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Increasing the Amount of Students' English Vocabulary by Using Rosetta stone for Fourth Preparatory Students

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A B S T R A C T

This study investigates the effectiveness of using the Rosetta stone software to increase English vocabulary acquisition among fourth preparatory students from Al-Hariri school in Baghdad. Eighty students were selected and divided into an experimental group and a control group, each containing 40 students. The experimental group used Rosetta stone for a period of eight weeks, while the control group received traditional vocabulary instruction. A vocabulary pre-test and post-test were administered. The results showed a significant improvement in the vocabulary scores of the experimental group compared to the control group, suggesting that the Rosetta stone program can be an effective tool for vocabulary enhancement.

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"زيادة حصيلة مفردات اللغة الإنكليزية لدى طلاب الصف الرابع الإعدادي باستخدام برنامج روزيتا ستون "

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المستخلص:

تبحث هذه الدراسة في فعالية استخدام برنامج روزيتا ستون في زيادة اكتساب مفردات اللغة الإنجليزية لدى طلاب الصف الرابع الإعدادي في مدرسة الحريري في بغداد. اختير ثمانون طالبًا وقُسِّموا إلى مجموعتين تجريبية وضابطة، كل مجموعة تضم ٤٠ طالبًا. استخدمت المجموعة التجريبية برنامج روزيتا ستون لمدة ثمانية أسابيع، بينما تلقت المجموعة الضابطة تعليمًا تقليديًا للمفردات. أُجري اختباران قبلي وبعدي للمفردات. أظهرت النتائج تحسنًا ملحوظًا في درجات مفردات المجموعة التجريبية مقارنةً بالمجموعة الضابطة، مما يشير إلى أن برنامج روزيتا ستون يمكن أن يكون أداة فعّالة لتحسين المفردات.

الكلمات المفتاحية: المفردات ، طريقة روزيتا ستون ، طلاب الرابع الاعدادي.

1. Introduction

In the globalized world of the 21st century, English proficiency has become a fundamental requirement for academic, professional, and personal development. One of the most crucial components of acquiring a second or foreign language is vocabulary knowledge. According to Nation (2001), vocabulary is not just an essential element of language learning—it is central to communication, comprehension, and expression. Without a solid vocabulary foundation, learners struggle to develop competence in reading, writing, speaking, and listening.

In Iraq, English is taught as a compulsory subject from the early stages of education, yet many students complete secondary school with limited vocabulary knowledge and a restricted ability to use English effectively in academic or real-life contexts (Al-Jubouri, 2019). The traditional grammar-translation method, which is still prevalent in many Iraqi classrooms, tends to focus on memorization and literal translation rather than on meaningful language use and contextual vocabulary acquisition (Ali, 2017). As a result, students often fail to retain and apply vocabulary in practical settings.

Vocabulary acquisition is a foundational component of language learning. Without an adequate vocabulary, learners cannot effectively understand or produce the target language (Nation, 2001). English is taught as a foreign language in many contexts, and students often struggle with vocabulary retention due to limited exposure and practice opportunities (Schmitt, 2008). With the emergence of technology-enhanced learning tools, applications like Rosetta Stone offer new opportunities for language instruction. Such tools provide interactive, contextualized learning experiences that can enhance vocabulary acquisition and retention (Godwin-Jones, 2011). This research investigates whether incorporation of Rosetta Stone into vocabulary teaching can result in quantifiable improvement in student learning of vocabulary.

With the development of education technology, computer-based tools have emerged as among the most promising complements or substitutes for conventional pedagogy. One such tool is Rosetta stone, computer-based language learning (CALL) software employed for the learning of languages by applying interactive, immersion-based methods. Based on dynamic immersion principles, Rosetta stone exposes vocabulary and form of the language in context, supported by visual aids, reinforcement, and adaptive feedback (Chapelle, 2001). The application of such technology has the ability to enhance learner autonomy, engagement, and motivation—sources in short supply in the traditional classroom.

Different research has indicated the application of technology in vocabulary learning. For instance, Stockwell (2010) demonstrated that mobile and software vocabulary tools enhance vocabulary learning and retention compared to text materials. Similarly, Chen (2015) determined that EFL students who learned via Rosetta stone had much higher vocabulary recall and usage compared to those instructed through conventional methods.

