

English Speaking Skill through Rosetta Stone Application at Junior High School: Students' Voices

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Abstract

This study aims to explore the impact of utilizing the Rosetta stone application as a means to improve English speaking skills among second-grade junior high school students. The study employs a qualitative case study approach and data content analysis to delve deeply into the experiences and perceptions of the students regarding their English-speaking skill development through the application. Using a modified questionnaire and depth interviews, the researcher collected data through share the questionnaires to 34 students and interviews conducted with three participants. The results reveal that the majority of students express positive perceptions about the application's impact on English speaking abilities, citing improvements in confidence, vocabulary, accent, and overall learning experience. Overall, these findings underline the dynamic nature of language learning and the potential for continuous improvement in educational technology through targeted enhancements and further empirical exploration. These findings underscore the effectiveness of integrating technology like Rosetta Stone in language learning environments, offering diverse speaking practice opportunities, immersive learning experiences, and targeted feedback that contribute to overall language proficiency. The findings of this study could be useful for language learners who are seeking to improve their language skills as well as for educators and developers who are interested in creating effective language learning tools.

Keywords: Speaking, Students' Voices, Rosetta Stone.

Introduction

The impact of technology on language learning, particularly in the realm of English as a foreign language, is undeniable and continues to shape the landscape of language education (Lamb, 2017; Fishman, 2012; Tayan, 2017; Coleman, 2009). The use of digital technology in language learning has been shown to improve interactive learning environments, increase learner motivation and enhance learning achievement, communication efficiency, and academic motivation in the context of learning English as a foreign language (Yu, 2022; Jovanic & Chiong, 2014; Stepp, 2002). The integration of digital tools, such as language learning applications, online resources, and interactive platforms, enables learners to engage with the language in dynamic ways. These technologies often incorporate multimedia elements, gamified approaches, and real-life simulations, fostering a more immersive and enjoyable learning experience. Additionally, the interactive nature of digital language learning allows for personalized and adaptive learning pathways, catering to individual needs and preferences (Groff, 2013; Majumdar, 2015). Moreover, the use of digital technology can enhance communication efficiency by providing opportunities for real-time interaction with native speakers or other learners across the globe (Kessler, 2018). Virtual classrooms, video conferencing, and collaborative online projects contribute to the development of language skills in authentic communicative contexts. Furthermore, the integration of digital tools can positively impact academic motivation by making language learning more accessible and flexible

(Kouhdast, 2023; Dvořáková et al., 2021). Learners can access resources at their own pace, receive instant feedback, and track their progress, leading to a sense of achievement and motivation to continue their language learning journey.

The utilization of technology in English language learning has significant positive impacts on the development of language skills. The presence of various learning applications, online platforms, and interactive software enriches students' learning experiences. Technology not only provides rich and diverse learning content but also creates engaging and profound learning environments (Groff, 2013; Jalkanen, 2015). Through multimedia approaches and real-life simulations, technology helps students undergo more lively and enjoyable learning experiences. Many kinds of application that can help teacher in learning process such as Hello English, Duolingo, and etc. But in this research, Rosetta stone is one of the examples that will be discussed. This app has found in 1992 by Allen Stoltzfuz, the name of Rosetta stone was inspired by the ancient artifact that played a crucial role in deciphering Egyptian hieroglyphs. It has been downloaded 10 million times in playsotre. Rosetta stone is one of popular language learning application that offers comprehensive language courses, including English, Spanish, French, Italian, German, and many others (Ikonta & Ugonna, 2015). The app is known for its ability to help users improve their speaking skills in the target language (Lord, 2016). With its dynamic method and extensive language offerings, it has been widely used by millions of people worldwide to enhance their language proficiency (Bajorek, 2017). It has involved the integration of speech recognition technology to provide real-time feedback on pronunciation (Godwin-Jones, 2009). The addition of live tutoring sessions for personalized language practice, and the implementation of a mobile app for convenient on-the-go learning. Furthermore, the company has expanded its language repertoire to include less commonly taught languages, catering to a diverse range of language learners. These advancements demonstrate Rosetta stone's dedication to leveraging technology and pedagogical innovation to enhance language acquisition and fluency, this app has a complete skill that we could learn, like grammar, listening, reading, speaking, writing, vocabulary, gamified exercise, interactive ability, adaptive skill level, consistent learning ability, and cultural engagement.

