

**The Effect of Educational Games as a Learning Means on Understanding
Vocabularies and Structures for Primary Stage Pupils**

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Abstract

This study aimed to identify the importance of learning through gaming and the effect of learning by gaming on increasing creativity and the rates of educational attainment among primary school students. It employs a quasi-experimental design. Study participants were (80) third-grade students during the second semester of 2021-2022. Participants were divided into two groups, a control group (taught using traditional methods) and an experimental group (taught using game-based strategies). The instruments of this study included the EFL language test and the scoring scale used to analyze the results. The pre-test was applied to both groups to ensure the skills of understanding vocabularies and structures were comparable. After implementing the game-based strategy for the experimental group, the posttest was applied again to both groups. The findings suggest that game-based strategies are effective in improving vocabularies and structures' skills. Therefore, it can be concluded that game-based strategies are effective in developing language skills and can be applied in EFL lessons at the primary level.

Introduction

Today, English is the main language in the world. It is an international language used worldwide. Without explicit language understanding, people can never know how to share the same concepts, expectations, agreements, etc. Therefore, language comprehension has become an important indicator of personal meaning. People without language can still understand each other, but cannot influence each other. English has become a global second language in all countries of the world. This growing importance of learning English has prompted the development and use of new teaching methods. Most importantly, everyone realizes that it is very important for children to learn languages from an early age. Teachers should take different paths in the process of educating children.

When learning a language, whether native or foreign, vocabulary and structure play an important role. It is the element that ties the four language skills together. Vocabulary teaching should incorporate the four skills of listening, speaking, reading and writing. Teachers cannot teach vocabulary themselves unless learners, especially children of young learners, are confused and possibly frustrated when learning English. To be able to communicate well in a foreign language, students should master a reasonable number of words and know how to use them correctly. In fact, English as a foreign language is taught separately from language skills. The teacher provides the vocabulary for the learners to jot down in their notebooks and finally memorize them for the next meeting. This traditional way is very tedious and even makes learners hate English classes (Wulanjani, 2016).

Vocabulary is an integral part of bringing together all four language skills, namely listening, reading, speaking and writing. Therefore, mastering enough words and knowing how to use them is very important for English learners. In fact, English teachers have found that the more vocabulary students know, the better their English skills are. Young learners learn better when lessons are more engaging, engaging and interactive. Their senses need to be stimulated in order for them to learn effectively. Therefore, many researchers mentioned that the use of educational games will help young learners master a language, in this case English, in many ways. Hadfield (1997) describes games as "an activity with rules, goals, and elements of fun." Language games help them focus and keep their interest and attention on that particular lesson.

Pradeep (2013) also pointed out that teachers should not ignore grammar class because it is very important. When students master grammar, they can speak better. However, he claims that teachers use the grammar-translation method (GTM) method in the classroom. However, it is notorious for being teacher-centred rather than student-centred, and students have no opportunity to report in English. Because of this, teachers need to take a different approach to teaching grammar so that students can express themselves perfectly and clearly in English.

All courses are different and developed according to a student-centred teaching approach. This requires the use of different approaches, strategies and techniques in

response to the constructivist approach and requires good student engagement in the learning process. Educational games are one of the methods that are suitable for this course. Therefore, researchers need to conduct this study to find out the effectiveness of educational games in teaching English in primary schools, especially vocabulary and grammar teaching.

Research problem:

Gaming, teaches the children to form bonds with others, participate in, negotiate and resolve conflicts, as well as contribute to their ability to assert themselves. Gaming also teaches children leadership skills, as well as group interaction. Using of games in teaching practice is very important, as it facilitates the teacher's work with more relaxed practice. This research presents early childhood education according to the BNCC curriculum and the opinion of several authors about the importance of gaming in the teaching and learning process, because the child learns more through gaming, without realizing it. It is taught, and teachers who develop teaching activities teach without realizing that they are also learning.

Gaming led to Learning teaching, Knowing, understanding, helping, identifying problems, influencing situations and, above all, to put yourself in children's place in order to better understand and serve children. Gaming is very important for children's development, especially when it comes to children's interaction with adults or with other children, and interaction and reactions during the game characterizes the daily life of childhood, bringing with it many lessons and possibilities for the integral development of children. By observing the interactions and play between children and their children with adults, it is possible to identify, for example, the expression of emotions, the mediation of frustrations, the resolution of conflicts and the regulation of emotions. Telling and listening to stories, dramatizing, playing with the ruler, and drawing, among other activities, are fun ways to learn. Through them, children bring out their creativity and emotions, reveal their fears and joys, and develop characteristics important to life in society. Accordingly, the main question of the study was identified, which is the importance of learning through play in the primary education stage?

Research objectives:

In early childhood education, children need conditions that enable them to learn in situations that lead to participation in environments that encourage them to face challenges and feel motivated to solve them, as they construct ideas and meanings about the world and natural, meaningful learning.

- Identifying the importance of learning through gaming in the primary education stage.
- Identifying the effect of learning by gaming on increasing creativity among primary school students
- Identifying the effect of learning by gaming on increasing the rates of educational attainment among children in the primary education stage.

