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APPLICATION BASED LEARNING : THE USE OF *ROSETTA STONE* IN STUDENT'S ENGLISH PRONUNCIATION

Riska Sofi Yana[1], Sri Suci Suryawati[2], Zakiyah[3]
Raden Intan State Islamic University, Lampung[1,2,3]
e-mail:
riskasofie862@gmail.com[1],sucisuryawati@radenintan.ac.id[2],zakiyah@radenintan.ac.id[3]

ABSTRAK

Tujuan dari penelitian ini adalah untuk menyelidiki pengaruh penggunaan aplikasi Rosetta Stone terhadap keterampilan pelafalan bahasa Inggris siswa kelas XI SMK. Pelafalan merupakan komponen penting dalam komunikasi, karena kesalahan pengucapan dapat menyebabkan kesalahpahaman dan mengurangi efektivitas interaksi. Oleh karena itu, diperlukan media pembelajaran yang efektif untuk membantu siswa meningkatkan kemampuan berbicara dan membangun kepercayaan diri. Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi-eksperimen non-equivalent control group, yang melibatkan 36 siswa pada kelas eksperimen dan 35 siswa pada kelas kontrol. Data dikumpulkan melalui pre-test dan post-test untuk mengukur performa pelafalan siswa. Nilai rata-rata pre-test kelas eksperimen adalah 61,51 (SD = 2,3), sedangkan kelas kontrol memiliki rata-rata 60,5 (SD = 1,76). Setelah perlakuan, nilai rata-rata post-test kelas eksperimen meningkat menjadi 75,31 (SD = 6,19), dengan skor terendah 61,5 dan tertinggi 84,5, sementara kelas kontrol mencapai 66,27 (SD = 3,39), dengan skor terendah 61,5 dan tertinggi 75,31. Temuan menekankan bahwa aplikasi Rosetta Stone menyediakan latihan interaktif berbasis teknologi yang dapat meningkatkan artikulasi, penekanan kata, intonasi, dan kelancaran siswa. Hasil ini menunjukkan bahwa aplikasi tersebut merupakan alat yang efektif untuk mendukung pembelajaran pelafalan dalam kelas EFL, membantu siswa berbicara dengan lebih percaya diri serta berkomunikasi dengan lebih jelas dan natural dalam bahasa Inggris.
Kata Kunci: *Pembelajaran berbasis aplikasi, pelafalan, aplikasi Rosetta Stone*

ABSTRACT

The objective of this study was to investigate the effect of using the Rosetta Stone application on the English pronunciation skills of eleventh-grade vocational high school students. Pronunciation is a crucial component of communication, as mispronunciation can cause misunderstandings and reduce the effectiveness of interaction. Therefore, effective learning media are needed to help students improve their speaking ability and boost their confidence. This study employed a quantitative approach with a quasi-experimental non-equivalent control group design, involving 36 students in the experimental class and 35 students in the control class. Data were collected through pre-tests and post-tests to measure students' pronunciation performance. The pre-test mean score of the experimental class was 61.51 (SD = 2.3), while the control class had a mean of 60.5 (SD = 1.76). After the treatment, the post-test mean score of the experimental class increased to 75.31 (SD = 6.19), with scores ranging from 61.5 to 84.5, whereas the control class reached 66.27 (SD = 3.39), with scores ranging from 61.5 to 75.31. Finding emphasizes that the Rosetta Stone application provides technology-based interactive exercises that can improve students' articulation, word stress, intonation, and fluency. These results indicate that the application is an effective tool to support pronunciation learning in EFL classes, helping students speak more confidently and communicate more clearly and naturally in English
Keywords: *Application based learning, Pronunciation, Rosetta stone application.*

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INTRODUCTION

In this era of globalization, English proficiency has become an essential skill for students worldwide, especially in countries where English is not the primary language. English is now spoken by more than half of the world's population, making it an international language. Therefore, effective learning methods are needed. One effective method is using teaching methods that allow students to practice speaking in natural and authentic situations are essential (Burns 2022).However, students often struggle to fully master the target language because they are still accustomed to their native language; thus, teachers play an important role in providing continuous motivation to build student' confidence and active learning.