To that extent, in the researchers' context, researchers found several challenges that faced by student at junior high school in learning speaking English at school. There are students feel afraid or lack confidence when speaking in front of class. This nervousness can affect the fluency and clarity of their communication. Therefore, vocabulary limitations, it also can make them challenging to convey ideas or messages with the necessary variety and clarity. There also difficulty understanding accent or dialect, student may struggle with understanding accent or dialects in the target language, especially if they are more accustomed to a different accent or dialect variation. Another challenge is lack of motivation, a lack of motivation or interest in the target language can be a factor influencing students' willingness to actively engage in speaking activities. In addition, lack of understanding of sentence structure: limited understanding of sentence structures in the target language can be a hindrance in constructing grammatically correct and meaningful sentences while speaking. From all the challenge above, the biggest challenge is the students feel afraid and they don't confident to speak in front of people. So, it could be a challenge for them, how they can face their fears when speaking in front of people. As if, speaking is one of the skills where students require extra attention to the audience (Hz & Daulay, 2021).

There have been a number of researchers that already investigated the use of Rosetta stone application in teaching English at global context (See: Lord, 2016) and in Indonesian context (See: Hanifa & Santoso, 2022; Hanif, 2012; Fiolita, 2022; Meri Aryani, 2022). These studies have explained a few ways to learn English through Rosetta stone application. However still a few

researchers that talked about how to improving English speaking skill through Rosetta stone application at junior high school. It uses an immersive method that simulates the way humans learn their first language. It focuses on visual and auditory cues, allowing learners to associate words with images and sounds rather than translations. And it also interactive lessons that engage learners through a variety of activities, including games, exercises, and quizzes. This helps to keep the learning process dynamic and enjoyable.

The primary objective of this study is to investigate and evaluate the efficacy of leveraging the Rosetta stone application as a means to improve English speaking skills. By examining the impact of this language-learning tool on various aspects of oral communication, such as pronunciation, fluency, and vocabulary acquisition, the research aims to provide valuable insights into effective strategies for language enhancement. The findings of the study could be useful for language learners who are seeking to improve their English-speaking skills as well as for educators and developers who are interested in creating effective language learning tools.

Method

Design

This study used qualitative research, because data collection, processing, and result interpretation can all be significantly impacted by qualitative research (Pathak, V., Jena, B., & Kalra, S. 2013). This study adopts a qualitative case study approach to delve deeply into the experiences and perceptions of junior high school students regarding their English-speaking skills development through the Rosetta stone application. According to Yin (2018), a case study design is appropriate for exploring complex phenomena within their natural context, allowing for an in-depth understanding of the subject matter. By focusing on a single case in this instance, the utilization of the Rosetta stone application for English language learning researchers can examine the intricacies of the phenomenon and uncover valuable insights from the students' perspectives. The qualitative nature of the case study approach aligns with the aim of this research, which is to explore and understand the subjective experiences of junior high school students in using the Rosetta stone application to improve their English-speaking skills. Through qualitative methods such as interviews and questionnaires, researchers can capture the nuances of students' thoughts, feelings, and experiences, providing a holistic view of their language learning journey.

Participant and Techniques of Data Collection

In this study, 34 participants from the second grade of a Junior High School in Medan took part, comprising 22 female and 12 male students. Purposive sampling was employed, selecting participants based on their experience with the Rosetta stone app for learning English. The research utilized a modified questionnaire and depth interviews as research instruments. The modified questionnaire consisting of 15 statements agree and disagree item was administered to collecting data on participants' experiences with the Rosetta stone app. It aimed to gauge the frequency of app usage, self-reported enhancements in English speaking skills, and overall satisfaction with the app. Additionally depth interviews were conducted with a subset of participants to delve deeper into their experiences. These semi-structured interviews provided a platform for students to articulate their perspectives on using the Rosetta stone app to improve their English-speaking skills. The interviews were structured to investigate the app's effectiveness, challenges encountered, and suggestions for enhancement.

