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Original Article

Effects of Instructional Games on Vocabulary Learning and Retention of Iraqi Primary School Students

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Abstract

Using instructional games in vocabulary learning is beneficial, but their effects in the Iraqi EFL context have been overlooked. This study investigated the effects of instructional games on Iraqi primary school students' vocabulary learning and retention. To fulfill the objectives of the study, a quasi-experimental study with a pretest-posttest design was adopted. The present study's participants were 40 Iraqi primary school students selected based on a convenience sampling. The participants were divided into two groups, one experimental (N= 20) and a control group (N=20). The students in the experimental group (EG) received vocabulary instruction in the form of game-based teaching. The control group (CG) was instructed using conventional teaching procedures. In this study, a textbook (Family and Friends 2) was used as the material, and two tests were utilized as the measurement instruments. It was found that the group of Iraqi primary school students who were instructed through the games considerably outperformed the group of students who received the traditional teaching in the classroom. Furthermore, the results revealed that the Iraqi primary school students who received vocabulary through instructional games had much better vocabulary retention than those who underwent the traditional teaching methods. The findings might have some implications for the material developers and EFL teachers in Iraq. **Keywords:** Instructional games, Iraqi primary school students, Vocabulary learning, Vocabulary retention

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1. Introduction

Vocabulary is the basis of language learning and teaching (Nation, 2013; Schmitt, 200°). Vermeer (2001) believes that communication is only made possible through vocabulary since they are major carriers of meaning. It is therefore obvious that for learning a new language, explicit teaching is crucial. (Dolati&Mikaili, 2011). In some EFL contexts, especially those in which English has not been received due attention and considered merely a foreign language, there is the large dependence on traditional teaching methods (Almahammad, 2018). This condition might bring teachers less opportunity to engage their learners in innovative teaching techniques and deter them from providing meaningful communicative situations which is the primary school students' major learning need (Curtain & Dahlberg, 2010).

The Iraq Ministry of Education has not presented any specific syllabus for teaching vocabulary and it expects its teaching through other language skills. Accordingly, many teachers do not have a clear and approved method for teaching vocabulary. Considering that vocabulary is very important in learning a language, it was tried to investigate new techniques for teaching vocabulary to Iraqi primary school students in order to facilitate their vocabulary learning.

Some scholars believe that the motivating and pleasing atmosphere can significantly contribute to improving vocabulary learning process (Wang, 2020; Yukselturk et al., 2018), and these can be achieved through various activities including playing games, singing songs, telling stories and acting roles (Melo-Pfeifer, 2015). Teaching through games, increases motivation, expedites communication and enhances learning; therefore they promote learning and retaining of new words (Nguyen & Khuat, 2003).

Since the learners perceive the learning environment enjoyable, beneficial, interactive, and learner-oriented in which all their peers are actively engaged in the learning tasks and effectively communicate in the learning process, they tend to be much more communicative, active, and efficient learners (Hayta &Yaprak, 2013). This is especially true for young learners who are new to foreign language learning and do not have much experience in the field before.

Due to the nature of instructional games and their attraction to young learners, it is believed that exposure of the learners to instructional games might create an effective and efficient platform and engage them much more actively in the learning process of

vocabulary. However, it seems that there is an apparent lack of studies on the impact of using instructional games on Iraqi primary school students' vocabulary achievement. Therefore, this study examined the effect of instructional games on Iraqi primary school students' vocabulary achievement. It was also tried to find the probable efficiency of the instructional games on the students' vocabulary retention.

2. Literature Review

Vocabulary is the building block of any language and determining factor of the learner's writing, reading, speaking, and listening quality (Milton,2013). "Lexical knowledge is central to communicative competence and to the acquisition of a second language" (Schmitt, 2000, p. 55). However, vocabulary is recognized as EFL learners' major source of problems (Gass & Selinker, 2001). In Zhang and Lu's (2015) view, one of the fundamental challenges for EFL learners in learning target language words is finding out the ways and procedures through which they can retain and recall the newly learned vocabulary more effectively. Vocabulary retention is defined by Mohammed (2009), as the ability to recall and use the learned vocabulary in language contexts.

Eyraud et al. (2000) suggested motivating and enriching learning contexts to foster students' vocabulary learning and retention. To achieve this, choosing an age-appropriate approach and activities is essential.