One important aspect of language learning is the ability to communicate effectively. Speaking is an important skill because it allows students to express thoughts, ideas, and information (Leong and Ahmadi 2017), With a high level of creative thinking, students can achieve speaking fluency, think flexibly, and generate ideas for smoother and more spontaneous conversations. Speaking also requires accurate pronunciation, which greatly affects intelligibility. In addition, effective pronunciation training can improve learners' ability to be understood more easily. Such instruction not only enhances intelligibility and comprehensibility but also helps learners master important suprasegmental aspects, such as stress and prominence, which play a crucial role in communicative success (Dalman 2025).Therefore, learners should focus on articulation, stress, intonation, and fluency as essential suprasegmental features to enhance meaning and build confidence.

Speaking also requires mastery of pronunciation, which plays an important role in communication, especially in language learning, as it affects the speaker's ability to be understood. If a speaker makes mistakes in pronunciation, it can lead to misunderstandings for the listener. This supportthe view that pronunciation instruction plays a crucial role in improving intelligibility (the extent to which speech can be understood by listeners) and comprehensibility (the ease with which listeners can grasp the meaning of speech). They emphasize that successful communication is determined not only by vocabulary and grammar but also by clear and accurate pronunciation (Alghazo et al., 2023). Therefore, students also need to pay attention to articulation, word stress, intonation, and fluency. These aspects are essential for conveying meaning and expressing pronunciation correctly. Thus, pronunciation must be considered an important component in learning English as well as other foreign languages to enhance speaking fluency and build students' confidence in using the language.

Digital media has now become an important part of everyday life, bringing significant changes in communication, entertainment, and especially education. This shows that digital technology, including mobile devices, AI, and online learning platforms, creates independent and personalized learning experiences, emphasizing that digital technology and other learning platforms can help learners develop autonomy by enabling them to learn according to their individual needs and pace (Jegadeesan. P, et.al., 2025). In this context, mistakes can be corrected and specific feedback can be provided, helping learners focus on particular errors and improve the learning process. Furthermore, a solution is offered to provide personalized and instant feedback to English language learners through digital media, capable of performing segmentation and analyzing both segmental and suprasegmental pronunciation features. In such an environment, errors can be corrected and specific feedback can be provided, playing an important role in helping learners practice and focus on particular mistakes, thereby adding significant value to the learning process.

In this digital learning environment, students' speaking skills, particularly in pronunciation, can be significantly enhanced through applications such as *Rosetta Stone*. This application facilitates both students and teachers in the English learning process because it can

be adapted to the learners' proficiency levels. Research has shown that the use of *Rosetta Stone* has proven effective in enhancing EFL students' pronunciation. These findings are further supported by other studies, which show that the application significantly improves pronunciation skills, as evidenced by statistical tests demonstrating a substantial increase in students' performance (Yuliani, et al., 2023). In addition, other researcher highlight that *Rosetta Stone* provides a step-by-step learning experience, allowing students to learn at their own pace and supporting authentic language acquisition (Bai 2024). Based on five previous studies, it can be seen that the majority of research on the use of the Rosetta Stone application has focused more on junior high school students, both in English subjects and in other foreign languages such as French. Meanwhile, studies specifically focusing on English pronunciation skills are still rare. In addition, most previous research has emphasized the improvement of pronunciation skills through pre-tests and post-tests, without further exploring students' responses, experiences, or perceptions toward the use of the application in the learning process. Therefore, this study presents a novelty by examining the effectiveness of Rosetta Stone in improving English pronunciation while also investigating students' perceptions of its use. Thus, integrating Rosetta Stone into English language learning is not only relevant to technological developments in the digital era but also makes a tangible contribution to improving students' pronunciation skills.

