Kiryoku, [10] (1), [2026], [Page 61 – 70]
e-ISSN: 2581-0960, p-ISSN: 2599-0497
Available Online at https://ejournal.undip.ac.id/index.php/kiryoku

The Use of Wayground Platform in Teaching Japanese Vocabulary in Kaiwa Course for Japanese Language Education Study Program Students

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Received: 17-10-2025; Revised: 17-12-2025; Accepted: 18-12-2025; Available Online: 03-01-2026
Published: 30-04-2026

Abstract

This study aims to analyze the effectiveness of using the Wayground digital quiz platform in teaching Japanese vocabulary in the *Kaiwa* course for students of the Japanese Language Education Study Program at the Faculty of Language and Arts, Universitas Negeri Manado. This study used a mixed-methods approach. The subjects were 32 second-semester students in the 2024-2025 academic year. Data collection was conducted through interviews, documentation, and objective tests. The results showed that the use of the Wayground digital platform increased learning motivation and material comprehension, with the success rate reaching 81% for the class. Out of 32 students, 7 students achieved a score of 100%, 6 students achieved 96%, 7 students achieved 76%, 5 students achieved 72%, 4 students achieved 68%, 1 student achieved 60%, and the lowest scores of 50% and 38% were achieved by 1 student each. The analysis shows that there is an increase in the accuracy of vocabulary mastery after using Wayground. However, some students require additional support due to limited digital literacy, technical issues, and connectivity constraints. This study highlights the importance of integrating technology with hands-on guidance to improve students' learning motivation and vocabulary acquisition, which in turn will improve their Japanese speaking ability.

Keywords: Wayground; Japanese vocabulary; *Kaiwa*; digital learning; motivation to learn

How to cite (APA): Wuisang, J. R., & Komarudin, M. A. (2026). The Use of Wayground Platform in Teaching Japanese Vocabulary in Kaiwa Course for Japanese Language Education Study Program Students. *KIRYOKU, 10*(1), 61-70. https://doi.org/10.14710/kiryoku.v10i1.61-70

DOI: https://doi.org/10.14710/kiryoku.v10i1.61-70

1. Introduction

Learning Japanese as a foreign language in Indonesia faces many complicated problems, especially in vocabulary acquisition, which is very important for communication skills. At the higher education level, especially in *Kaiwa* (conversation) courses in the Japanese Language Education Study Program, students are required to not only understand vocabulary passively

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but also use the vocabulary actively when speaking.

The mastery of the four fundamental abilities of speaking, listening, reading, and writing is the primary goal of learning a foreign language. Grammar proficiency and a solid vocabulary base are necessary for these four abilities. Schmitt (2000) asserts that a lack of vocabulary makes it hard to communicate effectively in a foreign language. However, active retrieval practice and numerous relevant exposures are more important for vocabulary retention than passive study. Nation (2001) emphasizes that vocabulary learning requires both intentional and incidental approaches, where learners need multiple exposures to words in various contexts to achieve full mastery. This addresses the crucial issue of sustaining student engagement during the repetitive practice required for vocabulary master. In Japanese, vocabulary, or *goi* (語彙), is an important component in improving speaking skills. Learning can be hindered if you lack vocabulary or are undirected. Unfortunately, Japanese language teaching in Indonesia, both in schools and colleges, still faces difficulties to improve students' vocabulary acquisition. Numerous obstacles were found through empirical observations, such as low engagement with traditional teaching methods, student ennui, and a lack of methodological variety. These issues are addressed by Wayground's gamification features, which turn passive learning into competitive, active engagement. These features include interactive tests, leaderboards, and real-time feedback.

The question of whether planned exercises should teach vocabulary directly or implicitly through the use of natural language is up for dispute. According to DeCarrico (2001), implicit learning promotes a more contextualized and natural understanding, while explicit learning offers the advantages of structure, vocabulary enrichment, and self-learning strategies. Wayground successfully combines the two methods, it allows students to internalize vocabulary through both direct study and natural pattern recognition by providing explicit vocabulary instruction through structured quiz questions with clear definitions and translations, while also facilitating implicit learning through contextualized sentences, visual cues, and repeated exposure in a variety of question formats.