Given the facts that for primary school students, the total time of teaching and the available inputs are quite limited (Curtain & Dahlberg, 2010), and they are engaging in learning a new language while they are still expanding some features of their native language, applying appropriate activities to promote the efficiency of vocabulary teaching and remove these shortcomings are even more important. In other words, to make the most of the restrictions, these teachers must apply creative and appropriate activities to increase students' vocabulary knowledge and retention. The task, therefore, should be designed according to the child's short attention. In addition, they need to be essentially motivating to make learning meaningful.

Iraqi Young EFL learners have little exposure to the foreign language and their uses are limited to certain school situations. The deficiencies in Iraq's educational system have led to creating anxiety, stress, and demotivation among the EFL learners. Further, those EFL students who are not adequately motivated may insufficiently involve in the learning process

that in turn makes them unable to develop language skills to their full potential (Santosa & Riady, 2021). A quality approach to teaching young EFL learners is to practice the target language through game-based activities (Nikolov et al., 2020). Some suitable activities for primary school students are songs, stories, overall physical reactions, artistic and craft activities (drawing, painting, cutting and pasting), games and role play. Games are important forces to trigger the learners' motivation and involve them in active learning of vocabulary which most Iraqi EFL learners are low proficient in it. Therefore, games were seen as a possible teaching tool that needs to be employed to enhance the vocabulary learning of primary school students.

This study was structured around games-based language learning (GBLL) that evolved out of Computer Assisted Language Learning (CALL). It is a field of study that combines language teaching and learning with computer technology and render a more student-fronted learning environment in which learners' interest, engagement, and needs are furthered and met. "Instructional games are games designed specifically for educational purposes, aiming to instruct learners on a particular topic or skill while engaging them in an interactive and stimulating experience" (Mayer, 2009, p.406). Deesri (2002) defined games as a kind of play directed by rules. They are ways of getting the learner to use the language while playing. They are useful and effective tools that "put games and learning together and present learners pleasing and safe environments that attract the language learners' attention and provide safe participation in activities (Wu, 2021). They can be used as a medium of instruction to create new learning opportunities and make the classes more interesting, enjoyable and effective. Instructional games expand the interaction with foreign languages accompanied by entertainment (Malliet& Meyer, 2005). They provide a text-rich environment for language learning (Artini, 2005). The relationship between instructional games and language learning has been studied by the researchers in recent years. (Cornillie et al., 2012).

Ghonsooly and Elahi's (2010) study, for example, revealed that instructional games enhanced the low-achieving learners' English reading self-efficacy. Chen and Shire (2011) claimed that EFL learners can learn new vocabularies when listening to dialogues between game characters. Chik's (2014) survey study to examine the impact of instructional games on EFL learners' reading skills, proved that they were useful in provoking the motivation of reading among EFL learners.

Partovi and Razari (2019), similarly, explored the constructive effects of instructional games on the academic attainment of elementary school students. However, Berna's et al. (2020) study revealed contradictory results. They investigated the effect of instructional games on the academic attainment of students. The result revealed that instructional games did not affected the academic achievement of students significantly.

Reinders and Wattana (2015) conducted a mixed-methods study to explore the impact of playing digital games on EFL learners' language learning. The result indicated that playing digital games had a positive impact on EFL students' language learning. They also demonstrated improved language skills, such as vocabulary acquisition, grammar, and pronunciation. Sourmelis et al. (2017) study also confirmed the encouraging role of instructional games on language learning. Pursuing the same line of research, Dewi et al. (2017) research revealed the significant impact of instructional games on teaching speaking. They recommended using games as designed activities in teaching speaking skills. In like manner, Wang's (2020) study has approved the positive role of instructional games on English students' communicative competence.

Yukselturk et al. (2018) in Turkey, investigated the effects of instructional games on students' attitudes to English language learning. According to results, students' attitudes towards English significantly increased. In the Arabic EFL context, Gamlo (2019) examined the effect of GBLL on Saudi female EFL learners' motivation in learning English. The results revealed that the EFL students were motivated to learn English.