Students' speaking skills, particularly in pronunciation, can be improved through digital media based on *Application-Based Learning* (ABL), such as English pronunciation applications including *Rosetta Stone*. This type of application-based learning has been proven effective, as seen in the use of the English File Pronunciation (EFP) application, which, during intensive practice can enhance EFL students' perception and production of pronunciation, although some differences were not statistically significant (Fouz-González 2020). Furthermore, the interactive approach supported by digital learning platforms is also effective in improving students' pronunciation skills while simultaneously strengthening their confidence and speaking fluency by actively encouraging the practical application of knowledge in meaningful contexts (Seemab, et al., 2024). In this context, Rosetta Stone provides audiovisual exercises that adjust the difficulty level according to learners' abilities, allowing for gradual and intuitive learning. By integrating images, text, and sound, the application helps students understand vocabulary, grammatical functions, articulation, intonation, word stress, and fluency naturally, while receiving direct feedback from voice recognition technology. Thus, the integration of digital applications based on ABL, such as *Rosetta Stone*, offers a more engaging, immersive, and effective learning experience, enabling students to practice independently, improve their pronunciation skills, speak more confidently, and achieve clearer and more natural communication.

The Rosetta Stone software was developed as an audiovisual aid that benefits both teachers and students in English language learning. This application is designed to support the teaching of the four main language skills: reading, listening, speaking, and writing, through an interactive and progressive approach. By integrating images, text, and sound, Rosetta Stone offers a learning method that enables students to understand vocabulary and grammatical functions naturally and gradually. The difficulty level in this application increases as users progress, making the learning process more challenging yet enjoyable. Unlike traditional methods that often rely on translation and repetitive exercises, Rosetta Stone emphasizes intuitive learning, which resembles the natural way a person acquires their first language. The use of the Rosetta Stone application in training vowel pronunciation, particularly diphthongs, provides significant improvement, indicating that this speech recognition technology is effective in helping learners improve their pronunciation accuracy (Hermana 2023)

The use of *the Rosetta Stone application* to improve pronunciation involves various interactive activities designed to help students master correct pronunciation. One of the main activities is pronunciation practice, where students imitate words or sentences spoken by native speakers, and the application provides automatic feedback on the accuracy of their pronunciation through speech recognition technology. In addition, to make learning more enjoyable and increase learners's motivation, the application also offers listening and repeating games that strengthen pronunciation skills in a fun way. Through this series of activities, the Rosetta Stone application becomes an effective tool for helping students improve and develop their English pronunciation skills.

The primary aim of mastering pronunciation for students is to enhance their ability to articulate words and sentences with accuracy and clarity across various contexts, including classroom settings, public speaking, and everyday communication. Teachers expect students to produce correct pronunciation, apply suitable intonation, and demonstrate effective control of articulation, word stress, intonation, and fluency. The use of various pronunciation strategies such as repetition drills, minimal pair practice, and imitation of native speakers are particularly effective in developing learners' pronunciation proficiency in English. These methods enable students to recognize and reproduce correct sounds, thus improving their fluency and speech clarity (Gao, et al., 2021). Consequently, learners are encouraged to adopt various pronunciation practices, including listening to native speakers, mimicking their articulation, and consistently performing repetition exercises. Through these approaches, students can achieve a clear and natural pronunciation, facilitating better comprehension by listeners and minimizing the risk of miscommunication.

Recognizing the importance of pronunciation learning, learners need to possess speaking skills, particularly in developing their fluency and pronunciation. However, classroom findings reveal that students still face various obstacles (Kadamovna 2021). Ideally, learners should develop skills that play a crucial role in enhancing the clarity of message delivery, strengthening listener comprehension, and building confidence in communicating across different contexts. Mastery of accurate pronunciation enables learners to avoid misunderstandings, maximize the effectiveness of interactions, and support overall success in language learning. Therefore, the ability to articulate words correctly is not merely a linguistic matter but also a key factor in building clear oral communication, helping listeners better understand masseges and increasing students' confidence in various situations. Through more focused practice, including direct learning of speech sounds and intonation, EFL students can significantly improve their speech clarity, especially when combined with exposure to native language input and feedback that is relevant to the communicative context (Ristati et al., 2025).

Using *the Rosetta Stone application* has proven effective in helping EFL students improve their pronunciation skills through interactive learning that enhances phonological awareness, increases pronunciation accuracy, and provides an immersive language experience. Implementing Rosetta Stone in English learning has been shown to significantly improve students' pronunciation, as evidenced by higher post-test scores in the experimental group compared to the control group (Hanifa and Santoso 2022). Meanwhile, the application not only improves pronunciation, particularly in word stress and intonation, but also boosts learning motivation due to its engaging, interactive design and flexible accessibility at any time .These findings indicate that Rosetta Stone can serve as a modern and effective approach to pronunciation training, enabling students to speak more fluently and preparing them to communicate with confidently in a global context.