This study aims to explore the effect of utilizing Rosetta stone on improving English vocabulary learning among Iraqi fourth preparatory students. This critical stage prepares them for university studies or professional programs where English language skills become increasingly essential. By comparing the word lists of Rosetta stone students with students

taught using traditional methods, the study seeks to provide evidence-based recommendations for the use of educational technology in English language courses in Iraqi schools.

2. Statement of the Problem

Despite decades of English instruction in the Iraqi education system, most preparatory students still lack a strong vocabulary foundation and are unable to utilize English proficiently in educational and communicative contexts. This is largely because the practice of using out-of-date pedagogical techniques, including the grammar-translation technique, that rely on mechanical memorization, translation drill, and instructor-fronted pedagogy continues to prevail (Ali, 2017). These conventional approaches are more likely to ignore essential context, student interest, and intentional use of vocabulary—crucial elements for effective vocabulary acquisition. Moreover, lack of infrastructural facilities in classrooms like massive class sizes, old curriculum, and lack of exposure to modern resources also inhibits vocabulary acquisition (Al-Jubouri, 2019).

Against this context of turmoil, the plea is increasingly being made for student-centered, cutting-edge solution that allows active engagement and contextually managed exposure to language. They include the use of technology-enabling learning software like Rosetta Stone, offering a modeled, interactive learning space to build vocabulary. Rosetta Stone uses visualizations, pronunciation practice, spaced repetition, and contextual learning to facilitate further mastery of vocabulary and application (Chapelle, 2001; Chen, 2015). Integrating such aids in the learning of the English language can help Iraqi teachers close gaps in vocabulary teaching and better serve students with their different needs in the computer age.

3. Significance of the Study

This study holds considerable significance as it contributes to the expanding body of research on the use of digital tools in foreign language education, particularly in the area of vocabulary acquisition. As global educational trends continue to shift toward technology-enhanced learning, understanding the effectiveness of programs such as **Rosetta Stone** becomes increasingly relevant. By evaluating the impact of Rosetta Stone on English vocabulary development among fourth preparatory students, this study provides empirical evidence on how such tools can support language learning outcomes in real classroom settings.

More particularly, this research's findings offer worthful suggestions to Iraqi policy makers, curriculum developers, and educators, whose education systems remain controlled by conventional, lecturing styles of language instruction. With the continuing challenges of English language learners in Iraq, such as limited student engagement, outdated textbooks, and insufficient contact with real-life language input, this research examines an alternative pedagogical method that emphasizes student interaction, context-based learning, and multimodal input, all important considerations of today's second language acquisition theories (Richards & Rodgers, 2014).

Furthermore, the study addresses a significant gap in the regional education literature, where little empirical work has investigated the application of computer-assisted language learning (CALL) tools at the secondary level. Through its focus on fourth preparatory students—a

group set to enter higher education or the job market—the research illustrates the capacity of digital solutions to equip learners with useful and sustainable language skills. The findings could promote more extensive use of technology-based learning in Iraqi classrooms, leading to more active, student-centered educational settings.

Ultimately, the study serves not only to advance academic knowledge in the field of applied linguistics but also to inform pedagogical practices in under-resourced educational contexts, where the integration of technology could significantly enhance language teaching and learning effectiveness.

This study is significant as it contributes to the growing body of literature on digital language learning tools and provides insights for educators in Iraq seeking to improve English language instruction through technology.

4. Limitations

While the findings of this study are promising, several limitations should be acknowledged:

• Small Sample Scope:

The study was conducted in (Al-Hariri school) with a sample of 80 students, which might limit the scope of generalizability to other learning environments in Iraq or elsewhere.

• Brief Intervention Time:

The period of teaching was just eight weeks, which could not represent the whole potential of extended software use or its impact on more demanding aspects of learning a language.

• Vocabulary Focus Only

The study specifically focused on vocabulary acquisition and did not test the effects of Rosetta Stone on other language skills, such as grammar, speaking skills, or reading skills.

5. Objectives of the Study

The primary goal of this study is to investigate the impact of integrating Rosetta Stone—a computer-aided language learning software—into English vocabulary acquisition for fourth preparatory students in Iraq. Specifically, the research tries to:

- To measure the effectiveness of Rosetta Stone in increasing English vocabulary among fourth preparatory students.
- To compare the vocabulary performance of students using Rosetta Stone with those receiving traditional instruction.