In Iraq, the researchers has observed a lack of interest and motivation among Iraqi EFL learners due to the overwhelming dependence on prescribed materials and traditional teaching methods. Moreover, these problems are compounded by the deficiencies in the educational system that create anxiety and stress among primary school pupils who struggle with vocabulary learning. Thus, this study tried to explore the impact of instructional games on Iraqi primary school students' vocabulary learning and to enhance their vocabulary learning and retention in a pleasant and motivating atmosphere. Moreover, reviewing the studies regarding vocabulary learning and instruction, the researcher managed to extract and specify the importance of vocabulary instruction in language classrooms. In addition, the related studies enriched the current study by presenting a vivid picture of how instructional games, the design and the instruments for setting up classrooms for this study should be laid

out and operationalized. Based on the objectives of the present study the following research questions were posed.

- 1. Do instructional games significantly affect the vocabulary learning of Iraqi primary school students?
- 2. Do instructional games significantly affect vocabulary retention of Iraqi primary school students?

3. Methodology

3.1. Design of the Study

This is a quantitative study in which a pretest-posttest quasi-experimental design was adopted to determine whether using instructional games has any significant impact on Iraqi primary school students' vocabulary learning achievement, as well as long-term retention of the English vocabulary. A quasi-experimental design is an experiment that the participants are not selected randomly. But, after selection, they have to be randomly divided into experimental and control group. In this study, instructional game was the independent variables of the study and the participants' vocabulary achievement and retention were the two dependent variables.

3.2. Participants

Out of boy primary schools in Karbala, Iraq, 40 students whose language proficiency level was Starters were selected through convenience sampling. They were 8 to 10 years old EFL students that spoke Arabic as their first language. The participants were assigned into one experimental (EG) and one control group (CG) each containing 20 students. The students in the experimental group received vocabulary learning through instructional games. The participants in the control group (CG) were instructed using traditional vocabulary teaching procedures.

 Table 1.

 Demographic Background of the Participants

No. of Participants	40 (Primary school students)
Gender	Male
Age	8 - 10 years old
Native Language	Arabic
Academic Year	2022

3.3. Instruments

3.3.1. Cambridge Young Learners Test

This test is designed to assess the English language proficiency of young learners aged between 7 and 12 years. The purpose of these tests is to provide a reliable and valid measure of a student's English language ability, which can be used for tracking progress over time and making decisions about placement or promotion. The tests are divided into three levels: Starters, Movers, and Flyers and use child-friendly activities. It was intended to pick out Starter-level learners for the present study.

3.3.2. Vocabulary Achievement Test (Pre-test, Post-test, and Delayed Post-Test)

Using vocabulary derived from Family and Friends 2 textbooks, a 25-item vocabulary test was designed consisting of three subsections: a) multiple-choice (15 items), b) matching (5), and c) fill-in-the-blanks (5 items). The selected vocabulary items were from subjects that were covered in the units of "Family and Friends Basic".

The designed vocabulary test was administered at three different times. To confirm the homogeneity of the learners in vocabulary knowledge to measure their progress after the treatment, it was administered once at the beginning of the course. One was administered immediately after treatment as a post-test and the other two weeks after the end of treatment to determine the effectiveness of the intended intervention for vocabulary retention. The only difference among the tests was the order and organization of the items to eliminate the effects of learning and remembering the items.

To check the validity of the test, it was sent to a TEFL professor who worked in the realm of language testing and two experienced and knowledgeable EFL teachers to be reviewed and checked in terms of its validity. The reliability was calculated through the KR-21 method. The correlation coefficients for the pre-test, post-test, and delayed post-tests turned out to be 0.85, 0.79, and 0.72.

For scoring this vocabulary test, each correct answer received one point and the incorrect answer received none. Next, the scores of the correct answers to the whole test were considered as the measure of the participants' vocabulary knowledge. The reliability for all tests was calculated through KR-21 method. The correlation coefficients for pre-test, post-test, and delayed post-tests turned to be 0.85, 0.79 and 0.72. In order to ensure the validity of the test, it was sent to a TEFL professors worked in the realm of language testing

and two experienced and knowledgeable EFL teachers to be reviewed and checked in terms of its validity.

3.3.3. Instructional Games

A set of online and fun games were selected from www.ESLgamesplus.com website to be used in the present study. All the games were designed for elementary and lower-intermediate EFL learners and were related to improving the learners' different language skills. The selected games were concerned with vocabulary learning, and sentence making.

3.4. Materials

3.4.1. Family and Friends 2

Family and Friends Books (Simmons, 2016) is a collection designed to teach English to children ages 8 to 12. These series consist of 7 levels. This collection is used in many schools in Iraq for children's courses. In addition to great content, this collection has tried to use attractive and colorful images to make children more interested in learning. To ensure that both the experimental group and the control group received the same learning materials and vocabulary items, the same book and the same sections were covered in both classes.