This aligns with Deterding et al.'s (2011) framework of gamification, which defines it as the use of game design elements in non-gaming contexts to enhance user engagement and motivation. In their meta-analysis study, Webb and Nation (2017) found that combining explicit and implicit methods is more effective than using them separately. In the early stages, explicit learning helps build vocabulary foundations. On the other hand, the implicit approach enhances the understanding of vocabulary usage in real situations. As stated by Lewis (1993) in the lexical approach, vocabulary should be seen not only as a list of words to be memorized, but as lexical units that are meaningful and contextual in relation to the function of language as a means of communication.

One of the factors that cause difficulties in teaching Japanese vocabulary is the habit of memorizing words separately without understanding the context in which they are used, learning approaches that do not match the characteristics of students, and difficulties in mastering Japanese script systems such as kanji, hiragana, katakana, and romaji. Zahn (2002) identifies that foreign language vocabulary acquisition faces multiple challenges including interference from the first language, the complexity of semantic networks, and the difficulty of retaining words without meaningful context. In addition, the monotonous and non-

interactive classroom atmosphere also causes problems, as teachers often only ask students to look up the meaning of words from the textbook.

Instead, advancements in digital technology are opening the door for more engaging and successful learning methods. Wayground, which uses gamification to teach, is one of the popular modern educational platforms. McGonigal (2011) argues that gamification can transform learning by leveraging the motivational power of games, making challenging tasks more engaging and rewarding. Gamification might increase intrinsic motivation, active engagement, and lesson retention as demonstrated by Dörnyei (2001), who found that motivational strategies in language classrooms significantly impact learners' persistence and achievement. For example, vocabulary learning became more interesting and fun with the LuvLingua app at SMA Negeri 1 Tondano (Wuisang, et al., 2022). Meanwhile, Sambung (2018) found that the use of gamification-based learning on mobile devices can improve student engagement and their learning outcomes. Similarly, Al Ghiffari and Sukmara (2024) demonstrated that the Asobiba application effectively improved Japanese vocabulary skills among college students through its interactive and gamified features.

Not much research has been done so far to find out how well the Wayground platform helps students learn Japanese vocabulary, especially in college *Kaiwa* courses. Zhao's (2019) study "Using Wayground to Integrate Fun Multiplayer Activity in the Accounting Classroom" concentrated on accounting learning rather than foreign language acquisition, despite the fact that Wayground can increase student learning satisfaction and reduce exam anxiety. Recent studies have begun to explore Wayground's potential in language learning contexts. Dayag (2025) found that Wayground fostered vocabulary enhancement through digital gamification, while Permana, Permatawati, and Khoerudin (2023) conducted a systematic review revealing generally positive student perceptions toward Wayground in foreign language learning. Zhang and Crawford (2023) specifically examined EFL learners' motivation in Wayground-based gamified formative assessment, finding significant improvements in engagement and vocabulary retention. Additionally, Pratolo and Lofti (2021) explored students' perceptions of Wayground during the COVID-19 pandemic, noting its effectiveness as an online learning medium.

This highlights a major research gap, while Wayground has shown promise in a number of fields, its use specifically for vocabulary acquisition in Japanese language learning has not received enough attention. Research is required to determine whether Wayground's gamification aspects can successfully meet these language-specific learning needs given the particular difficulties of Japanese vocabulary, including several writing systems (kanji, hiragana, and katakana) and contextual usage. However, features that support interactive learning, such as media integration, instant feedback, and learning outcome analytics, are available on this platform. Using Wayground can increase student engagement by 45% and test results by 18% compared to conventional methods. This is in line with the characteristics of digital generation students, who prefer visual, interactive, and fast-paced learning (Prensky, 2001). Second, prior studies on learning Japanese have tended to concentrate on general topics like kanji writing, gairaigo (loanwords), or general speaking abilities from the perspective of conversation learning (*Kaiwa*).