Technique of Data Analysis

Data analysis in this study has utilized content analysis techniques to systematically examine and interpret the data obtained from interviews and questionnaires, respectively. Content

analysis is a method of analysing textual or visual data by systematically categorizing and interpreting its content to identify patterns, themes, and insights (Gomm, 2008). Qualitative data from the interviews has been transcribed verbatim and subjected to content analysis. Initially, the transcripts have been read multiple times to gain familiarity with the data. Then, open coding will be employed to identify and label meaningful units of analysis, such as key phrases, concepts, or themes, within the data (Gibbs &], 2020). Subsequently, these codes have organized into categories based on their similarities and relationships, leading to the emergence of overarching themes representing the students' perspectives on English speaking skill development through the Rosetta Stone application (Saldaña, n.d.). The data analysis in this study has involved the systematic application of content analysis techniques to both data obtained from interviews and questionnaires. By employing this rigorous analytical approach, meaningful insights into the experiences and perspectives of junior high school students have been extracted, contributing to a comprehensive understanding of English-speaking skill enhancement through the Rosetta stone application.

Results

The Impact Of Using The Rosetta Stone Application On English Speaking Skills

The study aimed to explore the impact of utilizing the Rosetta stone application on English speaking skills among second-grade junior high school students. Employing a qualitative case study approach and data content analysis, the researcher collected data through share the questionnaires to 34 students and interviews conducted with three participants. The researcher used 3 questionnaires for the interview three respondent that have chosen by look from their ability in used the app. And below is the table for the finding in 15 statements of questionnaire students' voices in the utilize Rosetta stone app.

Table 1. Students' voices of Rosetta stone app for English speaking skills

No	Statement of questionnaires	5	4	3	2	1
1	Rosetta stone is effective in your English speaking	58,8%	20,6 %	17,6%	0%	0%
2	The utilization Rosetta stone increases confidence in speaking English	32,4%	52,9%	8,8%	0%	0%
3	Rosetta stone provides sufficient variety in speaking practice	47,1%	35,3%	14,7%	0%	0%
4	Rosetta stone helps expand your English vocabulary	36,3%	44,1%	14,7%	0%	0%
5	The utilization Rosetta stone makes the learning process more enjoyable	41,2%	38,2%	17,6%	0%	0%
6	Rosetta stone provides adequate feedback regarding your speaking skills	32,4%	47,1%	14,7%	0%	0%
7	Rosetta stone helps improve your English accent	44,1%	35,3%	14,7%	0%	0%
8	Interaction with native speakers can improve your speaking skills	26,5%	44,1%	20,6%	0%	0%
9	Rosetta stone can help you overcome certain difficulties in speaking English	44,1%	38,2%	11,8%	0%	0%
10	Rosetta stone provides enough context for your daily speaking practice	38,2%	47,1%	11,8%	0%	0%

11	The price of a Rosetta stone subscription is commensurate with the benefits you get for your speaking skills	29,4%	41,2%	17,6%	0%	8,8%
12	Rosetta stone helps you overcome shyness or discomfort in speaking English	32,4%	41,2%	20,6%	0%	0%
13	Rosetta stone has features that are suitable for all levels of students to practice learning English	23,5%	50%	23,5%	0%	0%
14	Rosetta stone provides motivation to continue improving your speaking skills	38,2%	41,2%	14,7%	0%	0%
15	By frequently using the Rosetta stone app, I can understand English grammar and pronunciation correctly	47,1%	35,3%	14,7%	0%	0%

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Table 1 present the result of the data calculated as percentages of the students' total responses of students' voices regarding the use Rosetta stone application in improving English speaking skill. The findings are divided into five sections based on students' responses and the score that they give. And then the categories are; (1), very disagree (2), disagree (3), neutral (4), agree and (5) strongly agree.

The majority of students express positive perceptions about the impact of Rosetta stone on their English-speaking skills, citing improvements in confidence, vocabulary, accent, and overall learning experience. However, there are variations in responses, suggesting that individual preferences and experiences may influence the effectiveness of the application. Addressing concerns such as enjoyment of the learning process and price satisfaction could enhance the overall user experience. Further research and a larger sample size may provide deeper insights into the application's effectiveness.

Moreover, the positive responses from students highlight the multifaceted benefits of Rosetta stone, with notable improvements in critical aspects of language acquisition, including confidence, vocabulary, and accent. The acknowledgment of an enhanced overall learning experience underscores the application's potential to positively impact various facets of language development. Despite these positive trends, the identified variations in responses emphasize the importance of recognizing the diverse learning needs and preferences among students. This suggests a potential need for tailoring the application or incorporating additional features to accommodate a wider range of individual learning styles. Additionally, the call for addressing concerns related to the enjoyment of the learning process and price satisfaction underscores the significance of user-centric considerations for optimizing the application's efficacy. Overall, these findings underline the dynamic nature of language learning and the potential for continuous improvement in educational technology through targeted enhancements and further empirical exploration.

