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A Systematic Literature Review on Using Game-Based Learning to Enhance English Vocabulary and Spelling for Primary School Pupils

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Abstract

Learning English at a young age always start with the words level before moving on to phrases and sentences. A large vocabulary helps to prosper pupils' proficiency in four basic English language skills - listening, speaking, reading and writing. Nevertheless, previous studies have shown that mastering English vocabulary and spelling is a significant problem for language learners. Hence, this paper presents a systematic literature review of relevant published studies on using game-based learning to enhance English vocabulary and spelling for primary school pupils from the year 2016 to 2021. The purpose of the study is to answer two research questions: (a) What are the criteria for selecting and using a game to improve pupils' vocabulary and spelling (b) How does game-based learning improve pupils' vocabulary and spelling? A total of 15 studies were examined in depth using the process of systematic process of systematic literature review proposed by Xiao and Watson (2019). The findings showed that background information of the pupils, context, timing, learning topic, goals and features of games are some of the criteria when selecting and using a game in the classroom. Game-based learning is an effective strategy to enhance pupils' vocabulary and spelling because it jacks up pupils' motivation, knowledge and skills. Hence, it is hoped that future practise and research direction will be explored further.

Keywords: Vocabulary, Spelling, Game-Based Learning

Introduction

To learn the English language, the first step is to build up the vocabulary. It acts as the foundation of language acquisition that can be used to communicate and understand thoughts and ideas. A large vocabulary also helps to prosper other skills such as listening, speaking, reading and writing. However, according to Wang & Yamat (2019), learning English as a Second Language (ESL) in Malaysian primary schools is not doing well, especially in terms of vocabulary. Pupils have a limited vocabulary list because they are unable to retain the vocabulary learnt and the spelling of the words. Furthermore, traditional teaching and learning practices, like direct translation, rote memorisation, learning using pictures, spelling tests and writing words repeatedly, have caused pupils to have less interest in learning

vocabulary and spelling. Therefore, there is a need to identify evidence-based educational practices to address this issue.

Research Objectives and Research Questions

The main objective of this systematic literature review is to present a synthesis of empirical evidence found in the past related studies to use games to enhance English vocabulary and spelling among primary school pupils so that games can be developed to improve pupils' vocabulary and spelling. The purpose of this study is to address two research questions: (a) What are the criteria for selecting and using a game to improve pupils' vocabulary and spelling (b) How does game-based learning improve pupils' vocabulary and spelling?

Literature Review

Vocabulary

Vocabulary is the central of a language. Adequate vocabulary acquisition is essential for successful second-language use (Apdy and Asrifan, 2018). It is one of the basic requirements for being able to communicate in spoken or written form (Jannah et al., 2019). Saputra and Hadi (2019) once stated that students will find it extremely difficult to communicate when they have no knowledge of vocabulary. Therefore, vocabulary mastery is significantly needed by the pupils. According to Thornbury (as cited in Jannah et al. 2019), vocabulary mastery means students should understand the vocabulary that include its meaning, the spoken and written form, the words' origin, grammatical behaviour, the opposition words, the associations of the words and also the word frequency.

Spelling

Spelling is another main component in mastering the English language. According to Spark (as cited in Lee et al., 2019), spelling skill is the ability to relate the knowledge of phonological processing, and letter correspondences, in the sounds that map onto letters. To have a good spelling skill, pupils need to acquire basic cognitive components such as phonological knowledge, morphological knowledge and orthographic knowledge. All the knowledge is vital because it is needed for the development of reading and writing skills (Templeton and Bear as cited in Samuddin and Krish, 2018). Hence, knowing the spelling of words will aid pupils to be fluent in reading and effective in written communication.

Game-Based Learning

A game is an activity with rules in which people or teams compete against each other (Oxford Advanced Learner's Dictionary, 2010). As for game-based approach, it is a kind of instructional activity which integrates games into teaching for educational purposes (Zhang, 2018). There are many games applicable in physical classrooms as well as games using technological gadgets and applications that will aid in improving pupils' English. Based on Cahill (as cited in Lukas et al., 2020), principles of games are learning through repetition, experiencing defeat and accomplishment of goals. Thus, employing games during the learning process is an effective method because they engage learners on an affective, cognitive and sociocultural level (Bin-Hady, 2020).

Game-Based Learning in Enhancing Pupils' Vocabulary and Spelling

To acquire the English language effectively, encompassing of listening, speaking, reading and writing skills, pupils need to grasp the basics of vocabulary first. However, in Malaysian context, most of the pupils find it challenging to acquire the English vocabulary due to the difficulties in remembering and retaining the new vocabulary learnt (Chai and Yunus, 2020). In addition, it has been mentioned by Santos et al. (2020) that spelling skill is difficult to develop. Thus, to improve pupils' vocabulary and spelling, game-based learning can be utilised. According to a study done by Rahmasari (2021), the findings showed that vocabulary mastery of most students improved after Bingo Game was used. Tsai et al. (2016) also said that when spelling games are applied upon the students, they can efficiently comprehend and learn English words.