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METHODS

This study adopted a quantitative approach that employed a quasi-experimental design, specifically using a non-equivalent control group model (Creswell & Creswell, 2023). The primary objective was to measure the effectiveness of the treatment by comparing learning outcomes between the experimental group receiving the intervention and the control group. Participants were not randomly selected. This study was conducted among eleventh-grade students at a vocational high school during the first semester of the 2025/2026 academic year. The study population included all eleventh-grade students, while the sample was determined using a purposive sampling technique. Based on this technique, eleventh-grade TJKT 1 was designated as the experimental group and eleventh-grade TJKT 2 as the control group. The experimental group received English instruction integrated with the Rosetta Stone application, while the control group was taught using conventional PowerPoint presentations for the same material, allowing for a direct comparison of the effectiveness of the two methods in improving pronunciation skills.

The research procedure began with the implementation of different treatments for the two predetermined groups. In the experimental class, students actively engaged in pronunciation practice and speaking sessions using the Rosetta Stone application. They were instructed to listen to audio-visual materials provided in the units assigned by the teacher, then imitate or repeat the presented text to practice articulation. In contrast, the control group studied identical materials without the aid of an app, using traditional teaching methods. After the treatment period ended, data collection was carried out by administering the same test to both groups to measure their pronunciation skills. The primary instruments used for quantitative data collection were a pre-test and a post-test. Photo and video documentation was used as supporting data to visually record the entire research process.

Quantitative data analysis obtained from the pre-test and post-test results was conducted using the PSPP statistical program. Before proceeding to the main analysis, a series of prerequisite tests were conducted to ensure the data met the necessary statistical assumptions. Normality tests were conducted using the Kolmogorov-Smirnov method to examine data distribution, while homogeneity of variance tests were applied using Levene's Test to ensure equality of variances between groups. After the data were proven to meet the assumptions of normality and homogeneity, hypothesis testing continued using the independent sample t-test. This test aims to identify whether there is a significant difference in pronunciation ability between the experimental and control groups. The study's conclusions are drawn based on a significance level of 0.05 to determine whether the use of the Rosetta Stone application has a significant impact on students' pronunciation ability.

RESULT AND DISCUSSION

Result

The purpose of this study is to see how using the Rosetta Stone application helps eleventh-grade pupils improve their pronunciation skills. The first meeting focused on presenting the Rosetta Stone application and teaching basic pronunciation skills such as articulation, stress word, intonation, and fluency. At this point, students were instructed to become acquainted with the application's key features and do basic exercises independently. The next meeting focused on more intensive practice, with students given 10 minutes to repeat and practice pronunciation using the application's interactive activities, such as listening to and imitating vocabulary and sentences already provided. The researcher worked as a facilitator, providing direction and corrections as needed.In the final meeting, the students were invited to demonstrate their pronunciation skills using conversation simulations from the app, followed by a discussion

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session to improve their knowledge and pronunciation. These three meetings demonstrated a significant improvement in the students' pronunciation ability, as evidenced by an increase in their activity and correctness of pronunciation throughout the learning process.

1. Result of Experiment Class

   Based on the results of the pre-test and post-test conducted in the experimental class, the findings after the treatment using the Rosetta Stone application are as follows:

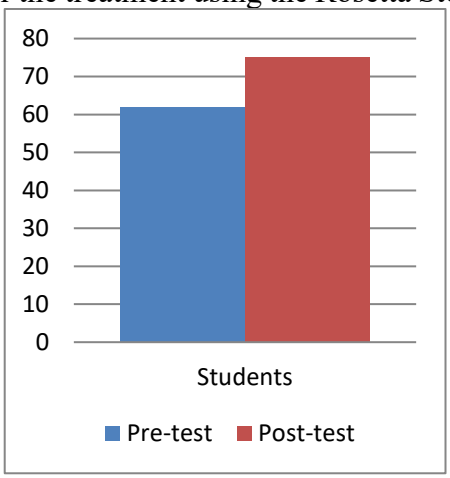

Figure 1 Result in Eksperiment Class

Based on figure 1 the data analysis, the average pre-test score in the experimental class was 62, showing that the students' initial pronunciation skill remained low. The students' abilities improved significantly after being treated with the *Rosetta Stone application*. This was seen in the average post-test score, which rose to 75. This improvement suggests that using *the Rosetta Stone application* improved student's pronunciation skills. In other words, the curriculum helped students enhance their articulation, word stress, intonation, and fluency.

