

THE USE OF INTERACTIVE EXERCISES IN TEACHING VOCABULARY FOR ELEMENTARY LEVEL LEARNERS

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ABSTRACT

This study investigates the impact of interactive exercises on vocabulary retention among elementary level learners aged 13 to 15. Conducted over a one-month period in a single classroom setting, 42 participants from a primary school engaged in vocabulary instruction augmented with interactive exercises. The interactive exercises included Fly Swatter, Matching, Miming Game, and Pictionary, covering 60 words related to themes such as Furniture, Clothing, Free Activities, and Shopping. Pre-tests were administered at the beginning of the study to gauge baseline vocabulary knowledge, followed by vocabulary instruction supplemented with interactive exercises. Post-tests were then conducted to assess vocabulary retention. Data analysis utilized paired t-tests to compare pre-test and post-test scores. The results revealed a significant improvement in vocabulary retention following the implementation of interactive exercises, supporting the hypothesis that such exercises positively impact vocabulary learning among elementary level learners. These findings suggest the potential effectiveness of incorporating interactive exercises into vocabulary instruction for this age group.

Keywords: Interactive exercises, vocabulary instruction, language nuances, language acquisition, language proficiency, educational contexts, long-term retention.

АННОТАЦИЯ

Ушбу тадқиқот 13 йошдан 15 йошгача бўлган бошланғич синф ўқувчилари ўртасида интерфаол машқларнинг сўз бойлигини сақлашга таъсирини ўрганади. У бир ой давомида бир синфда ўтказилди. 42 нафар бошланғич синф ўқувчилари интерфаол машғулотлар билан тўлдирилган луғатни ўргатиш билан шуғулланишди. Интерактив тадбирларга Fly Swatter, Matching, Miming Game ва Pictionary, улар мебел, кийим-кечак, тадбирлар ва харидлар каби мавзуларга оид 60 та сўзни камраб олади. Тадқиқот бошида асосий сўз бойлигини баҳолаш учун олдиндан тестлар ўтказилди, сўнгра интерфаол машқлар



билан тўлдирилган луғат бўйича кўрсатмалар берилди. Кейин сўз бойлигини сақлашни баҳолаш учун пост-тестлар ўтказилди. Маълумотларни таҳлил қилиш учун тестдан олдин ва кейин натижаларни солиштириш учун жуфтлаштирилган т-тест ишлатилган. Натижалар интерфаол машқлардан сўнг сўз бойлигини сақлашда сезиларли яшиланишларни кўрсатди, бу еса бундай машқлар бошланғич босқич ўқувчиларининг сўз бойлигини ўрганишга ижобий таъсир кўрсатиши ҳақидаги фаразни тасдиқлади. Ушбу натижалар интерактив фаолиятни ушбу ёш гуруҳи учун луғат ўргатишга кiritишнинг потенциал самарадорлигини кўрсатди.

Калит сўзлар: интерактив машғулотлар, сўз ёдлашни ўргатиш, тилнинг нуанслари, тил ўрганиш, тил билиш даражаси, таълим муҳитлари, узоқ муддатга еслаб қолиш

INTRODUCTION

The importance of vocabulary acquisition in language learning cannot be overstated. It serves as the foundation for effective communication and comprehension, enabling learners to express themselves accurately and understand the nuances of language (6). This significance is especially pronounced for elementary level learners, typically aged 13 to 15, as they begin to navigate more intricate linguistic contexts (14). Without a robust vocabulary, students may struggle to grasp the subtleties of language use, hindering their overall language proficiency.

Traditional methods of vocabulary instruction often fall short in engaging students and promoting long-term retention. Rote memorization and passive learning techniques, while common, may fail to ignite students' interest or facilitate deep understanding of vocabulary items (11). Recognizing these limitations, educators have increasingly turned to innovative approaches to vocabulary instruction, with a particular emphasis on interactive exercises (8).

Interactive exercises offer learners dynamic and engaging ways to interact with vocabulary items, fostering active participation and multisensory experiences (2). From lively games to collaborative tasks, these exercises immerse students in the language learning process, promoting experiential learning and enhancing vocabulary acquisition (9). Despite their potential benefits, however, empirical research on the effectiveness of interactive exercises for elementary level learners remains scarce (10).

This research gap underscores the need for rigorous investigations to evaluate the impact of interactive exercises on vocabulary retention among elementary level learners (15). Understanding the effectiveness of interactive exercises in vocabulary instruction holds significant



implications for language educators, curriculum developers, and policymakers alike (6). By shedding light on the role of interactive exercises in vocabulary acquisition, this study aims to contribute to the ongoing discourse on effective pedagogical practices for elementary level language learners (1). Through empirical inquiry and evidence-based findings, educators can refine their instructional strategies and optimize language learning outcomes for elementary level learners.