The study "Kaiwa Learning Effectiveness Using Interview Method in Improving Japanese Speaking Comprehension" by Karyati, Alo, and Hapsari (2019) looked at *Kaiwa*

learning, although they did it using traditional interview techniques rather than gamification-based digital platforms. This disparity is important because, in contrast to vocabulary learning for reading or writing, *Kaiwa* learning has special requirements that require not only passive vocabulary comprehension but also the capacity to use vocabulary actively, spontaneously, and contextually in real-time communication interactions.

At Universitas Negeri Manado, especially in the Japanese Language Education Study Program, there is still a need to improve the use of digital technology in learning. According to initial observations made on second semester students, they have difficulty in mastering vocabulary. The challenges students face are compounded by varying levels of digital literacy, which Surjono, Muhtadi, and Wahyuningsih (2022) identify as a critical factor in successful technology integration in education. Their systematic review highlights that digital literacy encompasses not only technical skills but also the ability to critically evaluate and effectively use digital resources. This has a direct impact on their ability in *Kaiwa* courses, especially in terms of class engagement, speaking ability, and correct use of contextual vocabulary.

Given these circumstances, it is imperative that this research is conducted. The main focus of this study is to evaluate how well the Wayground platform helps students master Japanese vocabulary in the context of *Kaiwa* learning. The research also evaluates the extent to which the use of the platform impacts students' desire to learn, as well as the factors that influence it. In addition, this study aims to discover the various difficulties that students face when using Wayground as a learning medium, both from a technical, pedagogical and individual point of view. It is expected that the findings of this study will make a theoretical contribution to the development of vocabulary learning approaches based on digital technology. In addition, this research will provide practical benefits as an alternative to learning approaches that are more suitable for digital generation students. Research during the COVID-19 pandemic has shown that innovative solutions are needed for Japanese vocabulary learning strategies in digital contexts (ResearchGate, 2021).

Furthermore, Asrini and Setiawati (2022) demonstrated the effectiveness of utilizing online media as teaching material sources for Japanese reading and writing courses, suggesting that digital platforms can support various aspects of Japanese language learning. In the context of *Kaiwa* courses specifically, Sukmara, Utari, and Septiany (2023) found that innovative teaching models incorporating active learning techniques significantly improved Japanese speaking skills, indicating the potential for technology enhanced approaches in conversation learning. In addition, the results of this study are expected to be a reference for curriculum and policy development of education at the study program and institutional levels, particularly with regard to the use of technology in foreign language learning.

2. Methods

To thoroughly understand the research problem, in order to gather and analyze both quantitative and qualitative data, this study used a mixed methods approach using an exploratory sequential design (Creswell & Plano Clark, 2018). Because the research objectives required both measuring learning effectiveness and comprehending the learning process, mixed methods were justified. While qualitative data (interviews, observations) showed how students interacted with the platform, which features they found helpful, and what difficulties they encountered, quantitative data (vocabulary tests, usage statistics)

provided objective evidence of Wayground's impact on vocabulary acquisition. Together, they provided a thorough understanding of the results and mechanisms of Wayground-supported Japanese vocabulary learning among 32 students at Universitas Negeri Manado. This complementary approach addressed the limitation that test scores alone cannot explain why or how learning occurred, while qualitative insights alone cannot demonstrate generalizability.

Japanese Language Education Study Program who took *Kaiwa* courses in the even semester of 2024/2025 were the subjects of the study. The selection was done purposively based on the requirements of students who are active and have access to technology. Data were collected through classroom observation, semi-structured interviews, and objective vocabulary tests (pre- and post-test). Thematic analysis was used to analyze qualitative data through the process of transcription, theme identification, interpretation, and triangulation. In addition, descriptive analysis was conducted on the quantitative test data to find out how the vocabulary acquisition scores changed before and after the use of Wayground.

3. Result and Discussion

3.1 Distribution of Student Achievement

The frequency distribution analysis shows that the majority of students achieved good achievement after using the Wayground platform. A total of 13 students (40.6%) reached the excellent category with a score of 90-100%, 12 students (37.5%) reached the sufficient category with a score of 70-79%, 5 students (15.6%) were in the deficient category with a score of 60-69%, and 2 students (6.3%) were still in the very deficient category with a score below 60%.