2. Result in Control Class

   Based on the results of the pre-test and post-test conducted in the control class, the findings are as follows:

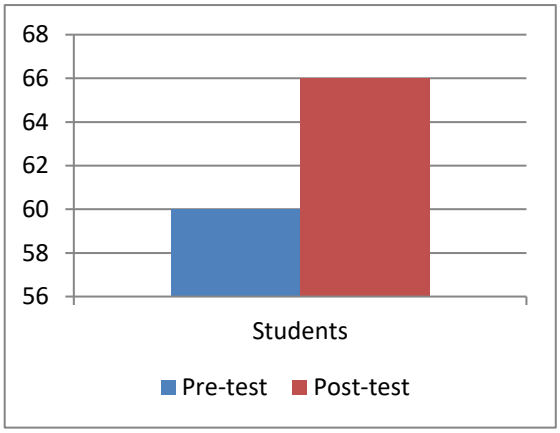

Figure 2. Result in Control Class

The control class had an average pre-test score of 60, which was marginally lower than that of the experimental class (Figure 2). After taking part in the learning process utilizing PowerPoint material without any extra treatment, the average post-test score climbed to 66. There was a little improvement, but it was not as significant as in

the experimental class. This suggests that traditional teaching methods are less effective at improving students' pronunciation skills than using *the Rosetta Stone application.*

Discussion

The research findings clearly demonstrate the superior efficacy of the Rosetta Stone application in enhancing the pronunciation capabilities of eleventh-grade students. The experimental group, which engaged with the application over three structured meetings, exhibited a substantial improvement in their mean scores, rising from a pre-test average of 62 to a post-test average of 75. This significant gain contrasts sharply with the minimal progress observed in the control group. The control class, utilizing conventional PowerPoint materials without the specialized application, showed only a slight improvement, with their average score moving from 60 to 66. This disparity highlights that the traditional teaching methods employed were considerably less effective. The intervention's success is attributed to its targeted focus on articulation, word stress, intonation, and fluency, suggesting that interactive digital tools provide a more robust learning pathway for these specific phonological skills.

These results align closely with existing scholarship on digital language learning, reinforcing the pedagogical value of technology-assisted instruction. Specifically, the findings support the conclusions of Aryani (2022), who previously demonstrated that the Rosetta Stone application effectively improves English speaking skills, notably in the crucial areas of pronunciation and fluency. The practical advantages of utilizing such digital media in the teaching and learning process are evident for both educators and learners. The application fosters a more engaging environment, encouraging students to actively and repeatedly attempt pronunciation, thereby gaining new knowledge and experiences. This increased engagement, whether through collaborative exercises with peers or independent, self-paced learning, is a key driver of improvement. Consequently, students' pronunciation abilities improve significantly simply because they are afforded more frequent and targeted opportunities to practice and refine their oral skills (Badhe et al., 2025; Qiao & Zhao, 2023).

The intervention's success can also be attributed to the active and interactive learning process fostered by the Rosetta Stone application. This approach moves beyond traditional, teacher-centric instruction to create a dynamic, student-centered learning environment. By engaging directly with the application's activities, such as imitation and simulation, students take greater ownership of their learning. This method allows teachers to facilitate optimal conditions where students benefit from a stimulating and supportive atmosphere that provides authentic language exposure. Such an environment is conducive to positive affective behavioral changes, as noted by Li et al. (2022), who found that learners reported increased positive attitudes toward digital-based learning. This positive perception is a critical, motivating factor in language acquisition. Thus, application-based learning via Rosetta Stone offers a vital and modern approach for developing pronunciation skills effectively (Qbeita, 2024; Xia et al., 2024).