STATEMENT OF THE PROBLEM

The educational landscape in Uzbekistan, particularly in the realm of English as a Foreign Language (EFL), presents a unique set of challenges and opportunities. While the country has made significant strides in reforming its educational system in recent years, there remains a need to address the effectiveness of vocabulary instruction methods for elementary level learners aged 13 to 15.

Within the context of Uzbekistan's EFL curriculum, the development of a robust vocabulary is essential for students to engage with English-language materials and communicate effectively in a globalized world. However, traditional vocabulary instruction methods often fall short in actively engaging students and promoting long-term retention, mirroring challenges faced in educational systems worldwide.

In light of these considerations, this study seeks to explore the effectiveness of interactive exercises in vocabulary instruction for elementary level learners. By evaluating the impact of interactive exercises on vocabulary retention among this age group, the findings of this study can inform pedagogical practices within Uzbekistan's EFL curriculum, contributing to the ongoing efforts to enhance language education in the country.

OBJECTIVES OF THE STUDY

The primary objective of this study is to investigate the effectiveness of interactive exercises in improving vocabulary retention among learners in the elementary age group. Specifically, the study aims to assess the impact of interactive exercises, such as Fly Swatter, Matching, Miming Game, and Pictionary, on vocabulary retention among this demographic. Additionally, it seeks to explore the extent to which interactive exercises facilitate active engagement and participation in vocabulary learning among these learners. Furthermore, the study aims to examine the relationship between thematic vocabulary instruction and vocabulary retention among learners engaged in interactive exercises. By addressing these objectives, this study endeavors to provide valuable insights into the role of interactive exercises in vocabulary instruction for elementary

level learners, with potential implications for language education practices in Uzbekistan and beyond.

RESEARCH QUESTIONS AND NULL HYPOTHESIS

This study aims to address the following research question:

Research Question (RQ): Do interactive exercises, such as Fly Swatter, Matching, Miming Game, and Pictionary, impact vocabulary retention among learners in the elementary age group?

Based on the research question, the following null hypothesis is proposed:

Null Hypothesis (H0): The use of interactive exercises, including Fly Swatter, Matching, Miming Game, and Pictionary, does not affect vocabulary retention among learners in the elementary age group.

SIGNIFICANCE OF THE STUDY

This study holds significant implications for language educators, curriculum developers, and policymakers in Uzbekistan and beyond. By investigating the effectiveness of interactive exercises in vocabulary instruction for learners in the elementary age group, this research contributes valuable insights to the field of language education. The findings of this study can inform pedagogical practices within Uzbekistan's educational system, aiding in the development of innovative and effective strategies for teaching English as a Foreign Language (EFL). Additionally, the study's outcomes can provide guidance to educators worldwide who seek to enhance vocabulary instruction for elementary level learners. Furthermore, by highlighting the importance of active engagement and experiential learning in vocabulary acquisition, this research underscores the need for continued exploration and integration of interactive exercises into language curricula. Ultimately, the significance of this study lies in its potential to improve language learning outcomes and promote effective communication skills among elementary level learners, thus contributing to their academic success and broader linguistic development.

REVIEW OF THE LITERATURE

Theoretical Background

In the theoretical background, foundational theories and models pertinent to vocabulary acquisition and instructional methodologies are examined. Krashen's Input Hypothesis (1985) posits that language acquisition thrives when learners engage with comprehensible input slightly beyond their current proficiency level (4). This underscores the pivotal role of providing learners with meaningful and accessible language input

in vocabulary instruction, fostering a conducive environment for language absorption and retention. Moreover, Schema Theory (11) emerges as a pivotal framework, positing that learners actively construct meaning by connecting new linguistic information with pre-existing knowledge structures (11). This theory underscores the significance of activating prior knowledge and building associative connections in the process of vocabulary learning, facilitating deeper comprehension and integration of new lexical items. Additionally, the Cognitive Theory of Multimedia Learning (5) surfaces as a relevant paradigm, spotlighting the efficacy of multimedia-based instructional materials, including interactive exercises, in promoting effective learning outcomes (5). By engaging learners through various sensory modalities and cognitive processes, multimedia-based approaches, such as interactive exercises, optimize vocabulary acquisition by fostering active engagement and facilitating deeper processing of linguistic content.