Methodology

To conduct this study, I adopted the eight systematic literature review process proposed by Xiao and Watson (2019) as shown in Figure 1.

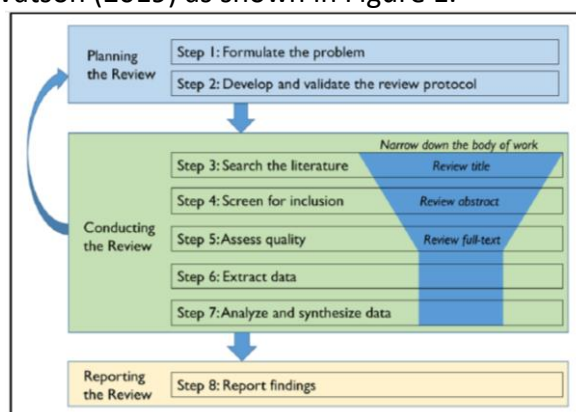


Figure 1: Process of systematic literature review.

The process involves three major stages and eight steps. The first stage was to determine the need for a review and develop the review protocol. In this stage, I identified the purpose of the study, research questions, search strategies, inclusion and exclusion criteria, synthesis and reporting.

Then, I started to conduct the review by searching suitable articles through database namely Google Scholar. The database was used to find peer-reviewed research studies or articles written in English published from years 2012 to 2022. When finding the articles, the keywords that I used were game-based learning, improve, enhance, English, vocabulary and spelling. At the same time, I also screened for inclusion and exclusion criteria as tabulated in Table 1.

Table 1

Criteria that should be included and excluded

| Inclusion criteria | Exclusion criteria |
|---|---|
| Respondents in the study should be at their primary level | Respondents in the study were at the secondary and tertiary level |
| Studies from various countries | Studies from one country |
| Articles were published from 2012 till 2022 | Articles were not published from 2012 to 2022 |

After that, all the articles were thoroughly read so that the data from the articles can be extracted, analysed and synthesised to answer the two research questions set for the review.

Finally, the findings of the review were tabulated consisting of reference, title of the study, criteria for selecting and using a game to enhance pupils' vocabulary and spelling and roles of game-based learning in enhancing pupils' vocabulary and spelling.

Findings

In this review, 15 articles from years 2016 to 2021 were chosen based on the two research questions. The findings are tabulated in Table 2.

| Reference | Title of the study | Criteria for selecting and using a game to enhance pupils' vocabulary and spelling | Roles of game-based learning in enhancing pupils' vocabulary and spelling |
|---------------------------|--|---|---|
| Bakhsh (2016) | Using Games as a Tool in Teaching Vocabulary to Young Learners | <ul style="list-style-type: none"> • Students' level • Interest • Context • Concerned with the presented topic and vocabularies | <ul style="list-style-type: none"> • Provide young learners' incentive and stimulus to use the language • Create a fun and relaxed atmosphere • Young learners are alert and stimulated |
| Mehrpour & Ghayour (2017) | The Effect of Educational Computerized Games on Learning English Spelling among Iranian Children | <ul style="list-style-type: none"> • Correspond with the student's level of education | <ul style="list-style-type: none"> • Makes learning entertaining and interesting • Help children maintain attention and concentration • Teach children to work as part of a group and learn to share • Develop creativity in children |

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|---------------------------|---|--|---|
| | | | <ul style="list-style-type: none"> • Improve students' ability to memorise the spelling of words • Give students chances to examine the words closely • Motivate students to learn and practice the words |
| Qamariah & Wahyuni (2018) | Teaching Spelling through Games | <ul style="list-style-type: none"> • An educational game that balances both fun and challenge • Look at the group that will be participating in the game and set out a goal for the group which the game should aim towards • Do not select a game that is too complicated • Must be central to learning | <ul style="list-style-type: none"> • Make learning interesting and fun • Initiate students to pay more attention in learning • Accompanied students in building good relation with other students to participate actively in classroom activity • Build up students' communication ability • Allow students to feel positively about their learning, especially the shy students and students with low confidence • Spark students' interest to learn |
| Tanago (2018) | The Effectiveness of Using Game-Based Learning in Teaching English Vocabulary | <ul style="list-style-type: none"> • Fit the teaching and learning purposes • Contain the contents which are appropriate for the learners' level of knowledge and language • Match with the learners' characteristics such as age and gender | <ul style="list-style-type: none"> • Helping the learners develop vocabulary knowledge and other related skills such as speaking and teamwork skills • Learners are provided an opportunity to encounter new words • Motivate learners to memorise the vocabulary while playing the game • Give learners a chance to practice using the new words in a real-life situation |
| Apdy & Asrifan (2018) | The Chinese Mime Game in Teaching Vocabulary | <ul style="list-style-type: none"> • Number of students • Level of proficiency • Cultural context • Time • Learning topic | <ul style="list-style-type: none"> • Lower the anxiety in children. • Add variation to the lesson • Provide a plausible incentive to utilise the |

