
Visual and Auditory Features of Memrise in Fostering English Vocabulary Learning Motivation: A Study of Class X Students at SMK Negeri 3 Metro

Fenny Thresia ⁽¹⁾
Universitas
Muhammadiyah
Metro
fenny.thresia@yahoo.com

Devi Yandika Putri ⁽²⁾
Universitas
Muhammadiyah Metro
devipurii408@gmail.com

*Citra Putri Aditia ⁽³⁾
Universitas
Muhammadiyah Metro
citraputriaditiaa@gmail.com

Syalum Aini ⁽⁴⁾
Universitas
Muhammadiyah
Metro
syalumaini29@gmail.com

Abstract

Although digital technology has been widely adopted in English language instruction, existing research often emphasizes general applications or large-scale platforms without closely examining how specific digital tools function within the context of vocational education. Most prior studies have focused on university students or general high school populations, with limited attention to how audio and visual elements in applications like Memrise influence motivation and vocabulary acquisition among vocational students. Furthermore, while Memrise has been recognized for its gamification and multimedia features, few empirical studies explore how these features interact with the unique learning needs, habits, and infrastructural challenges faced by students in vocational schools, particularly in rural or under-resourced settings. The lack of in-depth, context-specific studies examining the practical integration of Memrise into structured classroom routines—especially using qualitative insights—creates a significant gap in the literature. This study addresses that gap by exploring the perceptions and experiences of Class X students at SMKN 3 Metro, focusing on how Memrise’s visual, audio, and gamified elements affect motivation and vocabulary learning within a vocational education framework.

Keywords: Memrise; visual; audio; learning motivation; English language teaching

INTRODUCTION

All aspects of life, including education, have been profoundly influenced by the advancements that have been made in digital technology. Not only is technology a useful tool in the modern digital era, but it has also evolved into an essential component of activities that people engage in on a daily basis, particularly in the field of education. The rapid advancement of information and communication technology (ICT) has resulted in the development of innovative tools and platforms, which have enabled educators to create more engaging and effective learning experiences (Nadzeri et al., 2023). Mobile

gadgets, such as smartphones and tablets, have further democratized access to educational content, since more persons are adept in using these devices to access internet-based resources (Nadzeri et al., 2023).

In language teaching, digital solutions have shown enormous potential in overcoming traditional difficulties such as limited resources, lack of customization, and low learner engagement. For instance, mobile-assisted language learning (MALL) applications, like Memrise, integrate multimodal characteristics to increase learning outcomes. Mayer’s (2001) Cognitive

Theory of Multimedia Learning proposes that learning is more successful when information is provided using various channels, such as visual and aural inputs. This approach corresponds well with the demands of learners in vocational schools, where practical and contextual learning approaches are generally highlighted (Adijaya et al., 2023).

Despite the availability of digital technologies, motivating vocational high school students to learn English remains challenging. Many lack intrinsic motivation due to outdated teaching methods, irrelevant materials, and low interest (Soviana, 2018). Studies show that vocational learners prioritize practical skills over academic subjects, emphasizing the need for engaging and context-based language learning (Dörnyei, 1998; Ferm, 2021). Contextualized education helps make learning more meaningful and relevant. Gamification is one promising strategy to boost engagement and motivation. Marningsih and Sukarno (2024) found that game-like features create a supportive learning environment and encourage both individual and group learning.

One viable answer to these difficulties is the incorporation of technology-based learning aids that adapt directly to the preferences and needs of vocational students. Memrise, for example, offers a unique combination of visual and audio features meant to accelerate vocabulary acquisition and enhance learner motivation. Paivio's (1986) Dual Coding Theory stresses the need of merging verbal and visual representations to increase memory recall. By combining animations, visuals, and authentic pronunciation characteristics, Memrise develops an engaging learning environment that appeals to varied learning styles (Liu et al., 2018).

The use of gamification in increasing learner motivation is another notable characteristic of

Memrise. According to Deci and Ryan's (1985) Self-Determination Theory, gamified components, such as levels, points, and badges, can boost intrinsic motivation by meeting learners' psychological requirements for competence, autonomy, and relatedness. This makes Memrise particularly ideal for vocational students, as it blends entertaining activities with goal-oriented learning, so harmonizing with their inclination for practical and engaging experiences (Ryan & Deci, 2000).

Despite the fact that digital tools such as Memrise hold a great deal of potential, their effectiveness is contingent upon a number of factors, such as their availability, the frequency with which they are utilized, and the technological infrastructure that is readily available. Students who are located in areas with limited internet connectivity may have difficulty accessing the full range of functions offered by the app. These features include audio pronunciation support and interactive exercises. Hamidi and Chavoshi (2018) revealed that limited access to technology remained a key obstacle to the adoption of mobile learning in under-resourced locations.