Research Significance:

The present research might help:

1. Pupils will be able to promote healthy competition among pupils in the classroom. They also help in creating a non- threatening learning environment. They also provide the chances for pupils to use and practice the language in usefully and meaningfully.
2. Teachers will provide English teachers with a better perception in using various language games in their classroom. They are also so effective that teachers are more motivated to use language games as a tool to improve their pupils' linguistic abilities.
3. Curriculum designers will direct their attention to educational games to incorporate some of the methods, techniques and activities based on them.
4. Researchers will provide them with new avenues of research in educational games and how they can be used to teach pupils/students at the various stages of education.

Delimitations of the Research

The present research was delimited to:

1. A group of 6th year primary school pupils (N=24) from Complex Quran Memorization School (Primary School) in Gazan, Kingdom of Saudi Arabia.
2. Some vocabulary and grammar skills.
3. The first semester of the academic year 2018-2019.

Literature review:

Language learning is hard work. Someone must take effort, which is required to understand and manipulate the language that can be used by many learners. Games help the teacher to create context in which the language learning is useful and meaningful. A useful interpretation of meaningfulness is that the learners respond to the context in a definite way. If they are amused, angered, intrigued or surprised the context is clearly meaningful to them. The writer sure that every teacher wants their learners take part and understand what the teacher means. Ersoz said that language learning is hard task which can sometimes be frustrating. He also said well – chosen games are invaluable as they give students a break and at the same time allow students to practice language skill. Games are highly motivating because they are amusing and interesting. Games also serve as a diagnostic tool for the teacher, who can note areas of difficulty and take appropriate remedial action.

Jill Hadfield (1996:4) states that the games make use of variety of technique. Variety is important in language learning and teaching and a succession of games based on the same principle. Technique used for instance includes information gap, collecting, combining, role play, and simulation technique. Based on the explanation above, it seems clear that games provide an opportunity for intensive language practice, offer a context in which language is used meaningfully. Games are also as a tool for teacher to diagnostic the area of difficulty in teaching and learning process. Last but not least, although games use many kinds of techniques, the important reasons for using games is simply that they are immensely enjoyable for both teacher and students.

Class, individual, pair and group work can play games. The four of types of grouping, pair and group work are very important if each learner is to have sufficient oral practice in the use of language. In class work it is easy to demonstrate that learners say only one or two sentences in a lesson. Pair work is easy and fast to organize. It provides opportunity for intensive listening and speaking practice. Group work is essential if some games require four to six players. According to Wright (1997:5) pair work is better than group work if there are discipline problems. He also said that for all the reason we often prefer to organize games in pair or general class work, rather than in group work.

Vocabulary Acquisition is regarded by students as one of the hardest components of learning the language. However, vocabulary is considered one of the sub-skills of the language (Orfan, 2020). Although, there is not much attention paid to making it simpler and easier for enhancing the vocabulary knowledge of the students. Moreover, vocabulary knowledge helps improve the social potential of the student and also in improving the communicative skills of the student. For students to develop their vocabulary skills, different ways and techniques can be helpful. But there are no clear rules that allow vocabulary to be learned by students. Every student has their way of building vocabulary knowledge. Various studies have shown that learning new vocabulary by using games has helped to increase vocabulary retaining and make language learning fun and inspiring (Hoa and Trang, 2020; Ma and Yodkamlue, 2019; Selvi and Çoşan, 2018).

However, little attention has been paid to the use of educational games by the Afghan classroom upper classes to expand their vocabulary. Furthermore, vocabulary acquisition in the Afghan context is structured in a more traditional way. According to Orfan et al. (2021), the grammatical-translation approach was identified as the main approach by Afghan university lecturers. Teachers are used to teaching vocabulary by repeating its sound and meaning many times and asking students to follow the same rules to memorize vocabulary. Following the predecessors' research on the use of educational games for vocabulary teaching, this paper uses educational games to study the vocabulary teaching in reading comprehension. Therefore, this paper aims to examine three themes, namely, educational games, reading comprehension, and motivation, in the context of Afghanistan to find out the effect of using games in vocabulary instruction and to determine how educational games motivate students to build vocabulary skills. In this regard, Our current research focuses on the game-based teaching of vocabulary, student encouragement, and the impact of vocabulary on reading comprehension. Therefore, the present mixed methods study helps to find out the outcomes of using games to teach vocabulary and the motivation of new students in Taka University to learn vocabulary.

Lately every student and teacher's attention has been focused on improving vocabulary awareness through games. It is argued that games are of great value in improving students' vocabulary skills in educational toys. Likewise, the results of a study by Barabadi and

Khajavi (2017) suggest that combining education and games can be both educational and entertaining. The classroom world can become more communicative through fun vocabulary learning. Furthermore, Murray and Ian (2018) have acknowledged that involving students in activities such as using games can allow learners to recall new vocabulary more quickly. Game-based education helps ensure that the learning process is fearless and rewarding. Vocabulary acquisition through play encourages students to communicate with each other and expand their vocabulary knowledge (Ebrahimzadeh and Alavi, 2016). They are also supportive in keeping teachers to be boring and also helping them feel free to instruct students in an expressive way of learning.

Games have many advantages and effects when it comes to learning new vocabulary. Games create a friendly atmosphere for all students in the classroom, each interested in a fun and competitive supportive learning environment. In this way, students in small groups have the opportunity to support each other in solving problems raised in the joint work. They will also stimulate students' imaginations and develop their ability to practice language in playful ways (Rasti-Behbahani and Shahbazi, 2020; Akramy, 2020). As you can see, by teaching vocabulary in a fun way, it can be fun and motivate teachers and learners to make the learning process meaningful and accessible. The important role games play in learning and mastering new vocabulary in the language classroom cannot be overlooked.