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|--------------------------|---|---|--|
| | on EFL classroom | <ul style="list-style-type: none"> • Classroom setting | <p>target language to increase motivation</p> <ul style="list-style-type: none"> • The game context makes English useful to the children • Bring relaxation and fun to students which will help them learn and retain new words more easily |
| Shabaneh & Farrah (2019) | The Effect of Games on Vocabulary Retention | <ul style="list-style-type: none"> • Students' age • Abilities • Interests | <ul style="list-style-type: none"> • Create an engaging and enjoyable learning environment • Contextualised information stimulates students' critical thinking. When they play games, they learn to evaluate, synthesise, analyse and organise information • Help in developing flexible individuals who can do reasoning and adapt in real life situation • Produce feelings of passionate enjoyment. • Assist students in retaining words more quickly and effortlessly |
| Jannah et al (2019) | Exploring the Effects of Using Game on Students' Vocabulary Mastery: A Case Study in Instructional Material and Media Development Class | <ul style="list-style-type: none"> • A game that can grab students' attention, decrease students' stress and give students a chance for a real communication | <ul style="list-style-type: none"> • Bring relaxation and pleasant to students • Engage students in learning by involving a friendly competition • Bring a real-world context into the classroom and stimulate students to use English flexibly and communicatively |
| Saputra & Hadi (2019) | Teaching Vocabulary through Fly Swatter Game | <ul style="list-style-type: none"> • Game should not be regarded as a marginal activity filling in odd moments | <ul style="list-style-type: none"> • Make students more interested to enjoy learning English • Help students to lower their tension and stress |

| | | | |
|--------------------|--|--|---|
| | | <ul style="list-style-type: none"> • Games ought to be at the heart of teaching foreign languages | <p>while doing the learning process</p> <ul style="list-style-type: none"> • Students are not worried about making a bunch of mistakes • Helping learners to recall vocabulary in a pleasant and entertaining way |
| Chai et al (2020) | Enhancing Malaysian Primary Pupils' Vocabulary Skills using Pocable Game and Pear Deck | <ul style="list-style-type: none"> • Learning objectives • Age of learners • Children's level of proficiency | <ul style="list-style-type: none"> • Pupils participate actively in the learning process which promote learners' interest in expanding their vocabulary bank • Help pupils to make sense of their own vocabulary and internalising it in terms of the spelling and meanings of the vocabulary learnt • Give pupils a chance to experience a fun, positive and encouraging learning environment • Create a cooperative learning environment for the pupils • Developing problem solving skills and enhances the creativity and communication among primary pupils |
| Lukas et al (2020) | Using U-NO-ME Card Game to Enhance Primary One Pupils' Vocabulary | <ul style="list-style-type: none"> • A game with appropriate difficulties while still easy to be played and conducted • The use of visual aids | <ul style="list-style-type: none"> • Enhance pupils' memory retention • Encourage pupils' learning motivation • Keep pupils engaged in their learning • Promote high order thinking and problem-solving • Encourage learners to interact actively and collaborate with other people |

| | | | |
|-----------------------------|---|---|---|
| | | | <ul style="list-style-type: none"> • Learning context is meaningful and useful to the pupils • Enable pupils to use language in an adaptable, comfortable and interactive way |
| Şevik & Bostancıoğlu (2020) | Spelling Games and the Orthographic Abilities of Young EFL Learners | <ul style="list-style-type: none"> • Focus on specific structures, grammatical patterns and vocabulary items • Suit the individual age and language level of the students | <ul style="list-style-type: none"> • Function as reinforcement, review and enrichment • Involve equal participation from both slow and fast learners • Provide an outlet for the creative use of natural language in a non-stressful situation • Maximise participation from the students |
| Ng et al (2020) | Educational Mobile Game for Learning English Words | <ul style="list-style-type: none"> • Characters and Storyline • Rule • Immediate feedback • Goal • Reward | <ul style="list-style-type: none"> • Provide motivation for learners • Enable students to learn educational content interactively and engagingly • Create the learning environment for students to learn English words without particular intention • Learn a language in a fun and interesting way |
| Bin-Hady (2021) | The Role of Games in Enhancing EFL Students' Vocabulary Acquisition | <ul style="list-style-type: none"> • The number of students • Proficiency level • Cultural context • Timing • Learning topic • Classroom settings | <ul style="list-style-type: none"> • Make lessons' enjoyable to students • Enhance students' motivation • Minimize students' anxiety • Help students recall vocabulary easily and naturally • Create contexts in which the language is useful and meaningful • Enhance students' interaction and improve their communicative skills |