The Effectiveness of Rosetta stone

After researcher ventured into understanding how Rosetta Stone influences English speaking skills, responses from our young participants reflected a mix of sentiments.

Respondent 1:

"I haven't heard about this app before, so that I feel excited and after I used the app, I think my English speaking a little bit improved. The app has a fun exercise and help my pronunciation being clear. The structured lessons felt like an adventurous journey, making learning more enjoyable".

Rosetta stone Provides Sufficient Variety in Speaking Practice

This point high light how Rosetta stone contributes sufficient variety in speaking practice, the second respondent state that;

Respondent 2:

"Using Rosetta stone has been fun for me! Although at the beginning I had difficulty understanding how to register in this application but after I started it gives me different ways to practice talking in the language I'm learning. I get to talk in lots of different situations, like everyday stuff, and it helps me get better at speaking".

By Frequently Using the Rosetta stone App, I Can Understand English Grammar and Pronunciation Correctly

This point was contributed to how Rosetta stone can improve English grammar and pronunciation correctly, it was stated by the third respondent like

Respondent 3:

"I wholeheartedly agree that the Rosetta Stone app has played a crucial role in enhancing my grasp of English grammar and pronunciation. The diverse exercises, coupled with the emphasis on spoken language, have made the learning process engaging. I appreciate how the app breaks down grammar rules, making them easier to comprehend and apply in real conversations.

Discussion

Based on the data that have collected, "English Speaking Skill Through Rosetta Stone App: Students' Voices," shed light on the impact of the Rosetta Stone application on the English-speaking skills of second-grade junior high school students. The majority of students express positive perceptions, first, in the statement no.1 Rosetta stone is effective in your English speaking, there are 58,8% that strongly agree about that statement. Second, in the statement no. 3 Rosetta stone provides sufficient variety in speaking practice, there are 47,1% strongly agree about that statement. And the third, in the statement no 15 by frequently using the Rosetta stone app, I can understand English grammar and pronunciation correctly, there are also 47,1% students which strongly agree with that statement. The study's findings show that employing technology as a teaching tool can benefit pupils in some ways(Elmahdi et al., 2018). That statement is supported by the result of interview conducted by researcher. And below is the result of interviewed conducted by researcher to the respondent;

The Effectiveness of Rosetta stone

As the researcher has explained in the literature that the use of digital technology in language learning has been shown to improve interactive learning environments, increase learner motivation and enhance learning achievement, communication efficiency, and academic motivation in the context of learning English as a foreign language (Chen & Kuo, 2012; Jovanic & Chiong, 2014; Stepp, 2002). This finding also supported by research conducted by (Schmid, 2012) In the research, Schmid found that Rosetta Stone users reported high levels of enjoyment when using the app. They found the app easy to use and interesting, and they enjoyed the

process of learning a new language in an interactive way. A similar study conducted by (Chapel et al., 2017) Chapelle found that Rosetta Stone could help users significantly develop their language skills. Users of this app show significant improvement in their reading, writing, speaking and listening abilities. And further, the researcher also found in the research which said that Rosetta stone is effective as a medium instruction for increasing the student's vocab, it conducted by (Liando et al., 2022).

There are the reasons why Rosetta stone app can be said to be effective, it can follow from several reason like; Immersive method, Rosetta stone employs an immersive language learning method, encouraging users to learn a new language without translating words or phrases. This mimics the natural process of learning English as a foreign language (Song et al., 2023; Song et al., 2023). Audio-visual approach, the program integrates audio and visual elements, helping users associate words with images and sounds. This holistic approach enhances vocabulary retention, smart repetition, Rosetta Stone's learning system uses automatic and adaptive repetition. Difficult material is repeated more frequently, while mastered content is revisited less often, diverse content: Rosetta Stone provides various types of content, including exercises, games, and real-life situations. This variety helps improve language skills in different contexts, flexibility in time and place: users can learn anytime, anywhere through Rosetta Stone's digital platform, offering high flexibility.