Learning vocabulary plays an important role in reading comprehension. In order to understand the text as easily as possible, reading comprehension requires adequate vocabulary awareness. The researchers claim that reading skills as a primary language skill are related to vocabulary skills as a sub-skill. Lack of vocabulary affects learners' reading comprehension, which is seen as an important necessity and key factor (Hashemi and Kew, 2020). Ibrahim et al. (2016) recognize that there is a relationship between vocabulary and reading comprehension when students simultaneously develop their vocabulary knowledge. Therefore, reading comprehension and vocabulary are sure elements to make the learning process easy and understandable.

Rolletschek (2020) claims that those with a background of strong lexical skills are more likely to understand texts than those who lack them. He studied the important role of

vocabulary in reading comprehension in the Malaysian context and found that vocabulary learning is the main goal of language learning, be it a second or foreign language. Researchers acknowledge that vocabulary ability is an essential factor for proficient learners and suggest that those with excellent vocabulary ability can effectively comprehend reading texts (Camacho & Vásquez 2019; Ovalle et al. 2020; Kamnardsiri et al. 2017; Li & Cummins 2019; Palace Saki, 2019). Similarly, a study by Kameli & Baki (2013) investigated the effect of vocabulary awareness level on English reading among Iranian high school students. They claim that lexical awareness has an impact on reading comprehension at different learning levels.

There are several methods and techniques to help students improve their vocabulary. Motivation, whether intrinsic or extrinsic, is one of the main factors in improving students' reading comprehension vocabulary skills (Franciosi et al., 2016). However, there are also several ways to motivate learners to actively engage in learning and improve their vocabulary skills. This goal can be achieved by using games to improve students' vocabulary skills in the classroom. It is also worth noting that educational games can be internally and externally driven to create an enjoyable atmosphere. This learning process can over-learn, motivate the learner and facilitate the teacher's learning process. (Bakhsh, 2016) argued that it provides a social function and meaning that can motivate students to learn vocabulary through the use of games. Students' interpersonal skills and even verbal participation in group work in a collaborative manner.

Educational Games

English vocabulary is considered as one of the sub-skills of four integrated skills (writing, reading, speaking and listening). It is also recognized as a difficulty in language learning by learners. There are also no clear and effective rules and methods to help students learn vocabulary and terminology. More specifically, this research aimed to find out how vocabulary is taught through play, how students are encouraged to learn vocabulary to improve their communication skills, and how vocabulary works successfully in their academic context to comprehend any text they read. It combines teaching with fun, and it is very popular among teachers and students. Sowell (2018) argues that educational games have grown in importance in language lessons because they help to make language

lessons fun. He found that choosing games as a means of teaching and educating people can not only entertain and teach, but also improve the classroom atmosphere. Typical exercises such as memorizing long word lists, derivations, translations, word repetition, and cloze exercises are difficult and repetitive for students.

Techniques are not commonly used to teach and practice vocabulary, such as using games. They are only used by both teachers and students for a time or occasion that can be powerless and useless. Learning vocabulary through games is helpful and has many advantages. Prabha and Abdul Aziz (2020) stressed that games should provide learners with a learning experience that is fun-filled and calming. Students can use language in a non-stressful way after studying and using new vocabulary. Although students learn vocabulary and their emphasis is on the message rather than the language. Therefore, the linguistic forms don't matter to them and they just feel free to preserve the theme. This would remove the fear of publicly assessing or evaluating students negatively and this may be the primary reason for students to reduce their anxiety and learn more in a friendly environment (Miyazaki, 2019).

Methodology:

Study method: descriptive method - descriptive methods can be qualitative or quantitative, qualitative methods depend on the use of verbal language and do not resort to quantitative measurement.

The main methods of descriptive research are survey, observational, and individual case studies.

Participants of the Study

100 children from a school, 50 males and 50 females, who were chosen randomly.

Study population: School

The limits of the study

- Spatial limit: city

- Time limit: within 2022 AD

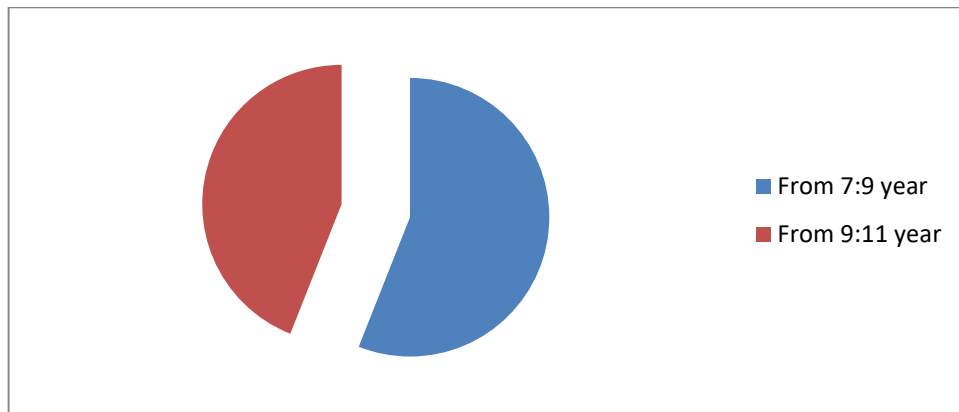
- A human boundary: Children in school children enrolled in the primary stage

Data collection tools: observation and questionnaire prepared by the researcher.