3.5. Data Collection Procedure

In the first step, by Cambridge Young Learners English Tests, 40 starter students were chosen for the study. In the second step, a researcher-made vocabulary achievement test was used as a pre-test to be sure about the homogeneity of the participants in terms of vocabulary knowledge before the treatment.

The taught vocabulary items are presented in Table 2. Both of the groups (control and experimental) received the same vocabulary items with the only difference that the control group were not instructed through games. Each session lasted 45 minutes. The first 5 minutes of the sessions was devoted to greetings and preparatory activities for both groups. In each session, 10 minutes were also devoted to reviewing the vocabulary items which have been taught in the previous sessions.

Table 2. *Vocabulary Instruction*

Category	Word List	Session	Time
Hello	Character, Names, Greetings	one	30 min
What color is it?	Colors	two	30 min
What is this?	School Things	three	30 min
Is it a plane?	Toys	four	30 min
This is my mum	Family	five	30 min
He is happy	Feelings	six	30 min
They are bears	Animals	seven	30 min
Are they teachers?	Jobs	eight	30 min
I've got a shirt	Clothes	nine	30 min
I like plums	Food and drink	ten	30 min
Activities	Eating, Playing, Sleeping, Cooking, Watching	eleven	30 min
Weekdays	Sunday, Monday, Wednesday, Thursday, Friday	twelve	30 min

More specifically, in the treatment sessions which lasted for six weeks and 12 sessions, the participants in the experimental group (EG) were taught the selected English vocabulary items through related instructional games. For example, in the first session of the treatment, the vocabulary items related to "Greetings" were taught by using online and fun games from www.ESLgamesplus.com. In this game, the students received the intended words accompanied by audio, images and text. After presenting the vocabulary items through instructional games, the new words were written on the board and the students were asked to read them aloud and say their meanings to check and make sure about the accuracy of the meaning.

For the participants in the control group, the same words were presented using a traditional method (without having any instructional games). First, flashcard or picture of a word was shown with its spelling Second, the word was read clearly and loudly. Third, the meaning was explained by miming or telling a simple story. Finally, if the students couldn't get the meaning, the word was translated into Arabic.

At the end of the treatment, the learners took the post-test to determine the effectiveness of the treatment. Then, after two weeks, a delayed post-test was administered to investigate the delayed vocabulary recall of the participants. After finishing the data collection, the gathered data was inserted into SPSS 24 to be analyzed using the related analytical procedures.

3.6. Data Analysis

To analyze the obtained data, various statistical procedure was used. First of all, the data were analyzed using SPSS 24 program. Secondly, to estimate the reliability of the proficiency test and vocabulary tests KR-21 method were used to obtain the alpha coefficient of them. Then, descriptive statistics were run for all three variables of this study. In addition, to answer the research questions of this study, inferential statistics also were utilized to analyze the collected data. To investigate the research questions two independent sample t-tests were conducted.

4. Results

The normality of the scores for the three tests of vocabulary was calculated using Kolmogorov-Smirnov Test. The summary of obtained results is presented in Table 3 below.

Table 3.The Normality Test for the Three Vocabulary Test Scores

		Pre	Post	Delayed
N		40	40	40
Normal Parameters ^{a,b}	Mean	13.22	18.98	18.22
	Std. Deviation	3.23	2.89	3.91
Most Extreme Differences	Absolute	.178	.912	.080
	Positive	.183	.096	.064
	Negative	139	82	080
Test Statistic		.456	.229	.481
Asymp. Sig. (2-tailed)		.123°	.165°	.188

Since the Sig values of Kolmogorov-Smirnovtests were greater than 0.05 in all groups, it could be concluded that for the two groups of the participants vocabulary scores were normally distributed.

4.1. Pre-test Analysis

In order to ensure that there was not any pre-existing difference between the participants in terms of vocabulary knowledge before the treatment, the pre-test scores obtained by them were compared. Table 4 indicates the descriptive statistics of vocabulary pre-test for control and experimental groups.

