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DIGITAL WORDS, REAL RESULTS? TESTING THE "ENGLISH VOCABULARY" APP IN A HIGH SCHOOL SETTING

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Abstract

This study examines the effectiveness of the "English Vocabulary" mobile application in enhancing vocabulary mastery among students at SMKN 1 Polewali. In response to the increasing integration of technology in language education, this research addresses the urgent need to evaluate digital tools for vocabulary acquisition. Employing a pre-experimental quantitative design, data were collected through pre- and post-tests administered before and after treatment using the application. The findings revealed a substantial increase in student performance, with mean scores rising from 43.33 to 74.81. Statistical analyses confirmed normal data distribution and homogeneity, and the paired sample t-test indicated a significant improvement (Sig. 2-tailed = 0.000 < 0.05). These results confirm the application's positive impact on vocabulary development. The study contributes to the field by providing empirical evidence supporting the effectiveness of mobile-assisted vocabulary learning and recommends the integration of such applications in formal education to enhance learners' lexical competence.

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INTRODUCTION

In the era of digital technology, the integration of technology into educational practices has profoundly altered learning methodologies, particularly within the domain of language education. Proficiency in English, recognized as a global lingua franca, is imperative for students, particularly those in non-native English-speaking regions. The acquisition of a robust English vocabulary is a pivotal element in this context, underpinning the development of effective communication abilities.An crucial element in the process of learning a language is vocubulary, playing a critical role in both comprehension and expression during communication (Tarigan, 2015). A well-developed vocabulary enhances a learner's ability to articulate thoughts more clearly and thoroughly. As noted by Widodo et al. (2022), having a strong vocabulary foundation is vital for the advancement of other language skills, likes listening, speaking, reading, and writing. Mastery of vocabulary is therefore indispensable for effective communication, facilitating better understanding and expression, and serving as the basis for further language skill development.

The growth of educational tecnology has resulted to the creation of numerous tools designed to support language learning. These tools vary from digital dictionaries to advanced language learning applications. The "English Vocabulary" app exemplifies an innovative strategy by utilizing interactive and gamified features to improve vocabulary acquisition

This study offers insigfull information about the potencial of digital tools to improve language learning. By illustrating the effectiveness of gamified learning resources in enhancing high school students' vocabulary acquisition, it adds to the body of knowledge already in existence.

Previous Studies on Vocabulary Acquisition

Several studies have demonstrated how crucial vocabulary is to learning a language. Alqahtani (2015) emphasizes that a broad vocabulary is essential for learners to understand and communicate effectively. A variety of vocabulary acquisition techniques, such as rote memorization, context-based learning, and the utilization of multimedia resources, have also been studied in earlier studies.

The Role of Technology in Language Learning

More and more, technology is being used in language instruction, offering interactive and engaging ways to enhance learning. Studies have shown that digital tools can provide personalized learning experiences, immediate feedback, and flexible learning schedules, which are beneficial for vocabulary acquisition (Oetomo & Priyogutomo, 2004).

Different Methods and Tools for Teaching Vocabulary

Traditional methods of vocabulary instruction often involve word lists and flashcards, which may not engage students effectively. In contrast, digital applications like "English Vocabulary" use interactive activities, such as quizzes and games, to make learning more engaging and effective.

Detailed Discussion of the English Vocabulary Application

The English Vocabulary application is designed to facilitate vocabulary learning through interactive features. This application was released on 15 April 2015 offered by TFlat Học Tiếng Anh and has been downloaded by more than 1 million people. It includes exercises that test and reinforce knowledge, tracks progress, and adapts to the user's proficiency level. These features are intended to enhance student motivation and retention of new words.

Theoretical Framework

This study is based on cognitive learning theory, which asserts that learning involves acquiring knowledge and skills through experience. The "English Vocabulary" program makes use of multimedia components in accordance with Richard Mayer's Cognitive Theory of Multimedia Learning. This idea highlights how learning results can be greatly improved by integrating verbal and visual components. It is predicated on three main tenets: that information is processed through two channels, one for auditory and one for visual stimuli; that the capacity of these channels is finite; and that information is combined and filtered actively.