Results and self-reflection:

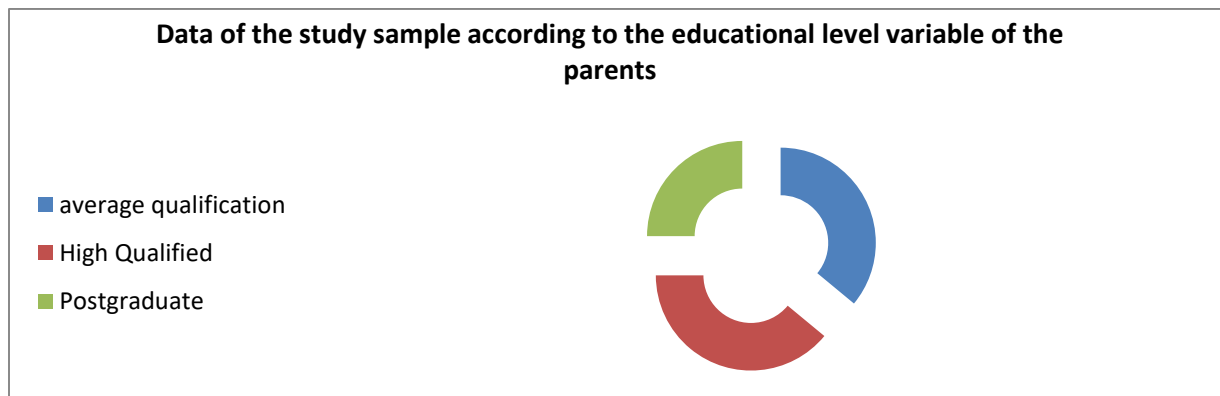
Data of the study sample according to the age variable:

Age	Number of children
From 7:9 year	56
From 9:11 year	44
Total	100



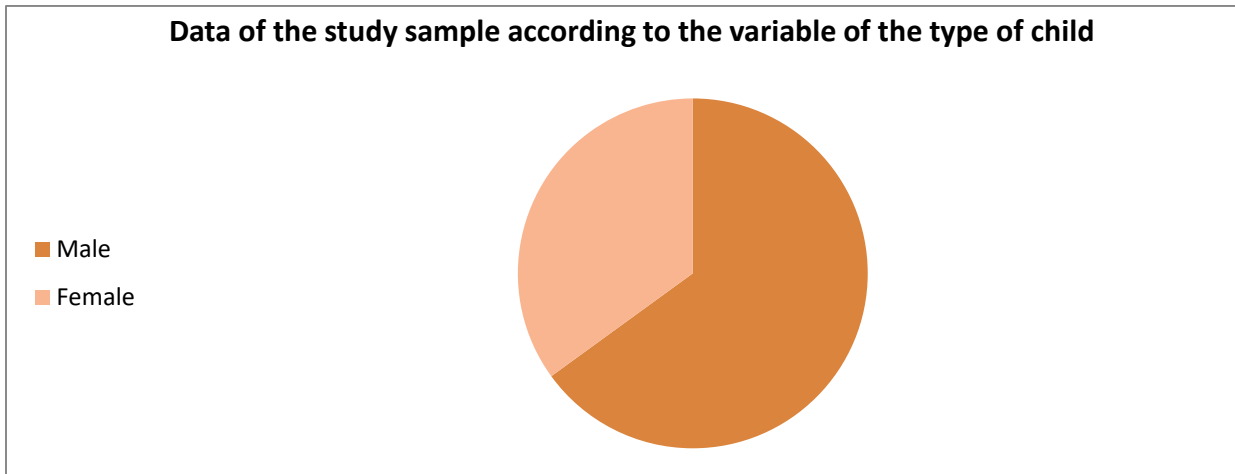
Data of the study sample according to the educational level variable of the parents:

Age	Number of children
average qualification	36
High Qualified	39
Postgraduate	25
Total	100



Data of the study sample according to the variable of the type of child:

Age	Number of children
Male	65
Female	35
Total	100

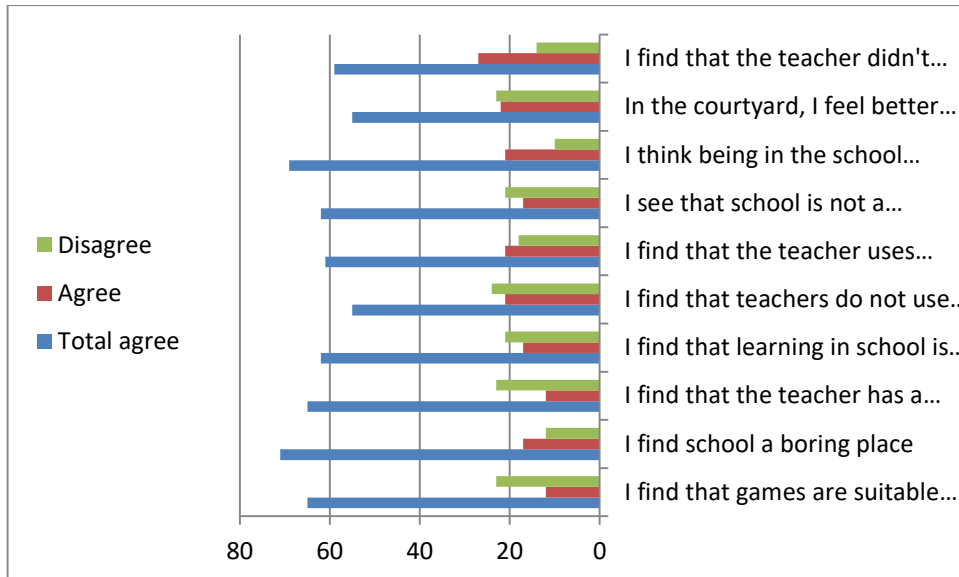


Questionnaire:

First: Identify the psychological impact of learning by gaming on the child's personality

	The phrase	Total agree	Agree	Disagree
1	I find that games are suitable for learning	65	12	23
2	I find school a boring place	71	17	12
3	I find that the teacher has a bad way of explaining	65	12	23
4	I find that learning in school is on the old way	62	17	21
5	I find that teachers do not use games to explain	55	21	24
6	I find that the teacher uses the computer more than gaming in learning	61	21	18
7	I see that school is not a suitable place for me	62	17	21

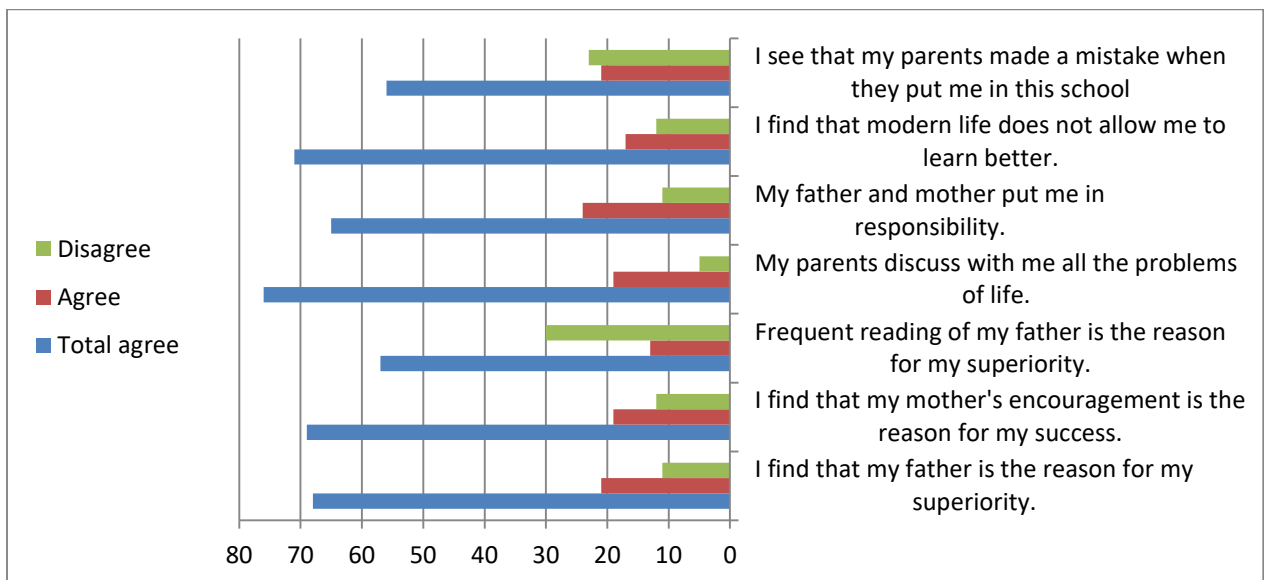
8	I think being in the school yard is better than the classroom	69	21	10
9	In the courtyard, I feel better and can understand more	55	22	23
10	I find that the teacher didn't explain in a suitable way	59	27	14



According to previous studies, it is found that the psychological learning state and personality of school-age children are affected, so the emotional and behavioral difficulties of school-age children are a serious and difficult problem. Provide mental health education to students and parents whose children are underperforming in school, based on their efforts and expectations. Most students with emotional and behavioral difficulties experience minimal changes in their cognitive, psychological, or emotional development that cannot be broadly categorized into specific diagnostic categories such as intellectual disability, attention deficit disorder, or specific learning obstacle. This is consistent with the research of (Zakour, 2018).

Second: Identifying the effect of the educational level of the parents on the strategies of learning by gaming to increase the child's learning in the primary education stage.