Table 4.Descriptive Statistics of Scores on the Vocabulary Pre-test

Test	Group	N	M	SD	SEM
.	Control	20	12.46	2.34	.55
Pretest	Experimental	20	12.21	1.98	.71

According to the results, the mean scores of the control and experimental groups did not differ significantly on pre-test of vocabulary. The pre-test scores obtained by two groups of participants were also compared by running an independent sample t-test to check significance of the findings. See Table 5.

Table 5. *Independent-Samples T- test of Pre-test Scores*

		Levene's Test for Equality of Variances		T-test for Equality of Means					
		F	Sig.	t	df	Sig.	Mean	Std.	Error
						(2-tailed)	Difference	Difference	ce
Pretest	Equal variance assumed	.265	.276	289	38	.287	25	1.04	
	Equal variances not assumed			289	38.7	.287	25	1.04	

As it is illustrated in Table 5 there was not any statistically significant difference in the pre-test mean scores of the two groups (t (38) = -.289, p = .287, p >0.05). Thus, it could be inferred that the participants in the two groups had approximately similar level of vocabulary knowledge before the main phase of the study and the homogeneity of the participants in terms of vocabulary knowledge was approved.

After ensuring the normality of the data, as well as the homogeneity of the participants in terms of vocabulary knowledge, the main statistical analyses were conducted to answer the intended research questions. The obtained results for each of the research questions are presented in the following section.

4.2. Post-test Analysis

Concerning the homogeneity of the students at the beginning of the study, any improvement from the pre-test to the post-test of vocabulary could be attributed to the role of instructional

games in vocabulary learning. The descriptive statistics of the control and experimental groups' scores on vocabulary posttest were illustrated in Table 6 below.

Table 6.Descriptive Statistics for the Two Groups on the Vocabulary Post-test

	ID	N	Mean	Std. Deviation	Std. Error Mean	
Posttest	Control	20	14.33	2.87	1.45	
	Experimental	20	20.55	1.91	1.33	

As Table 6 indicates, the learners in the experimental group (M=20.55, SD=1.91) who were exposed to instructional games had much better performance in the vocabulary posttest compared to the control group (M=14.33, SD=2.87). To check that the obtained descriptive results were statistically significant, an independent samples t-test was run. See the summary of the results in Table 7 below.

Table 7. *Independent Sample T-test for Two Groups on the Vocabulary Post-test*

		Levene's Test for Equality of Variances		T-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. E	Error e
Posttest	Equal variances assumed	.11	.354	- 7.29	38	.000	-6.22	1.77	
	Equal variance not assumed			- 7.29	37.8	.000	-6.22	1.77	

As the results of the t-test analysis indicate, there was a statistically significant difference in the mean scores of the CG and EXP groups in the vocabulary post-test (t (38) = -7.29, p = 0.000, p <0.05). Further, to obtain much comprehensive result in this section, the effect size was calculated. The effect size for the impact of instructional games on the Iraqi primary school students' vocabulary learning was found to be 0.57 which based on Cohen's instruction indicated a medium effect size.

Thus, the results suggest the successful development of vocabulary knowledge by instructional games. In other words, the group of primary school students who were taught vocabulary items through instructional games had much better performance in the

vocabulary test compared to the students for whom the vocabulary items were taught merely by traditional methods without the integration of any additional instruction.

4.3. Delayed Post-test Analysis

The second research question aimed to investigate whether instructional games had any significant effect on Iraqi primary schools' vocabulary retention. To answer this question, the control and experimental groups' mean scores on the delayed post-test were compared using an independent sample t-test.

Table 8. *Independent Sample T-test for Delayed Post-test Scores*

		Levene's Equality Variance	of	t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Err Difference	
	Equal variances assumed	.033	.72	- 5.44	38	.000	-4.64	1.05	
Delayed Posttest	Equal variancesnot assumed			- 5.44	37.32	.000	-4.64	1.05	

As Table 8 suggests, there was a statistically significant difference between the two groups in terms of the obtained means scores in the delayed post-test (t (38) = -5.44, p = 0.000, p <0.05). Moreover, the effect size for the efficiency of instructional games in primary school students' vocabulary retention was found to be 0.44 which based on Cohen's instruction indicated a medium effect size. Thus, the results approved the positive role of instructional games on the vocabulary retention of the students. To further investigate the effectiveness of the treatment on the experimental group students' vocabulary retention, two paired-sample t-test were run.