In addition, the pedagogical strategies that teachers implement are a significant factor in determining whether or not technology-based learning is successful. Research by Jamieson et al. (2005, as cited in Damak & Bahloul, 2015) underlines the need of scaffolding and instructor intervention in maximizing the impact of digital tools. Without sufficient supervision, students may struggle to utilize the app's capabilities successfully or fail to engage with it consistently. Thus, the role of educators in integrating Memrise into lesson planning and monitoring its utilization cannot be emphasized.

Previous research have evaluated the potential of Memrise in enhancing language learning

results. For instance, Liu et al. (2018) demonstrated that incorporating visual and auditory aspects into vocabulary acquisition can boost recall rates by up to 35% compared to standard methods. Similarly, Hattie and Yates (2013) found that digital tools with visually appealing interfaces greatly boost student engagement and motivation. However, existing research frequently focuses on general populations, with insufficient consideration to the special demands and challenges experienced by vocational high school students.

In a previous study conducted by Adijaya et al. (2023), the deployment of MALL tools in vocational education was demonstrated to boost students' perceptions of English as a desirable ability for their jobs. However, the study lacked a rigorous investigation of how individual app characteristics, such as visual and audio aspects, influence learning outcomes and motivation. This gap underlines the need for research that studies the interplay of these qualities with learner engagement and vocabulary learning, particularly within the context of vocational education.

This study intends to address the aforementioned shortcomings by studying the influence of Memrise's visual and auditory features in increasing vocabulary acquisition and motivation among grade X students at SMKN 3 Metro. Specifically, it attempts to (i) Analyze the influence of Memrise's visual components, such as animations and graphics, on vocabulary retention. (ii) Analyze the efficiency of audio elements, including pronunciation guides and voice repetition, in facilitating accurate word pronunciation. (iii) Identify the motivational effects of gamified components, such as levels and points, on student involvement. (iii) Examine the obstacles and barriers to applying Memrise in vocational high school settings. By providing a detailed examination of these elements, this

study contributes to the expanding body of literature on mobile-assisted language learning and offers practical insights for educators and policymakers wanting to strengthen English language instruction in vocational schools.

METHODOLOGY

In order to investigate the impact that Memrise's visual and auditory components have on the motivation and vocabulary learning of students in grade X at SMK Negeri 3 Metro, this study takes a qualitative method. According to Creswell and Creswell (2017), a qualitative technique is particularly well-suited for this research because it makes it possible to conduct an in-depth investigation of the experiences, perspectives, and interactions that students have with technology-based learning tools of their own.

The research made use of a case study design, which made it possible to conduct an in-depth investigation into the utilization of Memrise within a real-world setting. More specifically, the investigation focuses on the utilization of Memrise by vocational high school students who are enrolled in the Building Modeling and Information Design program.

Among the key resources utilized in this investigation is the Memrise application, which is designed to facilitate language acquisition through the combination of visual and auditory components. Memrise was accessed by students using their own personal smartphones and tablets, which were equipped with reliable internet connections wherever they were available. During the course of the inquiry, the visual features of the application, such as graphics and animations, as well as the audio components, which included pronunciation assistance and voice repetition, were utilized extensively. Recording devices, such as audio recorders and observation logs, were utilized in order to

document the data that was gathered through the utilization of interviews and participatory observations.

The selection of participants was carried out using a technique known as purposive sampling, which is a technique that chooses individuals who are best suitable to the objectives of the study (Sugiyono, 2020). These were the criteria that were utilized to determine who would be included in the study: (1) students who used the Memrise program on a regular basis at least three times per week; (2) participants who were willing to participate in interviews and observations; and (3) students who represented a variety of skill levels within the classroom. In order to ensure that the sample size was manageable while yet being diverse, a total of seven participants were selected from a group of thirty-four pupils.

Conducting semi-structured interviews and conducting participatory observations were the two basic strategies of data collecting that were utilized. For the purpose of gaining qualitative insights into the experiences that students have had using Memrise, interviews were conducted. Because of the semi-structured format's potential for flexibility, the researcher was able to probe more deeply into particular parts of the responses provided by the students. The questions asked students on their perceptions of the visual and audible components of Memrise, as well as the impact that it had on their motivation and some difficulties, they had experienced. In order to do analysis, interviews were both audio-recorded and transcribed. In addition to being conducted in the classroom, observations were also carried out in settings that involved independent learning. In the course of these observations, the objective was to record real-time interactions with the application, including how students interacted with its features and how they emotionally responded

to the process of learning. For the purpose of ensuring consistency, observational data were logged in a methodical manner.