Mayer's "multimedia principle" posits that learners gain a deeper understanding when presented with both pictures and words rather than words alone. Research supports this fundamental, showing that the integration of text and visuals helps learners comprehend and retain information more effectively by engaging both visual and verbal cognitive channels. This dual-channel approach reduces cognitive overload and promotes a more profound

understanding (Mayer, 2005, 2014) (Harvard Media Repository) (Cambridge University Press & Assessment) (Learning Theories).

Applying these principles in the "English Vocabulary" app can provide users with a more engaging and effective learning experience. By incorporating multimedia components including pictures, movies and sounds, the app can facilitate vocabulary acquisition by making abstract concepts more tangible and easier to understand.

METHODS

This study employed a quantitative research methodology utilizing a pre-experimental design. Particulary, a pre-test and post-test framework was adopted to evaluate vocabulary enhancement resulting from the intervention with the "English Vocabulary" application. Participants were selectively chosen from SMKN 1 Polewali through purposive sampling, encompassing students engaged with the English language curriculum and who had access to digital learning resources.

The application itself provides a variety of word categories and difficulty levels. English Vocabulary offers a comprehensive learning experience that reinforces vocabulary development through interactive courses, entertaining games, and speaking exercises. Additionally, the app includes progress-tracking capabilities, providing insights into students' areas needing improvement.

To begin gathering data, a pre-test was given to the pupils to gauge their starting vocabulary level. Following a designated period of application use, a post-test was conducted to assess any subsequent vocabulary improvements.To investigate this, the researcher created an exam. A multiple-choice exam served as both an assessment tool and a pre-test to gauge the students' comprehension and interpretation of the subject matter. The test had ten questions with options A, B, C, and D. It was given at the same time and had a 10-minute duration. The purpose of the pre-test was to evaluate the students' beginning competency and ascertain whether or not using the English Vocabulary Application affected their final post-test results. The post-test was given following the intervention, and the outcomes of the pre- and post-tests were contrasted. Data were assessed using statistical methods including paired t-tests and descriptive statistics to determine the significance of the observed changes in the pre-test and post-test scores.

RESULT AND DISCUSSION

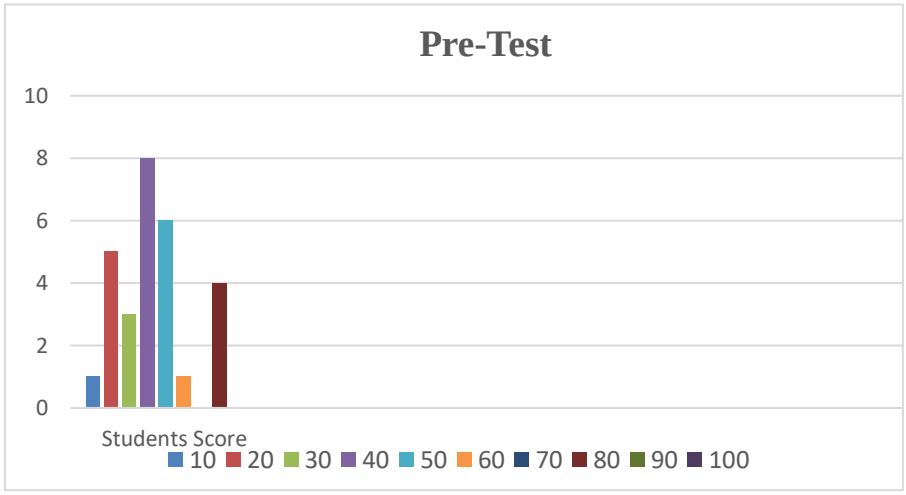
Presentation of Pre-test and Post-test Scores