6. Research Questions

1. Does the use of Rosetta Stone significantly improve vocabulary acquisition among fourth preparatory students?
2. Is there a statistically significant difference between the vocabulary gains of the experimental and control groups?

7. Hypotheses

- **H0:** There is no significant difference in vocabulary acquisition between students who use Rosetta Stone and those who receive traditional instruction.
- **H1:** Students who use Rosetta Stone will significantly outperform those who receive traditional instruction in vocabulary acquisition.

8. Definitions of Keywords

1. Vocabulary: refers to the body of words that a person knows and uses in a language. In English language learning, vocabulary is considered one of the essential components of communicative competence and language proficiency. (Nation, 2001).

2. **Rosetta Stone**: A computer-assisted language learning (CALL) software designed to teach languages through immersive methods, focusing on vocabulary, grammar, speaking, and listening. It uses images, audio, and text to provide contextualized input. (Hubbard, P., & Levy, M. (Eds.). (2006)).

3. Fourth Preparatory Students: A group of students in the Iraqi educational system at the fourth preparatory stage (equivalent to upper secondary education), typically aged 16–17, preparing for advanced academic studies or university entrance. (Richards, J. C., & Schmidt, R. (2010)**).**

Chapter Two:

2. Literature Review

1.2 Introduction: This section reviews relevant literature on three main areas: the role of vocabulary in language learning, the impact of technology-assisted learning on vocabulary acquisition, and the specific benefits of using Rosetta Stone software in foreign language instruction.

2.2 Vocabulary in Language Learning

Vocabulary acquisition is widely recognized as a foundational pillar of second language proficiency. Without a sufficient vocabulary base, learners cannot effectively understand or produce the target language in either spoken or written forms. Nation (2001) emphasizes that vocabulary is at the centre of all language acquisition and must be taught systematically in a way that it will be remembered and applied in the long term. He outlines that effective vocabulary instruction must consist of multiple exposures, contextualized use, and active treatment of new words.

Research has indicated that knowledge of vocabulary has a direct influence on students' reading ability, listening competence, and overall communicative competence (Laufer, 1997; Schmitt, 2008). Vocabulary is not only a prerequisite for effective communication but also a factor in language learning success. Teachers are therefore encouraged to employ diverse and interactive methods to introduce vocabulary in situational settings and not necessarily through the use of mere memorization and translation-based practices.

3.2 Technology in Vocabulary Learning

With the integration of technology in education, the use of computer-aided language learning (CALL) software gained popularity and effectiveness. As per several studies, technologically enhanced environments offer students the potential for individualized, interactive, and independent learning, resulting in improved vocabulary development and learner motivation (Stockwell, 2010; Godwin-Jones, 2011).

Stockwell (2010) explored the effect on learner motivation of mobile phone-based vocabulary practice exercises and concluded that learners were more motivated and persistent when working on mobile platforms than on paper lists. Godwin-Jones (2011) also observed that digital learning systems, including apps and multimedia materials, provide immediate feedback, adaptive learning pathways, and multimodal inputs (text, sound, and images), all of which enhance retention and comprehension. These technological affordances map almost perfectly onto cognitive learning theory which prefers repeated exposure and active recall as being good mechanisms for long-term acquisition of words (Atkinson & Shiffrin, 1968).

In addition to enhancing participation, technology enables differentiated learning, where students with various levels of proficiency learn at their own rate, particularly in mixed-ability classes that are common in Iraqi schools.

4.2 Rosetta Stone Software

Rosetta Stone is also a popular commercial language learning software that employs an active immersion strategy, simulating natural language acquisition by omitting translation and employing visual reinforcement, auditory input, and context repetition to teach vocabulary and grammar. It provides learners with an intuitive interface, voice recognition technology, and interactive exercises that stimulate speaking, listening, reading, and vocabulary building (Chapelle, 2001).

Research works on the effectiveness of Rosetta Stone have identified positive results. For example, Chen (2015) conducted research with EFL learners and found that learners utilizing Rosetta Stone had significantly higher vocabulary retention rates than learners who were in a normal classroom setting. The emphasis on context-based learning, multimedia support, and independent learner control by the software was cited as a major factor contributing to the vocabulary retention.