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|----------------------------|---|--|--|
| <p>Hasram et al (2021)</p> | <p>The Effects of WordWall Online Games (WOW) on English Language Vocabulary Learning Among Year 5 Pupils</p> | <ul style="list-style-type: none"> • A game that is exciting while effectively meeting the learning goals • Colourful pictures | <ul style="list-style-type: none"> • Promotes pupils' engagement • Assist and enrich pupils' experience in acquiring English language vocabulary • Help retain players' attention, strengthen the memory of spelling as well as support the understanding of word meaning directly and indirectly • Pupils are more motivated, autonomous and prone to develop problem-solving skills |
| <p>Rahmasari (2021)</p> | <p>Improving Students' Vocabulary Mastery through Bingo Games</p> | <ul style="list-style-type: none"> • Use of colourful pictures • Use many types of games from the same category (e.g.: picture Bingo, word Bingo and spelling Bingo) | <ul style="list-style-type: none"> • Attract students' attention and their involvement in the teaching and learning process. • Encourage students to study and review their vocabulary words. • Students can memorize the vocabulary in different way. • Give students chances to explore their knowledge or vocabulary related to the topic. • Reduce students' anxiety in learning and increased learning motivation. |

Discussion

From the review, it can be seen that all the 15 studies have revealed that game-based approach is a practical learning strategy to be applied upon the pupils to enhance English vocabulary and spelling. However, games should be selected well before applying it into the classroom so that it balances both fun and challenges. Based on the studies reviewed, the criteria for selecting and using a game to improve pupils' vocabulary and spelling include background information of the pupils (e.g.: age, level of proficiency, interests), context (e.g.: number of pupils, classroom setting, cultural context), timing, learning topic, goals and features of games (e.g.: characters, storyline, visual aids, rule, reward, immediate feedback).

As for the roles of game-based learning in enhancing pupils' vocabulary and spelling, studies show that game-based learning has three important roles to play: motivation,

knowledge and skills. By integrating games, it motivates pupils to learn English because it creates a fun, interesting, positive and relaxed learning atmosphere. It lowers the anxiety in pupils and encourages pupils to participate actively in the learning process. When it comes to the aspect of knowledge, game-based learning encourages pupils to study and review their vocabulary words, improve their ability to memorise and retain the words, provides them an opportunity to encounter new words and gives them a chance to practice using the words in a real-life situation. Game-based learning also improve pupils' skills such as communicative skill and teamwork skill because games are often played in groups which requires pupils to interact and collaborate with one another. In addition, game-based learning boost pupils' critical thinking skill and problem-solving skill too since they learn to evaluate, synthesise, analyse and organise information when they play the games.

Implications

By applying game-based learning to improve English vocabulary and spelling, it is without doubt that it will benefit both teachers and pupils. Integrating games in the teaching and learning session can intensify the role of the teacher as a facilitator. In Malaysian context, not all teachers fully understand the roles as facilitators as they are already used to being the knowledge providers and transmitters. They still like to spoon-feed the students and give no opportunity for the students to think or act for themselves. Hence, through the use of games, teachers' responsibilities of spoon-feeding could gradually shift to a facilitator who provides resources, monitors progress and encourages pupils to solve problems on their own.

On the other hand, when pupils learn through games, it enables pupils to be responsible for their own learning. For example, to finish a certain game, pupils need to apply the knowledge that they have learnt. Therefore, when pupils, especially the weaker ones, are unable to complete the game, they might feel frustrated and disappointed. At this time, teachers can play their role as a facilitator or pupils can discuss with their peers to win the game. After they win the game, they will undoubtedly be more eager to learn more. As a consequence, students will be able to manage their own learning, be more creative and be able to apply their learning to life's challenges.

Conclusion

This study mainly focused on the criteria for selecting and using a game as well as the roles of game-based learning to enhance English vocabulary and spelling for pupils in the primary school. The findings of this study had shed light that while selecting and choosing a game for the teaching and learning process, it is important to take into consideration the background information of the pupils, context, timing, learning topic, goals and features of games. Game-based learning plays vital roles to motivate and improve pupils' knowledge as well as skills. Improving vocabulary and spelling through games is indeed a good approach to develop pupils' vocabulary and spelling skill because it will bring remarkably positive attitudes from the pupils. Game-based learning will also serve as a media to uplift pupils' confidence in using the English language. Hence, it is hoped that this study will encourage teachers to use the game-based approach when teaching English vocabulary and spelling and inspire researchers to explore the effectiveness of game-based learning further.

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