The research was conducted into three stages: (i) preparation stage, this included participant recruitment, ensuring access to the Memrise app, and conducting a preliminary implementation to familiarize students with the app's functionalities. (ii) implementation stage, during this phase, students were encouraged to use Memrise as part of their daily vocabulary learning activities. Regular classroom sessions incorporated Memrise-based tasks, and students were prompted to log their independent usage outside class. Researchers monitored usage patterns and provided technical support as needed. (iii) data collection stage: Interviews and observations were conducted concurrently. The researchers documented participant behavior, emotional responses, and engagement levels. Any technical or logistical challenges encountered during this phase were also recorded.

Data were analyzed using thematic analysis, a method that identifies patterns or themes within qualitative data (Braun & Clarke, 2019). The analysis involved the following steps: (i) data Familiarization, audio recordings and observation notes were transcribed and reviewed multiple times to ensure a thorough understanding of the content. (ii) coding, data were coded to identify recurring themes related to visual elements, audio elements, motivation, and challenges. (iii) theme development, codes were grouped into broader themes that addressed the research questions, such as the role of Memrise's gamified features in fostering motivation and the impact of visual-audio elements on vocabulary retention. (iv) interpretation, themes were interpreted in the context of existing literature, highlighting

how the findings align with or diverge from prior research.

An ethical approval was acquired before the study was carried out. Informed consent was obtained from the participants, and confidentiality was preserved throughout the entire process. During the analysis, the data were anonymised in order to preserve the identities of the participants.

Table 1. Participants responds

P	Kode	Raw Data (Indonesia)	Raw Data (English Translation)
P 1	Visuals as Learning Tools	"Gambar di Memrise bikin aku lebih gampang ingat kata-katanya."	"The images in Memrise make it easier for me to remember the words."
P 2	Visuals Increase Interest in Learning	"Visualnya menarik sih. Beda sama buku pelajaran biasa."	"The visuals are interesting. Different from regular textbooks."
P 3	Audio Helps Pronunciation	"Sering banget, soalnya penting buat tahu cara baca kata yang benar."	"Very often, because it's important to know the correct pronunciation of words."
P 4 & P 5	Audio Helps Pronunciation	"Sering banget, soalnya penting buat tahu cara baca kata yang benar."	"Very often, because it's important to know the correct pronunciation of words."
P 6 & P 7	Audio Strengthens Memorization	"Kadang aku ulang-ulang audionya biar makin hafal cara bacanya."	"Sometimes I replay the audio to better memorize how to pronounce the words."

Table 1. 1 How visual and audio elements in Memrise affect learning motivation.

Using this process guarantees that the study can be repeated by other researchers looking for similar results. In order to give a clear framework for future study, the complete explanations of participant selection, data collection instruments, and analysis techniques are provided. In order to acquire results that are equivalent to those obtained in the original study, researchers who plan to duplicate it should ensure that they have access to the Memrise app, proper recording devices, and a varied participant sample.

RESULT AND DISCUSSION

The findings of the research indicated that the features of Memrise, which include both visual and audible components, play a significant impact in enhancing the learning motivation of students. Visual components, such as graphics that are both eye-catching and bright, not only make it simpler for kids to recall terminology, but they also assist lessen the amount of boredom that these students experience while they are studying. The audio component, on the other hand, is designed to assist pupils in comprehending the proper pronunciation of words. Students have the option to engage in more efficient memorization of vocabulary through the use of the audio repetition feature that is included in this application.

This research reveals that the visual and audio elements in the Memrise application are very important to improve the effectiveness of English vocabulary learning. In the presence of interesting and colorful representations of images, visual elements help students understand the context of words, which in turn supports long-term memory (R. E. Mayer, 2020). Additionally, a study on the efficiency of audiovisual aids in language learning indicated that mixing visual and aural stimuli promotes vocabulary acquisition and stimulates memory retention over time

(Regina & Rajasekaran, 2023). In addition, research on the use of visual aids in vocabulary learning suggests that teaching vocabulary items through the use of visual aids results in higher learning outcomes among language learners (Azma, 2018). As revealed by Participant 1, the interesting images in Memrise make it easier to understand the meaning of words. This is in line with Mayer's theory of Cognitive Theory of Multimedia Learning (CTML), which emphasizes that the integration of visual and audio elements strengthens the cognitive process of understanding information. In addition, visual elements play an important role in maintaining students' focus and preventing them from feeling bored while learning (Clark & Lyons, 2010; R. E. Mayer, 2005).