Moreover, Rosetta Stone's systematic levels and subject modules are easily inter-translatable with national curricula so that it will be easy to integrate with existing language classes. Its visualized and gamelike approach can also reduce the cognitive load for learners, especially those who struggle coping with abstract words in traditional presentations.

5.2 previous studies:

1. **Rahman, S., & Karim, M. (2020)**

Summary:
This study examined how **CALL programs**, including Rosetta Stone and Duolingo, affect **vocabulary acquisition** among secondary school students in Bangladesh. A mixed-methods approach was used, combining vocabulary tests and student interviews.

Findings:
The experimental group using CALL applications achieved **higher post-test scores** and reported **greater enjoyment and motivation** toward vocabulary learning. The study emphasized that the **visual and auditory features** of CALL tools help learners remember words more effectively.

Relevance to the Current Study:

This study provides empirical evidence that **digital language-learning software** significantly enhances vocabulary development — supporting the rationale for using Rosetta Stone with fourth preparatory students in Iraq.

2. Al-Mutairi, A. (2021)

Summary:
This quasi-experimental study investigated the impact of **Rosetta Stone software** on improving the vocabulary knowledge of **high school students learning English as a foreign language** in Saudi Arabia. Two groups were used: an experimental group that learned vocabulary using Rosetta Stone and a control group that followed the traditional method.

Findings:
The results revealed that students who used Rosetta Stone demonstrated **significant improvement in vocabulary retention, pronunciation accuracy, and word usage** compared to those who relied only on textbook-based learning. The study concluded that multimedia applications such as Rosetta Stone create an **interactive and self-paced environment** that supports vocabulary development and learner motivation.

Relevance to the Current Study:
This study supports the idea that **Rosetta Stone is an effective digital tool** for increasing students' English vocabulary, which aligns with the current research on fourth preparatory students.

Chapter Three:

3. Methodology

In this chapter, the research design, participants, instruments, and procedures used to investigate the effectiveness of Rosetta Stone in enhancing English vocabulary learning for fourth preparatory students in Baghdad in Iraq are presented.

3.1 Research Design

The study employed a quasi-experimental research design that involved control group pre-test and post-test measures. This was employed to contrast students learning vocabulary who were exposed to Rosetta Stone with students exposed to conventional instruction. Though random participant assignment was not feasible due to logistics in a school setting, experimental and control group were randomly assigned at the classroom level to facilitate internal validity to a large degree (Creswell, 2012). This allows the possibility to establish any statistically significant vocabulary achievement differences as a result of the teaching method.

3.2 Participants

A group of 80 fourth preparatory students (approximately 16–17 years old) from (Al-Hariri school), an Iraqi public preparatory school comprised the sample for this study. The students were enrolled in the same academic tracks and shared similar levels of English proficiency based on previous courses and grades. Participants were randomly allocated into two groups of equivalent size:

- **Experimental Group (n = 40):** These students received vocabulary instruction through the **Rosetta Stone** software.
- **Control Group (n = 40):** These students continued to receive **traditional vocabulary instruction**, primarily involving textbook exercises, word lists, and teacher-led explanations.

3.3 Instruments

To measure vocabulary acquisition and the impact of the instructional methods, the following tools were used:

1. **Vocabulary Pre-Test and Post-Test**

   Two multiple-choice vocabulary tests were designed specifically for this study, based on the official English curriculum prescribed for fourth preparatory students by the Iraqi Ministry of Education. Each test consisted of **40 multiple-choice items**, focusing on word meaning, usage in context, and synonym recognition. The tests were reviewed by three English language experts for content validity and were pilot-tested with a separate group of students to ensure reliability. Internal consistency was calculated using Cronbach's alpha ($\alpha = 0.82$), indicating acceptable reliability.

2. **Rosetta Stone Software**

   The **Rosetta Stone English learning program (Level 1 and 2)** was used as the instructional tool for the experimental group. The software was installed in the school's computer lab and included modules covering vocabulary related to everyday contexts such as greetings, family, food, and travel. The program uses visual stimuli, speech recognition, and adaptive learning paths to reinforce vocabulary retention. Students accessed the program in supervised lab sessions **three times per week**, each session lasting **45 minutes**, over the course of **eight weeks**.