Rosetta stone Provides Sufficient Variety in Speaking Practice

From the result of interview above, it can be seen that students feel fun by using technology(Nalimova et al., 2020) and get better at speaking. Speaking is an oral skill that involves creating a verbal sentence structure to transmit meaning, according to Nunan (2003:43). It also refers to a person's capacity to communicate ideas, feelings, thoughts, and feelings, as well as to react to the remarks made by others. Producing, transferring, and processing information are the three activities that make up speaking skill, a productive speech talent. The Rosetta stone language learning platform provides a variety of speaking practice opportunities for learners. It introduces new skills at an appropriate pace and offers chances to practice key words and phrases in different contexts. The platform uses interactive activities, audio from native speakers, and immersion methods to help learners develop confidence in their speaking abilities (Soto et al., 2020). Additionally, Rosetta stone offers live lessons where learners can interact with native-speaking tutors, practice pronunciation, and expand cultural knowledge (Rogerson-Revell, 2021).

By Frequently Using the Rosetta stone App, I Can Understand English Grammar and Pronunciation Correctly

In the previous study conducted by (Ardiningtyas et al., 2023) Students can improve their understanding of proper English pronunciation using the Rosetta Stone app, which offers multiple lesson modes that allow them to study the right responses and gain knowledge from the errors that they commit. By encouraging students to follow directions for pronunciation, the Rosetta stone app helps them become self-directed learners. Without being distracted by the surroundings, they attempt to pronounce it independently while practicing on their own on the app. As the researcher navigate through these insightful responses, it becomes clear that Rosetta stone's perceived effectiveness transcends mere skill improvement (Parkinson et al., 1999). It transforms into an exciting journey where structured lessons and interactive components converge to create a comprehensive language learning experience (Aldrich & Clark, 2005). These findings emphasize the significance of the application in not just honing speaking skills but also in fostering a broader language proficiency that extends to vocabulary, pronunciation, and overall linguistic confidence, aligning with the developmental level of our second-grade junior high school participants. It's important to note that Rosetta stone builds

understanding of grammar gradually, without overly emphasizing explicit grammatical rules (Purgina et al., 2020). This mimics how children learn their native language, where grammar comprehension develops naturally through repeated exposure to the language.

Moreover, Rosetta stone places significant emphasis on pronunciation (Firdaus et al., 2022). The application features voice recognition technology that allows users to record and compare their pronunciation with that of native speakers. Immediate feedback is provided on users' pronunciation, helping them identify and correct errors in pronunciation. Rosetta stone also emphasizes repetition and practice, reinforcing understanding of grammar and pronunciation. Through a series of well-designed exercises, users have the opportunity to deepen their understanding of the target language and improve their skills in correctly pronouncing words.

Conclusion

The findings of this study demonstrate the positive impact of Rosetta Stone on the English-speaking skills of second-grade junior high school students. Students reported enhanced speaking abilities, enjoyment in learning, and improved comprehension of grammar and pronunciation through the use of the application. These results underscore the effectiveness of integrating technology like Rosetta Stone in language learning environments, offering diverse speaking practice opportunities, immersive learning experiences, and targeted feedback that contribute to overall language proficiency. However, it is important to consider the paid nature of Rosetta Stone, which may limit access to certain features for students with financial constraints. Future research should explore ways to address this limitation and further investigate the long-term effects of using Rosetta Stone on language acquisition and proficiency among students