Mean Score

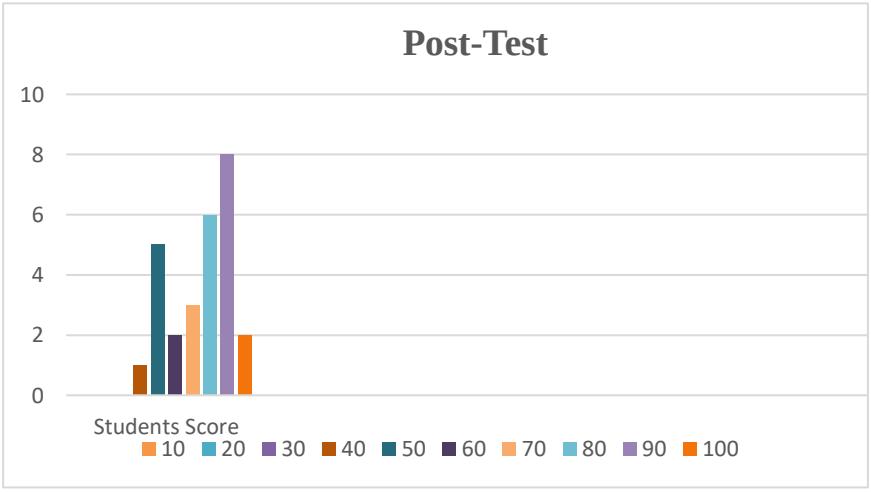
	N	Mean	Std. Deviation	Std. Error Mean
Pre Test	27.000	43.330	19.807	3.812
Post Test	27.000	74.810	17.622	3.391

The results showed a notable increase in vocabulary scores post-intervention. The post-test score increased to 74.81, whereas the mean pre-test score was 43.33, indicating substantial vocabulary acquisition.

Graphs and tables illustrating the distribution of scores and the degree of improvement were provided, highlighting the positive impact of the application.



It is known from the image above that one student received the lowest pre-test score of 20, with a total of 5 students who were in that score range. Then, there were 4 students scored of 30, there were 8 students scored of 40, one student scored 50, another student scored 60, and 4 students achieved the highest pre-test score of 80.



Based on the picture above, it is observed that the lowest post-test score of 40 was achieved by 1 students, five pupils received a score of fifty, two received a score of sixty, three received a score of seventy, six had an 80, and eight received a score of ninety and at the highest test score it is known that there are 2 students.

Tests of Normality			
	Shapiro-Wilk		
	Statistic	df	Sig.
PreTest	.905	26	.018
PostTest	.896	26	.011

The normality of the data was confirmed, with normality test p-values of 0.018 and 0.011 for pre-test and post-test scores, respectively. The data's homogeneity was validated by the homogeneity test ($p = 0.22$). The results of the pre- and post-tests showed a significant difference ($p < 0.05$) according to the paired t-test.

Hypothesis Testing

Hypothesis testing serves the purpose of confirming the researcher's tentative hypothesis. The researcher had previously estalished the hypothesis listed below. The statistics used were parametric statistic with paired sample t-tests, ase on the homogenty and normalty tests. This study had proviously estalished the following hypothesis:

a) Null hypothesis (H0) application of English vocabulary use there is no discernible impact on pupils' vocabularies.
b) Alternative hypothesis (H1) utilization of English vocabulary applications there is a significant impact on students' vocabulary.

The significant improvement in vocabulary scores suggests that the "English Vocabulary" application effectively enhances vocabulary learning. The interactive and engaging nature of the app likely contributed to increased motivation and retention among students.

The findings are consistent with previous studies that have demonstrated the benefits of digital tools in language education. The application provided a dynamic and flexible learning environment that traditional methods often lack.

The study underscores the potential of integrating technology into language curricula. Educators can leverage such applications to complement traditional teaching methods, providing a more holistic learning experience.

The study's strengths include its practical application and relevance to current educational trends. However, limitations such as the asenceof a control group and the short duration of the intervention should be noted. Future studies could address these limitations by incorporating a control group and extending the study period. Future research could explore the long-term effects of using digital vocabulary applications and investigate their impact on other language skills such as grammar and comprehension.

CONCLUSION

The study found that the "English Vocabulary" application significantly improved students' vocabulary knowledge. The positive results indicate that digital tools can effectively support language learning.

This study adds to the increasing amount of research that backs the use of instructional technology in language acquisition. It provides practical insights for educators and policymakers on incorporating digital tools into language curricula.

The findings suggest that incorporating applications like "English Vocabulary" can enhance vocabulary learning and overall language proficiency. Schools and educational institutions can adopt such tools to provide students with additional resources for learning.

Further research could explore the application of similar digital tools across different educational contexts and with diverse student populations. Additionally, studies could examine the effects of such tools on other afacets of language acquisition, such as listening and speaking skills.

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