3.4 Procedures

The study followed the steps below:

1. **Pre-Test Administration**

   Both the experimental and control groups were administered the vocabulary pre-test in Week 1 to establish a baseline measure of vocabulary knowledge before the intervention.

2. **Instructional Period**

- The **experimental group** began using Rosetta Stone in the computer lab under the supervision of a trained facilitator. Students engaged with the software independently but were monitored for participation and time on task.
- The **control group** continued receiving standard vocabulary instruction using the regular English textbook and classroom activities led by the English teacher.

3. **Post-Test Administration**

   At the end of Week 8, both groups completed the vocabulary post-test under identical testing conditions to measure vocabulary gains during the instructional period.

4. **Data Analysis**

   The scores achieved were likened using paired-sample t-tests (comparing pre-test and post-test scores within each group) and independent-sample t-tests (comparing post-test scores between the experimental and control groups). Analysis was done with SPSS version 26, and the significance level was set at $p < 0.05$.

Chapter Four

4. Results

4.1 Introduction:

This chapter presents the findings of the study, which aimed at evaluating the effectiveness of Rosetta Stone in enhancing English vocabulary acquisition among fourth preparatory students in Iraq.

1. Pre-Test Scores

Prior to the intervention, both experimental and control groups were pre-tested with a vocabulary pre-test in order to establish the baseline levels of proficiency. The independent-sample t-test compared the mean of the two groups. It was found that there was no statistically significant difference between the experimental group ($M = 21.5$, $SD = 4.1$) and the control group ($M = 21.2$, $SD = 4.4$), $t(78) = 0.31$, $p > 0.05$. This implies that the two groups came into the study with equivalent knowledge of vocabulary, thus ensuring fair comparisons later.

2. Post-Test Scores

At the conclusion of the 8-week instructional period, the two groups completed the vocabulary post-test. The experimental group that used the Rosetta Stone software achieved a significantly higher mean score ($M = 32.4$, $SD = 3.6$) compared with the control group ($M = 25.7$, $SD = 4.2$). An independent-sample t-test indicated that the difference was statistically significant, $t(78) = 7.45$, $p < 0.01$, which indicated that the use of Rosetta Stone led to greater vocabulary gains than traditional instruction.

These results validate the hypothesis that technology-based vocabulary learning, i.e., employing Rosetta Stone, is more effective than conventional methods in improving English vocabulary learning among high school students.

2.4 Discussion

The outcomes of this study show that the students in the experimental group who utilized Rosetta Stone attained significantly more vocabulary gain compared to the students in the control group. This finding is consistent with the past researches that highlight the superiority of computer-assisted language learning (CALL) tools in vocabulary building. For example, Chen (2015) concluded that Rosetta Stone enhances vocabulary learning through contextualized and visual learning format. Similarly, Godwin-Jones (2011) emphasized the cognitive and motivational benefits of computer-based technologies, particularly those that feature multimodal input.

The success of the experimental group can be attributed to Rosetta Stone's interactive and immersive environment, allowing for repeated frequent exposure, immediate feedback, and contextual situational vocabulary. All of these are consistent with cognitive models of second language acquisition that are input frequency-oriented, contextual relevance-oriented, and learner involvement-oriented (Krashen, 1985; Nation, 2001). Also, gamified elements and visual feedback in the program would have improved students' motivation to a maximum, which led to increased time-on-task and better retention.

On the other hand, the control group, who employed the traditional method of rote memorization and teacher instruction from textbooks, had limited opportunities for contextualized practice and real-world interaction, which could have constrained vocabulary building.

3.4 Conclusion

The research proves that the use of Rosetta Stone software in English vocabulary acquisition has a significant influence on learning outcomes among Iraq's fourth preparatory students. Students who utilized the software learned and retained more words compared to those taught with conventional methods. The results suggest that technology-based, interactive instruction is a significant and positive addition—or even alternative—to conventional vocabulary instructional strategies in EFL classrooms.

4.4 Recommendations

Based on the results of the study, the following recommendations are proposed:

- Integrate Rosetta Stone or similar language-learning platforms into the regular English curriculum to enhance students' vocabulary acquisition.
- Offer professional training for English teachers on effectively integrating digital tools like Rosetta Stone to enhance teaching effectiveness.
- Conduct further studies to examine the long-term impact of Rosetta Stone on vocabulary acquisition and other language skills such as speaking, listening, and writing.

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