Experimental Background

In the experimental background, previous research studies examining the efficacy of interactive exercises in vocabulary instruction are reviewed. Smith et al. (2017) conducted a comparative study evaluating the effectiveness of interactive vocabulary games against traditional instruction methods among elementary level learners (13). Their findings revealed a significant advantage for interactive games, demonstrating higher levels of vocabulary acquisition and retention among participants. Similarly, Johnson and Johnson (2009) conducted a meta-analysis of interactive learning strategies across diverse educational contexts, affirming the consistent association between interactive exercises, such as games and simulations, and enhanced learning outcomes (3). However, Royer and Cable (2007) contributed a nuanced perspective with their study, revealing mixed results regarding the effectiveness of interactive exercises (10). Their findings underscored the potential influence of factors such as instructional design and learner characteristics on the efficacy of interactive exercises in vocabulary instruction.

To summarize, while existing research indicates the promising potential of interactive exercises in vocabulary acquisition for elementary level learners, there remains a need for more rigorous and contextually grounded studies within EFL contexts.

RESEARCH METHODS

A. Participants

The study involved 42 elementary-level students from the 195th school in Tashkent, Uzbekistan. Participants were selected based on criteria such as age (8 to 15 years) and academic



standing to ensure a diverse representation. To ensure a homogeneous level of language knowledge and skills among participants, a pre-test assessing elementary-level vocabulary was administered. This step was undertaken to confirm that all participants possessed a similar baseline understanding of vocabulary before the commencement of the intervention.

B. Instrumentation

The researcher-designed vocabulary pre-test and post-test comprised 60 items, categorized into five sections to assess participants' lexical knowledge and improvement. These sections included finding translations, matching words with definitions, writing words based on context, identifying synonyms, and matching words with their translations in Russian. The face and content validity of the test were ensured through consultation with experienced teachers familiar with the test material. Alongside the vocabulary tests, student feedback surveys were utilized to collect qualitative data on the efficacy of employing fun activities in vocabulary instruction, offering insights into student engagement, motivation, and perceived learning outcomes.

C. Procedure

The research procedure encompassed a month-long intervention period during which participants engaged in four distinct interactive games designed to enhance vocabulary acquisition. Each week, 15 words were systematically studied, culminating in a total of 60 words covering four different thematic topics. The first week featured the "Fly Swatter" game, a fast-paced activity where participants rapidly recognized and recalled target words displayed on a board. In the second week, participants played the "Matching" game, pairing target words with their corresponding definitions or images to promote association and comprehension. Moving on to the third week, participants engaged in the "Miming Game," actively acting out target words without speaking, fostering kinesthetic learning and creative expression. Finally, in the fourth week, participants participated in the "Pictionary" game, where they were presented with four boxes labeled with the names of different topics on the board. Their task was to match the correct picture to the corresponding topic box. Throughout the intervention, participants received tailored instruction and feedback, creating a dynamic and immersive learning environment conducive to vocabulary development. The sequential nature of the intervention allowed for a structured and progressive approach to vocabulary development, systematically exposing participants to new lexical items across various contexts.

D. Data analysis

For the quantitative analysis of the collected data, JASP version 0.18.3.0 was utilized. Descriptive statistics were

employed to summarize the characteristics of the dataset, including measures such as means, standard deviations, and frequencies. These descriptive measures provided an overview of the participants' performance in the vocabulary learning tasks.

To assess the effectiveness of the fun activities in enhancing vocabulary learning, inferential statistics were employed. Specifically, a Paired Samples t-test was conducted to compare the performance of the experimental group between the pre-test and post-test phases. This statistical test allowed for the detection of significant differences in vocabulary acquisition following the intervention.

RESULTS

TABLE 1:
THE RESULTS OF DESCRIPTIVE STATISTICS (PRE VS. POST-TESTS)

	Pretest	Posttest
Valid	42	42
Missing	0	0
Mean	32.810	48.381
Std. Deviation	9.648	5.622
Minimum	15.000	36.000
Maximum	53.000	60.000

Descriptive statistics highlighted a notable increase in mean scores from the pre-test ($M = 32.81$, $SD = 9.648$) to the post-test ($M = 48.381$, $SD = 5.622$). The minimum score increased from 15.000 on the pre-test to 36.000 on the post-test, while the maximum scores indicated that participants were able to achieve full marks (60.000) on the post-test, an improvement from the maximum pre-test score of 53.000. This suggests that all students experienced some degree of improvement in their vocabulary retention, with the range of scores narrowing, as indicated by the decrease in standard deviation from the pre-test to the post-test.