	The phrase	Total agree	Agree	Disagree
1	I find that my father is the reason for my superiority.	68	21	11
2	I find that my mother's encouragement is the reason for my success.	69	19	12
3	Frequent reading of my father is the reason for my superiority.	57	13	30
4	My parents discuss with me all the problems of life.	76	19	5
5	My father and mother put me in responsibility.	65	24	11
6	I find that modern life does not allow me to learn better.	71	17	12
7	I see that my parents made a mistake when they put me in this school.	56	21	23



The different studies agreed that there is a correlation between recognizing the influence of the educational level of the parents and the child's ability to learn, read, and progress in education, due to the existence of a cultural environment, and its ultimate goal is to enhance

children's ability to develop and learn. The most effective programs combine basic nutrition services, health care and activities designed to stimulate children's mental, language, physical and psychosocial skills - all of which reinforce each other. Experiments and research have conclusively shown that enhancing the experience of children - especially disadvantaged children - from their early years significantly improves their potential for growth and development throughout their lives. Studies agree that there is a link between the influence of parental education levels and children's ability to learn, read, and progress due to cultural context, with the ultimate goal of enhancing children's developmental and learning abilities. The most effective programs combine basic nutrition services, health care, and activities designed to stimulate children's intellectual, language, physical, and psychosocial skills—all of which go hand-in-hand. Experiments and research conclusively show that improving children's (especially disadvantaged) experiences from an early age can greatly enhance their potential to grow and develop throughout their lives.

Research findings:

The game also provides specific situations to help children find their own difficulties—whether it is memory, attention, observation, reasoning, etc. Let each child discover their hobbies and inclinations towards career.

Games help children imagine their daily life, travel and play, thereby facilitating the learning process, especially in early childhood education. Playing alone cannot be considered fun or a waste of energy as it promotes physical, cognitive, emotional and moral development.

A child's fondness for toys, spaces, and friends is a very important way into their mind-set, and its choices reveal its fears, abilities, potentials, and desires. Children need to play with other children to learn, but also to be able to teach.

Conclusion and recommendations

Fun activities should be present every day in early childhood education classes, because it is through games that teachers get to know their students more deeply, in order to serve them better, and that games allow a child to release stress, frustration, insecurity and even aggression, fear and confusion, all without you noticing. He has been saving all these feelings.

Recommendations

- Gaming is so important to human development that even when fights happen, it contributes to growth and learning, negotiating points of view, persuading an opponent, winning contagion for a cause, surrendering, fighting for a point - all this informs how you live
- In children's education, toys and games can be used to develop motor skills, perception, imagination, flexibility, interpretation, reasoning, agency, organization, rules, interpersonal conflict, mistrust of others, discipline, post-use toy storage. And it can be obtained through children's games together, so that the entire teaching and learning process of early childhood education can be developed in game activities.

Regarding the first research question, does the game have an effect on the teaching of vocabulary in reading comprehension. The findings show that educational games improve students' vocabulary skills. Your comprehension and comprehension of vocabulary is also improved. The findings of this study are similar to those of (Alhajaji et al., 2020; Camacho Vásquez and Ovalle, 2019; Karaaslan et al., 2018; Miyazaki, 2019), which pointed to educational games as a key factor in improving vocabulary. Before, they found it difficult to learn English, but when educational games were introduced in the classroom, the students became more energetic and excited to participate in the lessons given to them. The findings also show that various educational games are beneficial for students to learn and build new vocabulary and help them effectively comprehend the texts they read. This result is consistent with the findings of Allen et al. (2015) who believe that using appropriate games when teaching students can improve their comprehension and ability to build vocabulary knowledge. Students always stress that they and other students who are not paying attention in class should improve their vocabulary. To ensure that all students are engaged in the lesson and learn new vocabulary through playing games, it is best to improve their memory so that they can remember just by reading in a normal way.

In addition, the current findings show that students are more likely to play educational games or some kind of language game to stimulate their interest in learning vocabulary. Puzzle games have always been a common and fun activity for both children and adults. This will be more interesting as students will focus on different activities to ensure

the learning process goes smoothly. Therefore, this study shows that educational games motivate students to engage in each vocabulary learning session. Therefore, the findings of this study are consistent with those conducted by (Derakhshan and Davoodi Khatir, 2015; Ebrahimzadeh and Alavi, 2016), in which they stated that educational games can motivate students and increase their engagement in vocabulary learning. In this regard, teachers can use language games to improve students' vocabulary ability in reading comprehension, because vocabulary has great added value. In this regard, educational games do not delay the lesson, but instead help students to understand the reading text easily and effectively. Most importantly, however, the findings suggest that learning games that have already been used once should not be used again within a week, as they will get bored and will not participate every day. This finding was corroborated by (Dindar et al. 2021), who focused on teaching students using the game only once. By using educational games, students can increase their engagement, memorize new words, and explain new words.

Moreover, educational games have positive implications for learning and enhancing the vocabulary knowledge of the students. This is because students do not feel bored when learning these new words through educational games. The findings of this study are in line with the study conducted by Chen and Hsu (2020) where they have agreed on the effects of games in teaching vocabulary. Students can also be more excited when educational games are being used in the classroom and need to memorize the words they are learning immediately. In the sense of encouragement, educational games have a great influence on learners' vocabulary enhancement and memorization as well as on their psychological side in reading comprehension. This proved to be a successful way for both teachers and students to consolidate and use new lexical objects. As for the second research question on whether there is any significant difference in the mean scores of pre and post-test across gender. The findings of the study showed that there is no statistically significant difference in the pre and post-test scores of the respondents across gender.