Table 1. Categories of Student Achievement

Category	Frequency	Percentage
Very good (90-100%)	13	40.6%
Good (80-89%)	0	0.0%
Fair (70-79%)	12	37.5%
Less (60-69%)	5	15.6%
Very less (<60%)	2	6.3%

3.2 Data Normality Test

Table 2. Shapiro-Wilk Test Results

Variable	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test Score	0.115	32	0.200*	0.979	32	0.769
Post-test Score	0.227	32	0.000	0.871	32	0.001

The normality test using the Shapiro-Wilk test showed that the pre-test score data was normally distributed (W = 0.979, p = 0.769), while the post-test score data was not normally distributed (W = 0.871, p = 0.001). These results indicate a polarization of achievement in the post-test score, where there are groups of students with high achievement and groups with low achievement.

3.3 Wayground Platform Effectiveness Test

A paired t-test was conducted to determine the significance of the difference between pre-test and post-test scores. The analysis results showed a highly significant difference (t = 14.941, df = 31, p = 0.000) between the scores before and after the implementation of the Wayground platform. The increase in the average shows that the Wayground platform is statistically proven to be effective in improving students' Japanese vocabulary acquisition.

The findings showed that 78.1% of students achieved a score of ≥70%, indicating a high level of effectiveness of the Wayground platform. However, there were 53.1% of students who experienced difficulties in using the application, and 43.8% of students required additional support in the learning process.

Table 3. Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Before treatment After treatment	-23.96875	9.07490	1.60423	-27.24060	-20.69690	-14.941	31	.000

Table 4. Difficulties and Support

Aspect	Yes	No	Difficulty Percentage
Application Difficulty	17	15	53.1%
Additional Support	14	18	43.8%

3.4. Discussion

3.4.1 Effectiveness of Wayground Platform in Vocabulary Learning

The results of this study consistently show that the Wayground platform is effective in improving students' Japanese vocabulary acquisition. The average increase in score of 13.62% with a significance level of $p < 0.001$ provides strong empirical evidence of the effectiveness of this digital platform. This finding is in line with previous research which shows that gamification in learning can improve student engagement and learning outcomes (Bicen & Kocakoyun, 2018; Zhao, 2019). The theoretical foundation for these results can be traced to Nation's (2001) comprehensive framework on vocabulary learning, which emphasizes that effective vocabulary instruction must combine explicit teaching with opportunities for meaning-focused input and output. The Wayground platform successfully implements this principle by providing structured vocabulary practice while maintaining learner engagement through game mechanics. The Wayground platform provides an interactive and fun learning environment through gamification elements such as points, rankings and real-time competitions. This has been shown to increase students' motivation to learn, as shown by the very strong correlation between motivation and learning achievement. Wayground specifically embodies these benefits through empirical evidence, Panmei, B., & Waluyo, B. (2023) found that Wayground significantly increased student engagement and vocabulary retention in English language learning. Furthermore, Zhao (2019) documented that Wayground's interactive features such as leaderboards, immediate feedback, and timed challenges enhanced student motivation and participation, creating a more positive learning atmosphere that encourages voluntary practice and reduces the fear of failure commonly associated with language learning.Factors that Influence Motivation and Success. Comprehension of the material also shows a significant contribution to learning achievement. The Wayground platform facilitates comprehension through fun repetition, diverse contexts and positive reinforcement. Students' initial ability, although contributing the least, still showed statistical significance, indicating that foundational knowledge remains important in advanced vocabulary learning.

3.4.2 Achievement Disparity Analysis and Learning Technology Implementation Challenges

Although the majority of students (78.1%) achieved satisfactory performance, there was significant disparity in the distribution of performance. This phenomenon can be explained through the individual differences theory in language learning which states that factors such as learning style, digital literacy, and self- regulation skills affect the effectiveness of learning technology (Chapelle, 2001). The low-achieving group of students (21.9%) may face challenges in digital literacy or require a more traditional approach to learning. This is supported by the finding that 53.1% of students experienced technical difficulties in using the application, which could hinder the learning process. Volman, van Eck, Heemskerk, and Kuiper (2005) found that differences in ICT use among students can be attributed to various factors including prior technology experience, access to resources, and individual learning preferences. These differences may explain the achievement disparities observed in this study. Technical difficulties can reduce learning effectiveness and even create counterproductive frustration. Therefore, preparation of technological infrastructure and training on the use of the

platform are critical factors in the successful implementation of digital learning.