Table 9.Paired Samples T-tests for the Pre-test, Post-test and Delayed Post-test of the Experimental Group

		Paired	Paired Differences							Sig. tailed)	(2-
		Mean	Std. D	Std. Mean	Error	95% Confidence Interval of the Difference		_			
						Low	Up	_			
Pair 1	Pre Post	-8.34	2.11	.36		-13.35	-7.16	-8.22	19	.000	
Pair 2	Pre Delay	-6.31	2.93	.76		-15.22	-9.11	-7.81	19	.000	

The above table revealed that, there was a statistically significant increase and gains in vocabulary knowledge from pre-test to post-test (t (19) = -8.22, p = 0.00, p <0.05) and pre-test to delayed post-test (t (19) = -7.81, p = 0.000, p <0.05). It implied that the Iraqi primary school students who underwent the instruction of new vocabulary items by instructional games had considerable development in vocabulary scores from the pre-test to the delayed post-test. It implied that the instructional games in the process of vocabulary teaching could make a considerable contribution to the development of Iraqi primary school students' retention of newly learned vocabulary items.

5. Discussion

The first major finding of the study proved that the group of Iraqi primary school students who were exposed to vocabulary items through instructional games considerably outperformed the group of students who received the traditional teaching of vocabulary in the classroom. In other words, the integration of games in the vocabulary learning process could lead to a considerable development in the vocabulary learning of the Iraqi primary school students. The second finding of the study showed that the Iraqi primary school students who received the vocabulary instruction by instructional games had much better achievement in vocabulary retention compared to the group of students who underwent the traditional teaching methods.

The results are in line with Chen and Shire (2012) and Reinders and Wattana (2015), findings that proved the significant effect of instructional games on learning new vocabulary, and similar to Salikhova et al. (2020). Partovi and Razari's (2019) and Wang's (2020) research results that instructional games significantly affected academic achievement.

In the Iraqi system of education, the teachers have to rely largely on the traditional procedures of language teaching which they are not expected to be motivating and innovative. Accordingly, most teachers apply long lists of vocabulary and ask the students to memorize them. This certainly doesn't work, because for storing something new in the brain, the new entity has to be connected to the previously learned materials (Niosi, 2021).

According to recent studies, most of the traditional activities for teaching vocabulary are not effective enough to help students to learn them because the most of the students, according to Ellis and Farmer (2005), hardly remember the meanings of new terms after the exam. For learning new vocabulary and coping with forgetting of newly acquired

information successfully, EFL learners should be provided with opportunities in which they can interact with this information actively in a meaningful way through which they can accurately transfer them from working memory to long-term memory (Schmitt, 2000). The teachers should eliminate the difficulties of students' participations and achievement through instructional stimuli and by linking the activity to relevant academic objectives. More specifically, according to Baines (2008), the students potential engagement and learning with play-like instruction can be progressed.

According to Soleimani and Mohammadi (2015), in order to get along with desired outcomes in EFL contexts especially vocabulary learning, there is a need for some effective and appropriate strategies that not only provide learners with meaningful learning but be compatible with the requirement of EFL learning environments in Iraq. Due to the overwhelming dependence on prescribed materials and traditional teaching methods, a lack of interest and motivation among Iraqi EFL learners has been observed. Moreover, these problems are compounded by the deficiencies in the educational system that create anxiety and stress among primary school pupils who struggle with vocabulary learning. Therefore, the researcher employed instructional games as an appropriate strategy to create a meaningful and motivating environment. The findings revealed that the Iraqi primary school students by instructional games had much better improvement in vocabulary retention compared to the group of students who underwent the traditional teaching methods. Similar to Gamlo's (2020) study in Arabic context and the study of Yukselturk, and Başer (2018) in Turkey, English students' motivation and attitudes significantly increased for learning English. Due to game-based instruction, the researcher could create a rewarding atmosphere in which efficient language learning took place and students were motivated to make more use of the available resources and similar to Vu et al. (2015) study games helped the learners to remember new words quickly. Iraqi teachers often follow the strict curriculum of the ministry of education with predetermined deadlines and this can hinder them from enjoying games with their students.

6. Conclusion

The present study was conducted to examine the effectiveness of instructional games on Iraqi primary school students' vocabulary learning and retention. The obtained results in

this study suggested that instructional games can be considered as one of the most effective and efficient activities to improve the achievement of desired outcomes in vocabulary.