References

- Aldrich, C., & Clark, I. (2005). *Learning by Doing: A Comprehensive Guide to Simulations, Computer Games and Pedagogy in e-Learning and Other Educational Experiences*. 69–72.
- Ardiningtyas, S. Y., Butarbutar, R., Weda, S., & Nur, S. (2023). Online scaffolding behavior for speaking EFL improvement: narrative inquiry issues. *Interactive Learning Environments*, 1–11. <https://doi.org/10.1080/10494820.2023.2207608>
- Bajorek, J. P. (2017). L2 Pronunciation in CALL: The Unrealized Potential of Rosetta Stone, Duolingo, Babbel, and Mango Languages. *Issues and Trends in Educational Technology*, 5(2), 60–87. <https://journals.uair.arizona.edu/index.php/itet/article/view/20140/21378>
- Chapel, J. M., Ritchey, M. D., Zhang, D., & Wang, G. (2017). Prevalence and Medical Costs of Chronic Diseases Among Adult Medicaid Beneficiaries. *American Journal of Preventive Medicine*, 53(6), S143–S154. <https://doi.org/10.1016/j.amepre.2017.07.019>
- Chen, T.-Y., & Kuo, C.-H. (2012). A genre-based analysis of the information structure of master's theses in applied linguistics. *The Asian ESP Journal*, 8(1), 24–52.
- Coleman, J. A. (2009). Why the British do not learn languages: Myths and motivation in the United Kingdom. *Language Learning Journal*, 37(1), 111–127. <https://doi.org/10.1080/09571730902749003>
- Dvořáková, K., Emmer, J., Janktová, R., & Klementová, K. (2021). From f2f to ert: University students' perception of remote learning during the first covid-19 lockdown. *Journal on Efficiency and Responsibility in Education and Science*, 14(2), 89–100. <https://doi.org/10.7160/eriesj.2021.140203>
- Elmahdi, I., Al-Hattami, A., & Fawzi, H. (2018). Using Technology for Formative Assessment to Improve Students' Learning, *Turkish Online Journal of Educational Technology - TOJET*,

- 2018-Apr. *TOJET: The Turkish Online Journal of Educational Technology*, 17(2), 182–188. <https://eric.ed.gov/?id=EJ1176157>
- Fiolita, V. (2022). *THE STUDENTS' RESPONSE OF USING THE ROSETTA STONE APPLICATION ON SPEAKING SKILLS (A Case Study at Bimbel Rumah Pintar 2022)*. Universitas Pancasakti Tegal.
- Firdaus, H., Laensadi, A. M., Matvayodha, G., Siagian, F. N., & Hasanah, I. A. (2022). Analisis Evaluasi Program Kurikulum 2013 dan Kurikulum Merdeka. *Jurnal Pendidikan Dan Konseling*, 4(4), 686–692. <https://core.ac.uk/download/pdf/322599509.pdf>
- Fishman, J. A. (2012). The new linguistic order. *Language and Linguistics in Context: Readings and Applications for Teachers*, 3, 175–181. <https://doi.org/10.4324/9780203929124>
- Gibbs, B., & J. (2020). Critically Examining War : A Classroom Catch-22. *Ohio Social Studies Review*, 56(2).
- Godwin-Jones, R. (2009). Emerging technologies speech tools and technologies. *Language Learning and Technology*, 13(3), 4–11.
- Gomm, R. (2008). Social Research Methodology. *Social Research Methodology*. <https://doi.org/10.1007/978-0-230-22911-2>
- Groff, J. (2013). Technology-rich innovative learning environments. *Oecd.Org*, 1–30.
- Hanif. (2012). Using Rosetta Stone... Using Rosetta Stone Software As Media In Teaching English Vocabulary (An Experimental Study At SDN No.02 Lhoksukon). *Rosetta Stone Evaluation Report Resources.*, 24–36.
- Hanifa, R. S., & Santoso, D. R. (2022). The Use of Rosetta Stone in Enhancing Junior High School Students' Pronunciation. *Ethical Lingua*, 9(2), 836–845. <https://doi.org/10.30605/25409190.448>
- Hz, B. I. R., & Daulay, E. (2021). Online Learning Media: English Education Department Students' Perspective. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(1), 50–64. <https://doi.org/10.31002/metathesis.v5i1.3604> p-ISSN:
- Ikonta, N. R., & Ugonna, N. C. (2015). The effect of Rosetta Stone (computer-assisted language learning) software on English as second language students' proficiency in English language. *African Educational Research Journal*, 3(1), 69–79.
- Jalkanen, J. (2015). *Development of pedagogical design in technology-rich environments for language teaching and learning* (J. S. in Humanities (ed.)). University Library of Jyväskylä Jyväskylä.
- Jovanic, J., & Chiong, R. (2014). *Technological and Social Environments for Interactive Learning*. Informing Science Press.
- Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals*, 51(1), 205–218. <https://doi.org/10.1111/flan.12318>
- Kouhdast, A. M. K. (2023). Transformative Applications of Technology in English Language Education: A Literature Riview Over the Last Two Decades. *Technology Assisted Language Education TALE*, 1(3), 45–62. https://lilikmasrukhahmpd.gurusiana.id/article/2017/08/pembelajaran-bahasa-inggris-dengan-memanfaatkan-it-1251283?bima_access_status=not-logged%0Ahttps://publikasiilmiah.ums.ac.id/xmlui/handle/11617/9566
- Lamb, M. (2017). The motivational dimension of language teaching. *Language Teaching*, 50(3), 301–346. <https://doi.org/10.1017/S0261444817000088>
- Liando, N. V. F., Tatipang, D. P., Tamboto, G., Poluan, M., & Manuas, M. (2022). Pictures as a Learning Media in Teaching Vocabulary. *Jurnal Ilmiah Universitas Batanghari Jambi*, 22(3), 1944–1949.
- Lord, G. (2016). Rosetta Stone for Language Learning: An Exploratory Study. *IALLT Journal of*