TABLE 2:

THE RESULTS OF PAIRED SAMPLES T-TEST (PRE VS. POST-TESTS)

Measure 1	Measure 2	t	df	p	Cohen's d	SE Cohen's d
Pretest	- Posttest	-12.172	41	< .001	-1.878	0.252

The paired samples t-test was conducted to determine if the mean increase was statistically significant. The results indicated a statistically significant increase in vocabulary retention scores after the intervention with interactive exercises ($t(41) = -12.172$, $p < .001$). Cohen's d was calculated to determine the effect size, which was found to be -1.878 , indicating a large negative effect. The negative sign reflects the direction of the paired samples t-test and is consistent with a significant increase in post-test scores. The standard error of Cohen's d was 0.252 , affirming a strong effect size.

TABLE 3:
ASSUMPTION CHECKS

Test of Normality (Shapiro-Wilk)

	W	p
Pretest - Posttest	0.930	0.013

When examining the assumption of normality as a prerequisite for the paired samples t-test, the Shapiro-Wilk test indicated that post-test scores deviated from normality ($W = 0.930$, $p = 0.013$). While this deviation is statistically significant, it did not preclude the use of the t-test given the robust nature of the test and the sufficiently large sample size.

TABLE 4:
DESCRIPTIVES

	N	Mean	SD	SE	Coefficient of variation
Pretest	42	32.810	9.648	1.489	0.294
Posttest	42	48.381	5.622	0.868	0.116

DESCRIPTIVES

N	Mean	SD	SE	Coefficient of variation
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In terms of variability, the coefficient of variation for pre-test scores was 0.294, which decreased to 0.116 in the post-test scores, suggesting a reduction in relative variability and an increase in score consistency among participants following the intervention. The standard error (SE) also decreased from the pre-test (SE = 1.489) to the post-test (SE = 0.868), indicating more precise estimations of the mean in the latter measure.

DISCUSSION

This section focuses on the results and findings given in the previous part. In order to discuss the research results, the research question is raised again:

Do interactive exercises, such as Fly Swatter, Matching, Miming Game, and Pictionary, impact vocabulary retention among learners in the elementary age group?

The significant findings from the current study have important implications for the field of language education, particularly in the context of vocabulary acquisition for elementary level learners. The results clearly indicate that interactive exercises can be highly effective in improving vocabulary retention, which aligns with the theoretical underpinnings of active learning and engagement in educational psychology. The large effect size (-1.878) obtained from the paired samples t-test suggests that the interactive exercises had a meaningful impact on the participants' learning outcomes. The significant reduction in the standard deviation from pre-test to post-test indicates not only improved scores but also a more uniform level of vocabulary retention among the students. This homogenization effect suggests that the interactive exercises were beneficial across different levels of initial vocabulary knowledge, potentially reducing disparities in learning outcomes within the classroom. The increase in minimum scores from the pre-test to the post-test further reinforces the effectiveness of the intervention, with all students demonstrating at least some improvement in their vocabulary retention. This is particularly noteworthy, as it suggests that interactive exercises have the potential to support lower-achieving students in catching up with their peers.

However, the deviation from normality in the post-test scores, as indicated by the Shapiro-Wilk test, warrants

consideration. While the statistical significance of the findings is not called into question, the deviation suggests that the distribution of post-test scores was not perfectly bell-shaped. This could be attributed to a ceiling effect, where a proportion of students achieved very high scores, potentially skewing the distribution.

CONCLUSION

This study has provided empirical evidence supporting the effectiveness of interactive exercises in enhancing vocabulary retention among elementary level learners aged 13 to 15. By introducing interactive methods such as Fly Swatter, Matching, Miming Game, and Pictionary into the vocabulary learning process, we have observed a statistically significant improvement in the retention of 60 targeted vocabulary items across various thematic categories. The positive outcome of this intervention, as demonstrated by the comparative analysis of pre-test and post-test results, underscores the role of engagement and multisensory stimulation in facilitating vocabulary acquisition—an essential component of language proficiency. The implications of these findings are manifold. For educators, the results endorse the integration of interactive exercises into language instruction, moving beyond traditional rote memorization techniques. This pedagogical shift has the potential to not only augment vocabulary retention but also to enhance overall student motivation and participation, thereby addressing the dual goal of educational effectiveness and learner satisfaction.

However, it is important to acknowledge the limitations of this study. Conducted within a single classroom setting over a relatively short period, the results, while promising, require further validation through longitudinal studies and replication in diverse educational contexts. Additionally, future research should consider the incorporation of control groups and the examination of other variables, such as the impact of individual differences in learning styles and the potential for interactive exercises to facilitate language acquisition beyond vocabulary.

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