Considering the third research question on how is the motivation of games in enhancing the vocabulary knowledge of the students in reading comprehension. The findings of the study in this respect indicate that motivation is a key factor for the enhancement of the vocabulary knowledge of the students in reading comprehension. This finding has been

supported by (Elaiish et al. 2019; Khalidiyah, 2017; Shahriarpour and Kafi, 2014) who believed that using games can motivate the students to improve their vocabulary knowledge. Vocabulary terms are not for a day's study, but the students need to practice them every day so that they can use the words and know how to use them. In other words, for a specific student, vocabulary is very important because it takes some time to acquire the skills to learn something new. In the classroom, we just need to concentrate and the students can apply the urge to learn something new. There will be a time when students will not take part in the lesson as they tend to be in their way, we as a teacher should know how to draw the attention of the students so that they can come and take part in the learning process. Since the students will be left out if the students do not participate, students will not be able to offer an example or clarify in their own words when it comes to explaining the meaning of the new words.

Considering that vocabulary is a sub-skill of English language proficiency, especially for beginners who learn as many new words as possible, teachers should use all their backgrounds to teach this skill differently. He or she must choose a method that correctly gathers all the factors that contribute to his understanding. Multiple studies agree that language games as a teaching tool have a significant impact on improving learners' vocabulary (knowledge, retention, and use) as well as their psychological aspects (motivation, relaxation, and confidence). Research is currently underway to illustrate the impact of vocabulary use through play on reading comprehension. Taken together, learning vocabulary through play was found to be more effective for reading comprehension and more dynamic for students willing to improve their vocabulary skills in a strategic and fun way. On the other hand, using games to teach and learn vocabulary can keep students engaged more frequently.

The purpose of this study was to examine the effect of using games on students' vocabulary knowledge in reading comprehension and to find out the effectiveness of games in encouraging students to develop vocabulary knowledge in reading comprehension. Thus, the results of this study suggest that using five different reading comprehension games consistently improves students' vocabulary skills. In addition, students can understand and remember words without the help of a tutor. This helps motivate students to learn

vocabulary while playing the games introduced in class. Teachers, on the other hand, must therefore be responsible for taking care of the needs of all students in order to maximize their vocabulary learning. Learning games have also been shown to have a significant impact on students' vocabulary skills in reading comprehension. In conclusion, the current findings suggest that teaching vocabulary through educational games increases student motivation as it provides them with fun activities.

This paper has some recommendations for the use of educational games by students and teachers to enhance the vocabulary knowledge of the students. It is proposed that teachers should look for techniques to involve their students in the use of creative expression. Students may use the language more communicatively by using vocabulary games. Due to their benefits, educational games are widely recommended for both teachers and students to use in enhancing the vocabulary knowledge of the students. Because, they offer students accountability and the chance to be physically and mentally involved, and are student-centered rather than teacher-centered, easily attract the interest of children, promote their engagement, and are fun to play in the structured academic phase, and socialize students. Students often learn or grow several skills, such as taking turns, working independently.

The present study is limited to several limitations number such as the number of participants was one constraint and less $N=20$. Another limitation was, the researcher selected all the students from the same class (freshmen). Hence, the power of the study was lower than desired with the small number of participants ($N=20$). Moreover, this analysis was limited to one university whereas the large population from many universities could be more effective and generalizable. This university may not be representative of other universities, therefore, it restricts the generalizability of the results to other universities. Finally, it should be remembered that introducing more games into language classes to promote learning is a new strand of study. It is possible to consider the impact of learning concrete and abstract words through various games as another line of study. Mobile-assisted language learning apps can help learners develop their vocabulary domain, so the influence of various mobile applications on vocabulary learning is a good area of research to find out.

References

- Wulanjani, A. N. (2016). The Use of Vocabulary-Games in Improving Children's Vocabulary in English Language Learning. *Transformatika: Jurnal Bahasa, Sastra, dan Pengajarannya*, vol. 12, no. 1, pp. 76-83.
- Hadfield, J. (2002). *Elementary communication games (3rd end)*. Hong Kong: Thomas and Nelson Sons Ltd.
- Deesri, A. (2002). Games in ESL and EF class. *The internet TESL Journal*, vol. VIII, No. 9. Retrieved from: <http://iteslj.org/Techniques/Deesri-Games.html>
- Pradeep, K. B. (2013). *The importance of Grammar in English Language Teaching –a reassessment*. *Language in India*, 482-486.
- Ersöz., A. (2000). Six Games for the EFL/ESL Classroom. *The Internet TESL Journal*, Vol. VI, No. 6.
- Wright, Andrew (1997). *Games for Language Learning: New Edition*. United Kingdom: Cambridge University Press.
- Orfan, S. N. (2020). Afghan undergraduate students' attitudes towards learning English. *Cogent Arts and Humanities*, 7(1).
- Hoa, T. M., & Trang, T. T. T. (2020). *Effect of the Interactive Whiteboard on Vocabulary Achievement, Vocabulary Retention and Learning Attitudes*. *Anatolian Journal of Education*, 5(2), 173–186.
- Ma, X., & Yodkamlue, B. (2019). The effects of using a self-developed mobile app on vocabulary learning and retention among EFL learners. *Pasaa*, 58(December), 166–205.
- Selvi, M., & Çoşan, A. Ö. (2018). The effect of using educational games in teaching kingdoms of living things. *Universal Journal of Educational Research*, 6(9), 2019–2028. <https://doi.org/10.13189/ujer.2018.060921>
- Orfan, S. N., Noori, A. Q., Hashemi, A., & Akramy, S. A. (2021). Afghan EFL Instructors' Use of Teaching Methods. *International Journal of English Language Studies (IJELS)*, 3(5), 31–38. <https://doi.org/10.32996/ijels>