- Language Learning Technologies*, 46(1), 1–35. <https://doi.org/10.17161/iallt.v46i1.8552>
- Majumdar, S. (2015). Emerging Trends in ICT for Education & Training. *Director General Asia & Pacific Region IVETA*, 94–101. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Pedagogic+Strategies+for+Using+ICT+to+Support+Subject+Teaching+and+Learning:+An+Analysis+Across+15+Case+Studies#0%5Cnhttp://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Pedagogic+strate>
- Meri Aryani. (2022). The Use of Rosetta Stone in Improving Speaking Skill. *Journal of Teaching English and Applied Linguistic*, 1(1), 35–42. <https://doi.org/10.56517/jteal.v1i1.5>
- Nalimova, S. S., Kondratev, V. M., Ryabko, A. A., Maksimov, A. I., & Moshnikov, V. A. (2020). Study of sensor properties of zinc oxide based nanostructures. *Journal of Physics: Conference Series*, 1658(1). <https://doi.org/10.1088/1742-6596/1658/1/012033>
- Parkinson, R., Diffie, W., Fischer, M., & Simpson, R. S. (1999). *No Title*. Univ of California Press.
- Purgina, M., Mozgovoy, M., & Blake, J. (2020). WordBricks: Mobile Technology and Visual Grammar Formalism for Gamification of Natural Language Grammar Acquisition. *Journal of Educational Computing Research*, 58(1), 126–159. <https://doi.org/10.1177/0735633119833010>
- Rogerson-Revell, P. M. (2021). Computer-Assisted Pronunciation Training (CAPT): Current Issues and Future Directions. *RELC Journal*, 52(1), 189–205. <https://doi.org/10.1177/0033688220977406>
- Saldaña, J. (n.d.). *The Coding manual For Qualitative Researchers* (J. Seaman (ed.)). SAGE Publications Ltd.
- Schmid, K. (2012). The effectiveness of Rosetta Stone language learning software. *Language Learning & Technology*, 16(2), 9–28.
- Song, C., Shin, S.-Y., & Shin, K.-S. (2023). Optimizing Foreign Language Learning in Virtual Reality: A Comprehensive Theoretical Framework Based on Constructivism and Cognitive Load Theory (VR-CCL). *Applied Sciences*, 13(23), 12557. <https://doi.org/10.3390/app132312557>
- Soto, J. H. B., Ocampo, D. C. T., del Carmen Beltrán Colón, L., & Oropesa, A. V. (2020). Perceptions of immerseme virtual reality platform to improve english communicative skills in higher education. *International Journal of Interactive Mobile Technologies*, 14(7), 4–19. <https://doi.org/10.3991/IJIM.V14I07.12181>
- Stepp, J. G. (2002). Student Perceptions on Language Learning in a Technological Environment: Implications For The New Millennium. *Language Learning and Technology*, 6(January), 165–180. <http://llt.msu.edu/vol6num1/steppgreany/>
- Tayan, B. M. (2017). Students and Teachers' Perceptions into the Viability of Mobile Technology Implementation to Support Language Learning for First Year Business Students in a Middle Eastern University. *International Journal of Education and Literacy Studies*, 5(2), 74. <https://doi.org/10.7575/aiac.ijels.v.5n.2p.74>
- Yu, Z. (2022). Sustaining Student Roles, Digital Literacy, Learning Achievements, and Motivation in Online Learning Environments during the COVID-19 Pandemic. *Sustainability (Switzerland)*, 14, 1–14. <https://doi.org/10.3390/su1408438>