This study specifically targeted four crucial components of pronunciation: articulation, word stress, intonation, and fluency. The structured sequence of the intervention, progressing from basic familiarization to intensive practice and finally to conversation simulations, provided a systematic pathway for skill enhancement. The application's design, which requires students to listen and imitate vocabulary and sentences, offers the precise, repetitive drills essential for phonological accuracy and muscle memory. The significant improvement in the experimental group's post-test scores reflects a tangible enhancement in their ability to produce clearer and more accurate English speech. This systematic practice facilitates not only cognitive understanding but also the development of the physical motor skills required for correct

articulation, leading to positive, observable behavioral changes in students' overall oral communication confidence and competence (Wilschut et al., 2024; Yin et al., 2024).

While previous research has already indicated the benefits of Rosetta Stone for improving pronunciation skills, this study provides a novel contribution by examining its application within a specific, under-researched context. Earlier studies, such as those conducted by Hermana comparing the application to conventional media and Yuliani focusing on motivation, primarily involved junior and senior high school students. This research, however, specifically targeted eleventh-grade students within a vocational high school setting. This distinction is significant as vocational students may have different learning objectives and motivational drivers than their general high school counterparts. Furthermore, this study is one of the first to implement this digital intervention within the new framework of the Kurikulum Merdeka. The positive results confirm the application's effectiveness and adaptability, demonstrating its capacity to achieve significant pronunciation improvements even within this distinct educational level and emerging curriculum (Hilmi, 2024; Permana et al., 2025).

The findings of this investigation offer significant practical implications for educators, curriculum designers, and school administrators, particularly those operating under the Kurikulum Merdeka. The demonstrated success of the Rosetta Stone application suggests that integrating such digital tools into the English curriculum aligns well with the curriculum's core objectives of fostering active, independent, and technology-literate learners. To maximize the benefits of this application-based learning, schools should consider strategic investments. This includes not only ensuring adequate technological infrastructure, such as reliable internet access and devices, but also providing continuous professional development for teachers. Such training is essential to equip educators with the pedagogical strategies needed to effectively integrate the application, thereby facilitating an optimal learning environment that supports both collaborative and independent pronunciation practice (Duan & Wei, 2024; Zhang, 2022).

To ensure the successful adoption of this strategy, the teacher's role remains paramount. Educators must employ learning models that effectively help students build their knowledge, comprehension, and practical abilities, acting as crucial motivators in the language learning journey. The use of digital media intrinsically motivates students to practice actively and consistently. As noted by Hidayah (2024), active learning facilitated by digital media, whether collaborative or independent, is exceptionally beneficial for mastering language components like pronunciation. This study confirms Rosetta Stone as a powerful tool, but its findings are limited by a relatively short intervention period and a specific vocational school context. Future research should therefore explore the long-term retention of skills gained through the application and compare its efficacy against other digital pronunciation tools across diverse student populations to broaden the generalizability of these results.

CONCLUSION

The results of this study show that students' pronunciation skills improved after using the Rosetta Stone application. In the pre-test, the students' average score was still low (around 61), which means their pronunciation ability was not good yet. After the treatment, the experimental class that used *Rosetta Stone* reached an average score of 75.31, which was much higher than before. Meanwhile, the control class that did not use the application only had a small increase, with an average score of 66.27. This difference proves that the Rosetta Stone application is more effective than traditional learning methods. In other words, the application really helped students improve their English pronunciation.

Furthermore, the findings show that Rosetta Stone efficiently enhances the development of essential pronunciation skills including as articulation, word stress, intonation, and fluency.

The program creates an interesting and interactive learning environment, allowing students to practice individually and continually. Its speech recognition technology allows students to receive prompt feedback, motivating them to repeat words, phrases, and sentences until they attain proper pronunciation. This technique improves pronunciation while also encouraging active, student-centered, and self-directed learning. Future research should investigate Rosetta Stone's usefulness in learning other language abilities, as well as its long-term influence on enhancing overall English ability. Future studies should include more diverse samples and levels of language proficiency in order to provide a more comprehensive and in-depth understanding of Rosetta Stone's benefits in English language learning.

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