with their peers while playing the games. The pupils enjoy learning vocabulary with games.

In addition, the challenges faced by the pupils in learning vocabulary were also identified. It is undeniably vital to recognise the difficulties that primary pupils face when learning vocabulary. English language teachers will be able to determine the most appropriate teaching strategies to utilise in teaching and learning of vocabulary by understanding the obstacles experienced by primary pupils in vocabulary learning. Thus, teachers should be aware of the effectiveness of game-based learning strategies to improve primary pupils' vocabulary development to better conduct the lesson. In a nutshell, based on past research, English language teachers could use game-based learning strategies to help primary pupils overcome problems in learning vocabulary more efficiently and to enhance vocabulary retention.

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