- Barabadi, E., & Khajavi, Y. (2017). The effect of data-driven approach to teaching vocabulary on Iranian students' learning of English vocabulary. *Cogent Education*, 4(1). <https://doi.org/10.1080/2331186X.2017.1283876>
- Murray, & Ian. (2018). *Use Of Multimedia Games For Biology Vocabulary Instruction* (Vol. 15).
- Ebrahimzadeh, M., & Alavi, S. (2016). Motivating EFL students: E-learning enjoyment as a predictor of vocabulary learning through digital video games. *Cogent Education*, 3(1).
- Akramy, S. A. (2020). Speaking anxiety in an Afghan EFL setting: A case study of an Afghan University. *Language in India*, 20(12), 161-182.
- Rasti-Behbahani, A., & Shahbazi, M. (2020). Investigating the effectiveness of a digital game-based task on the acquisition of word knowledge. *Computer Assisted Language Learning*, 0(0), 1–25.
- Hashemi, Aminuddin Kew, S. N. (2020). The Effects of Using Blended Learning in Teaching and Learning English: A Review of Literature. *The Eurasia Proceedings of Educational & Social Sciences (EPESS)*, 18(4), 173–179.
- Ibrahim, E. H. E., Sarudin, I., & Muhamad, A. J. (2016). The Relationship between Vocabulary Size and Reading Comprehension of ESL Learners. *English Language Teaching*, 9(2), 116.
- Rolletschek, H. (2020). The Effects of Odor on Vocabulary Learning. *Language Teaching Research Quarterly*, 18, 21–39. <https://doi.org/10.32038/ltrq.2020.18.02>
- Camacho Vásquez, G., & Ovalle, J. C. (2019). The Influence of Video Games on Vocabulary Acquisition in a Group of Students from the BA in English Teaching. *GIST Education and Learning Research Journal*, 19(19), 172–192.
- Kamnardsiri, T., Hongsit, L. O., Khuwuthyakorn, P., & Wongta, N. (2017). The effectiveness of the game-based learning system for the improvement of American Sign Language using kinect. *Electronic Journal of E-Learning*, 15(4), 283–296.
- Li, J., & Cummins, J. (2019). Effect of using texting on vocabulary instruction for English learners. *Language Learning and Technology*, 23(2), 43–64.

- Franciosi, S. J., Yagi, J., Tomoshige, Y., & Ye, S. (2016). The effect of a simple simulation game on long-term vocabulary retention. *CALICO Journal*, 33(3), 355–379.
- Bakhsh, S. A. (2016). Using Games as a Tool in Teaching Vocabulary to Young Learners. *English Language Teaching*, 9(7), 120.
- Sowell, J. (2018). Talking about Words: A Vocabulary Description Game. In *English Teaching Forum*.
- Prabha, T., & Abdul Aziz, A. (2020). Effectiveness of Using Poly Category Mind Map for Vocabulary Development. *Arab World English Journal*, 11(2), 214–231.
- Selvi, M., & Çoşan, A. Ö. (2018). The effect of using educational games in teaching kingdoms of living things. *Universal Journal of Educational Research*, 6(9), 2019–2028.
- Miyazaki, K. (2019). The Effect of an Online Vocabulary Learning Tool on Passive and Active Vocabulary Use at a Range of Proficiency Levels. *Journal of Pan-Pacific Association of Applied Linguistics*, 23(1), 85–108.
- Alhajaji, B. H., Algmadi, J. S., & Metwally, A. A. (2020). Exploring the success of GMT technique: Games, mind-mapping, and twitter hashtags in teaching vocabulary in EFL higher education environment. *International Journal of Higher Education*, 9(3), 290–299.
- Karaaslan, H., Kilic, N., Guven-Yalcin, G., & Gullu, A. (2018). Students ' Reflections On Vocabulary Learning Through Synchronous And Asynchronous. *Turkish Online Journal of Distance Education-TOJDE July*, 19(3), 53–70.
- Allen, L. K., Snow, E. L., & Mcnamara, D. S. (2015). Are You Reading My Mind? Modeling Students ' Reading Comprehension Skills with Natural Language Processing Techniques.
- Derakhshan, A., & Davoodi Khatir, E. (2015). The Effects of Using Games on English Vocabulary Learning. *Journal of Applied Linguistics and Language Research*, 2(3), 39–47.

- Dindar, M., Ren, L., & Järvenoja, H. (2021). An experimental study on the effects of gamified cooperation and competition on English vocabulary learning. *British Journal of Educational Technology*, 52(1), 142–159.
- Elaish, M. M., Ghani, N. A., Shuib, L., & Al-Haiqi, A. (2019). Development of a Mobile Game Application to Boost Students' Motivation in Learning English Vocabulary. *IEEE Access*, 7, 13326–13337.
- Khalidiyah, H. (2017). The use of domino game with picture in improving students' vocabulary knowledge. *Education and Language International Conference Proceedings Center for International Language Development of Unissula*, 1(1), 349–358.
- Shahriarpour, N., & Kafi, Z. (2014). On the Effect of Playing Digital Games on Iranian Intermediate EFL Learners' Motivation toward Learning English Vocabularies. *Procedia - Social and Behavioral Sciences*, 98, 1738–1743.