On the other hand, audio elements also have a crucial role in mastering vocabulary pronunciation. Participant 2 stated that the audio feature in Memrise helped them understand and memorize word pronunciation better. Research by Ahmadi (2018) shows that audio elements have a positive impact on improving listening and pronunciation skills. The use of audio components into language learning has the potential to result in significant improvements in both listening and pronouncing abilities. For an instance, Lepore (2014) conducted a study in which they executed a podcasting effort with the purpose of enhancing proficiency in pronunciation among individuals who were learning advanced language skills.

The findings revealed that students liked hearing comments from native speakers as well as non-native speakers, which contributed to changes in their pronunciation due to the feedback they received. Furthermore, a study by Dung (2021) on the use of audiovisual media in increasing students' listening skills indicated that

integrating visual pictures and sound enhances students' perceptions, consequently enhancing their listening comprehension abilities.

However, challenges such as unstable internet connections are significant obstacles in utilizing audio features, especially in areas with limited network infrastructure (Akmad & Abatayo, 2024; Venkatasubramanian, 2024). Overall, the combination of visual and audio elements in Memrise is in line with the principles of multimodal learning, where the delivery of information through various media can improve student understanding (R. E. Mayer, 2020). However, the effectiveness of this feature is highly dependent on the consistency of users in accessing the application and the availability of supporting resources, such as a stable internet connection. Students' motivation to learn English vocabulary is significantly impacted by the visual and auditory features that are included in Memrise, as demonstrated by the effects of these elements. Visual components, such as visuals that are vivid and interesting, play a significant part in improving students' ability to remember terminology and in making the learning process more fun, which in turn helps to reduce the amount of boredom experienced by students. In a similar vein, audio elements serve as a crucial aid for improving pronunciation by providing students with explicit guidance on how to appropriately pronounce words.

Memorization is further supported by the repeating option that is included in the audio components of Memrise. This affords pupils the opportunity to successfully reinforce their mastery of language. The combination of these characteristics results in a learning environment that is dynamic and engaging, which has the effect of enhancing motivation and making language acquisition easier.

Furthermore, students expressed positive attitudes toward Memrise's visual and audio features it appears from the findings that students, on the whole, have a positive attitude toward the visual and aural components that Memrise allows them to access. These components are exciting to the majority of individuals, and they have the potential to increase their drive to study when they are taken into consideration. By utilizing the features of the app, which include levels and points, students are encouraged to continue their education. These features give the idea that the learning process is a game, which encourages students to continue their education. However, there are a number of challenges that need to be conquered, such as limited access to the internet and a lack of uniformity in the utilization of applications.

These are just two examples of barriers that need to be addressed. Using the app on a consistent basis can be difficult for certain students, especially after a long and demanding day. This is especially true after the app has been used.

Table 1. 2 Students' attitudes towards the use of visual and audio elements in Memrise

Code	Raw Data (Indonesia)	Raw Data (English Translation)
Motivation with the Level System	<i>Iya, karena belajarnya seru kayak main game. Ada level-levelnya, jadi pengen terus naik level.</i>	Yes, because learning feels like playing a game. There are levels, so I want to keep leveling up.
Visually and Audio Appeal	<i>Aku lebih semangat kalau lihat gambar yang menarik. Apalagi kalau warnanya cerah.</i>	I'm more excited when I see interesting images, especially when the colors are bright.

Internet Access Challenges	<i>Kalau kuota internet habis, ya nggak bisa buka aplikasinya.</i>	If my internet quota runs out, I can't access the app.
Consistency of Use	<i>Kadang suka malas buka aplikasinya kalau lagi capek habis sekolah.</i>	Sometimes I feel lazy to open the app after a long day at school.
Audio Strengthens Memorization	<i>"Kadang aku ulang-ulang audionya biar makin hafal cara bacanya."</i>	"Sometimes I replay the audio to better memorize how to pronounce the words."

It is commonly accepted by students that they have a favorable attitude toward the utilization of visual and audio components in Memrise, as they recognize these components as being both entertaining and helpful learning tools. Their drive to interact with the platform is further increased by the presence of features within the app such as levels and points at various levels. However, there are a few obstacles that prevent constant use, such as limited internet connectivity, which makes it difficult for some students to access the application. Additionally, maintaining daily use of the app can be a challenge for certain learners, which highlights the necessity of developing solutions to address these obstacles and ensure that its functions are utilized in a more efficient manner.