The literature revealed an agreement between theorists and researchers that there is a clear link between adopting some effective teaching activities and the desired achievements in the realm of vocabulary learning. It was concluded that Using instructional games can be an efficient tool for teaching vocabulary to young EFL learners. Making educational environments more active and dynamic, helped students to internalize the lexical knowledge much more efficiently. Games undoubtedly present a chance for EFL students to learn the language in a pleasant and fun way. Game-like education brings about relaxation and involves the students in friendly competition. Games by creating motivation and using authentic context, make students actively participate in the classroom and enhance learners' language learning. As a result, the efficient role of instructional games in teaching vocabulary should not be ignored.

The findings imply that games are efficient teaching and learning tools. Teachers, accordingly, can make use of instructional games as an appropriate educational tool in their classrooms. The findings of this study can be beneficial for the officials of the Ministry of Education based on which they are recommended to conduct workshops and seminars for EFL teachers of Iraqi public schools which provide them with an overview of current and effective methods of teaching English language vocabulary as well as learner strategies for acquiring new vocabulary items. Furthermore, the material developers can incorporate these findings in the process of preparing the materials they develop. They can get inspired by the findings of the current study, particularly in designing more comprehensive and critical vocabulary learning tasks that lead language learners to be more actively and efficiently engaged in the learning process to gain much more desired achievements.

References

- Almahammad, Y. (2018). First language transfer in the acquisition of English prepositions by Jordian EFL learners. [Unpublished Ph.D. Thesis]. Amman Arab University.
- Artini, L. (2017). Rich language learning environment and young learners' literacy skills in English. *Lingua Cultura*, 11(1), 19-24.
- Berna. K., Kevser. E., Özpolat, T., & Esen, Ibrahim, Y. (2022). The effect of instructional games on student achievement: A meta-analysis study. *Technology, Knowledge and Learning*. 27, 1-16.
- Chen, J. J., & Shire, S. H. (2011). Strategic teaching: Fostering communication skills in diverse young learners. *YC Young Children*, 66(2), 20-27.
- Chik, A. (2014). Digital gaming and language learning: Autonomy and community. <u>Language, Learning and Technology</u>, 18(2), 85 100

- Cornillie, F., Thorne, S. L., & Desmet, P. (2012). Digital games for language learning: From hype to Insight? *Re CALL Journal*, 24(3), 243-256.
- Curtain, H. & Dahlberg, C. A. (2010). Languages and children: making the match new languages for young learners. Pearson Education, Inc.
- Deesri, A. (2002). Games in the ESL and EFL class. *The Internet TESL Journal*. Retrieved from http://iteslj.org/Techniques/Deesri-Games.html.
- Dewi, R.; Kultsum, U. & Armadi, A. (2017). Using communicative games in improving students' speaking skills. *English Language Teaching*, *I*(10), 63-71.
- Dolati, I., & Mikaili, P. (2011). Effects of instructional games on facilitating of students' vocabulary learning. *Australian Journal of Basic and Applied Sciences*, 5(11), 1218-1224.
- Ellis, E., Farmer, T, & , Newman, J. (2005). Big ideas about teaching big ideas. *Teaching Exceptional Children*, 38 (1), 34-47.
- Eyraud, K., Giles, G., Koenig, S., & Stoller, F. L. (2000). The word wall approach: Promoting L2 vocabulary learning. *English Teaching Forum*, *38*(3), 2-11.
- Gamlo, N. (2019). The impact of mobile game-based language learning apps on EFL learners' motivation. *English Language Teaching* (12)4, 49-56.
- Gass, S. M., & Selinker, L. (2001). Second language acquisition, an introductory course (2nd ed.). Lawrence Erlbaum Associates.
- <u>Ghonsooly</u>, B., & <u>Elahi</u>, M. (2010). Learners' self-efficacy in reading and its relation to foreign language reading anxiety and reading achievement.. *Journal of English Language Teaching and Learning*, 217, 45-67.
- Hayta, F., & Yaprak, Z. (2013). Learner autonomy and computer technology as a facilitator of autonomous language learning. *Journal of Education and Instructional Studies in the World*, 3(2), 57-63.
- Jensen, B. (2009). A Nordic approach to early childhood education (ECE) and socially endangered children. *European Early Childhood Education Research Journal*, 17, 7–21.
- Mayer, R. E. (2009). Multimedia learning. Cambridge University Press.
- Malliet S., & Meyer G. D. (2005). The history of the video game. In J. Raessens & J. Goldstein (Eds.), *Handbook of computer game studies* (pp. 23-46). MIT Press.
- Melo-Pfeifer, S. (2015). Blogs and the development of plurilingual and intercultural competence: Report of a co-actional approach in Portuguese foreign language classroom. *Computer Assisted Language Learning*, 28(3), 220–240.
- Milton, J. (2013). Measuring the contribution of vocabulary knowledge to proficiency in the four skills. In C. Bardel, C. Lindqvist, & B. Laufer. (Eds.), *L2 vocabulary acquisition, knowledge, and use: New perspectives on assessment and corpus analysis* (pp. 57–78). Italy: Eurosla.
- Mohammed, E. F. (2009). The Effectiveness of TPRS in Vocabulary Acquisition and Retention of EFL Prep. Stage Students and their Attitude towards English Language. [Unpublished MA Thesis]. Mansoura University, Egypt.
- Nation, I. S. P. (2013). Learning vocabulary in another language. Cambridge University Press.
- Nikolov, M. & Mihaljević Djigunović, J. (2020). Teaching young language learners. Second Handbook of English Language Teaching, 1–23.
- Niosi, A. (2021). Memory and retrieval Introduction to consumer behavior. BCcampus Open Publishing.
- Nguyen, G. & Khuat. H. (2003). Learning vocabulary through games. *Asian EFL Journal*. Retrieved from http://www.asian-efl-journal.com/dec-03-sub.Vn. php.
- Partovi, T. & Razavi, M. (2019). The effect of instructional games on academic achievement motivation of elementary school students. *Learning and Motivation*.68, 101592. Crossref.
- Reinders, H., & Wattana, S. (2015). The Effects of digital game play on second language Interaction. International Journal of Computer-Assisted Language Learning and Teaching, 5, 1-21. DOI:10.4018/IJCALLT.2015010101.
- Salikhova, N., Lynch, M., & Salikhova, A. (2020). Psychological aspects of digital learning: A self-determination theory perspective. *Contemporary Educational Technology*, 12(2), 1-13. DOI:10.30935/cedtech/8584.
- Santosa, I., & Riady, Y. (2021). Demotivating factors of EFL learners of Indonesian undergraduate students during pandemic Covid-19: Gender differences. *Linguists: Journal of Linguistics and Language Teaching*, 7(1), 118-130. DOI: 10.29300/ling.v7i1.4933.
- Schmitt, N. (2000). Vocabulary in language teaching. Cambridge: Cambridge University Press.
- Simmons, N. (2014). Family and Friends. Oxford University Press.

- Soleimani, F., & Azizmohammadi, F. (2015). The effect of etymology of an additional language on Iranian EFL learners' vocabulary retention. *Indian Journal of Fundamental and Applied life Sciences*, *5*(2), 1449-1458.
- Sourmelis, T., Loannou, A., & Zaphiris, P. (2017). Massively multiplayer online role playing games (MMORPGs) and the 21st century skills: A comprehensive research review from 2010 to 2016. *Computers in Human Behavior*, 67, 41-48. DOI: 10.1016/j.chb.2016.10.020.
- Vermeer, A. (2001). Breadth and depth of vocabulary in relation to L1 / L2 acquisition and frequency of input. *Applied Psycholinguistics*, 22, 217-234
- Vu. N., Linh, p., Lien, N., & Van. Th., (2015). Using word games to improve vocabulary retention in middle school EFL classes. Advances in Social Science, Education and Humanities Research (621), 97-108. DOI:10.2991/assehr.k.211224.011.
- Wang, Q. (2020). The role of classroom-situated game-based language learning in promoting students' communicative competence. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 10(2), 59-82. DOI: 10.4018/IJCALLT.2020040104.
- Wu, T. T. (2018). Improving the effectiveness of English vocabulary review by integrating ARCS with mobile game-based learning. *Journal of Computer Assisted Learning*, *34*(3), 315–323.
- Yukselturk, E., Altiok, S., & Başer, Z. (2018). Using instructional games with Kinect technology in foreign language education course. *Educational Technology and Society*. 21. 159-173.
- Zhang, X. & Lu, X. (2015). The relationship between vocabulary learning strategies and breadth and depth of vocabulary knowledge. *The Modern Language Journal*. 99, 740-753. DOI: 10.1111/modl.12277.