The response of pupils towards the visual and aural features in Memrise is generally extremely good. Many participants indicated that this feature boosted their motivation and interest in the learning process. This participant was one of three selected for direct quotation in the results section because their statement most clearly represented the overall themes emerging from the data. Although

seven students were interviewed, only three were quoted to avoid redundancy and to maintain clarity in illustrating the key findings. These three participants were chosen because their responses were the most articulate, insightful, and directly relevant to the visual, audio, and motivational aspects examined in this study. For example, reported that the beautiful and bright visual features encouraged them to use the program for longer. These findings coincide with research by Hattie and Yates (2013), which reveals a favorable association between visual appeal in digital learning tools and student engagement.

Similarly, Clark and Lyons (2010) claim that well-designed images help sustain attention and make abstract concepts more accessible, hence boosting learning results. However, there are still hurdles to overcome, such as limited internet connectivity and a lack of consistency in the use of the application. Participant 1 said that low internet quota is generally the biggest hurdle in accessing Memrise. This correlates with the findings of Hamidi and Chavoshi (2018), which reveal that limiting access to technology greatly reduces the effectiveness of digital learning applications. To solve this, educational institutions should prioritize strengthening digital infrastructure to enable fair access for all students.

Additionally, the intrinsic motivation of the students is a significant factor that plays a role. It was mentioned by three of the participants that the different levels and points that Memrise offers serve as a motivation to continue studying. From the perspective of Self-Determination Theory (Ryan & Deci, 2000), gamification components such as points and levels can improve intrinsic motivation by offering a sense of achievement and fulfillment. This idea says that motivation is boosted when learners feel competent, autonomous, and linked to others in their

learning environment. Research by Deterding et al. (2011) supports the premise that gamification components in educational technologies can produce a sense of accomplishment, which sustains user engagement over time. However, it is vital to highlight that this drive can be transitory if it is not supported by a continuous learning method. Therefore, educators are required to incorporate these tools into more comprehensive pedagogical frameworks that enable learning and engagement for extended periods of time.

Moreover, it is crucial to consider the function of teacher support in optimizing the use of Memrise. According to Jamieson et al. (2005, as cited in Damak & Bahloul, 2015), the efficient integration of technology into the classroom involves active involvement from educators, who may educate students in maximizing app capabilities and sustaining consistent usage. It is also possible for teachers to intervene in order to remove obstacles, such as limited computer literacy or access to resources, in order to guarantee that all students are able to successfully utilize the technology. This fits with Mayer's (2020) emphasis on the requirement for scaffolding in multimedia learning environments, where directed instruction increases the cognitive processing of information.

In general, the visual and audio components of Memrise hold a great deal of potential in terms of enhancing the motivation and effectiveness of learning English vocabulary. However, there are a number of challenges that need to be addressed, such as the availability of technology and the consistency of its application. Furthermore, it is of the utmost importance to provide a friendly learning environment that integrates official educational strategies with the individual's own intrinsic motivation. The government and educational institutions must take into

consideration the possibility of investing in the training of teachers, the development of digital infrastructure, and the ongoing evaluation of technology-based learning aids. It is imperative that these measures be taken in order to fully realize the potential of Memrise as an efficient digital learning tool and to ensure that it is included into language training in a sustainable manner.

CONCLUSION

This study shows that the visual and audio elements in the Memrise application play a crucial role in increasing the motivation to learn English vocabulary for grade X students at SMKN 3 Metro. Visual elements help students better retain vocabulary through engaging imagery, while audio elements aid in accurate pronunciation and vocabulary mastery. The gamification features in Memrise, such as levels and point systems, effectively stimulate intrinsic motivation by presenting learning as a challenging yet enjoyable activity. However, the effectiveness of this application is influenced by several external factors, including limited internet access and inconsistent usage. To optimize its benefits in educational settings, schools should invest in strengthening technological infrastructure, ensuring stable internet connectivity, and providing access to digital devices. Teachers are essential in guiding students through effective usage by integrating Memrise into lesson plans, monitoring student progress, and offering continuous feedback. Consistent engagement can be promoted through scheduled activities or assignments linked to the application.

Furthermore, collaboration between educators and developers to create context-relevant vocabulary materials for vocational students can enhance its impact. Integrating Memrise's gamification strategies into classroom practice—such as setting achievement goals or competitions—may further boost

motivation. By addressing these structural and pedagogical considerations, Memrise can be effectively utilized to support English vocabulary acquisition and enhance students' language proficiency, particularly in the receptive and productive domains of vocabulary usage, pronunciation accuracy, and contextual application in classroom interactions.

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