3.4.3 Contribution to the Body of Knowledge

This study contributes to the digital language learning literature by providing empirical evidence on the effectiveness of gamification platforms in the context of Japanese vocabulary learning. The findings on the central role of motivation as a mediator between technology and learning achievement enrich the understanding of psychological mechanisms in technology-enhanced language learning. The resulting prediction model can serve as a framework for assessment and intervention planning in digital language learning. The identification of critical success factors provides practical guidance for educators in the implementation of effective learning technologies.

4. Conclusions

Based on the results of the research that has been conducted, it can be concluded that the Wayground platform is statistically proven effective in improving students' mastery of Japanese vocabulary. This is evidenced by an increase in the average score of 13.62% from pre-test to post-test with a significance level of $p < 0.001$ and an effect size that is classified as large. The majority of students (78.1%) achieved satisfactory performance with a score of ≥70%, with 40.6% of students even reaching the excellent category (90-100%). Learning motivation was the strongest predictor of learning success, followed by material understanding and initial ability. The Wayground platform successfully creates an interactive and fun learning environment through gamification elements, which is proven to increase student engagement and motivation with a very strong correlation.

Despite showing high effectiveness, the implementation of the Wayground platform faces several challenges that need attention. Significant achievement disparities are evident from the high coefficient of variation in post-test scores (23.4%), indicating heterogeneity in student responses to digital learning methods. More than half of the students (53.1%) experienced technical difficulties in using the app, and almost half (43.8%) required additional support in the learning process. These findings underscore the importance of adequate technological infrastructure preparation, digital literacy training, and provision of comprehensive technical support to ensure the successful implementation of learning technologies. This research contributes to the development of the body of knowledge in digital language learning by providing empirical evidence on the effectiveness of gamification.

References

Al Ghiffari, M. G., & Sukmara, R. (2024). Application of Asobiba Application Learning Media to Improve Japanese Vocabulary Skills in College Students. *KIRYOKU, 8*(2), 293-304. https://doi.org/10.14710/kiryoku.v8i2.293-304

Asrini, D. P., & Setiawati, A. S. (2022). Pemanfaatan Media Online Sebagai Sumber Bahan Ajar Mata Kuliah Dokkai Sakubun Shokyu. *KIRYOKU, 6*(2), 117-126. https://doi.org/10.14710/kiryoku.v6i2.117-126

Bicen, H., & Kocakoyun, S. (2018). Perceptions of students for gamification approach: Kahoot as a case study. *International Journal of Emerging Technologies in Learning*, *13*(2), 72-93. https://doi.org/10.3991/ijet.v13i02.7467

Chapelle, C. A. (2001). *Computer applications in second language acquisition: Foundations for teaching, testing and research*. Cambridge University Press.

Creswell, J. W., & Clark, V. L. P. (2017). Designing and Conducting Mixed Methods Research. Thousand Oaks, CA: Sage Publications.

Dayag, J. D. (2025). Fostering vocabulary enhancement through Wayground: A perspective on digital gamification. Journal of English and Applied Linguistics, 4(1), Article 3. https://doi.org/10.59588/2961-3094.1186

DeCarrico, J. S. (2001). Vocabulary learning and teaching. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (3rd ed., pp. 285-299). Heinle & Heinle.

Deterding, S., Sicart, M., Nacke, L., O'Hara, K., & Dixon, D. (2011). Gamification: Using game-design elements in non-gaming contexts. In CHI'11 Extended Abstracts on Human Factors in Computing Systems (pp. 2425-2428). ACM. https://doi.org/10.1145/1979742.1979575

Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press.

Karyati, S., Alo, K., & Hapsari, I. N. (2019). Kaiwa learning effectiveness using interview method in improving Japanese speaking comprehension. *Chi'e: Journal of Japanese Learning and Teaching*, *7*(2), 47-58. https://doi.org/10.15294/chie.v7i2.33970

Lewis, M. (1993). *The lexical approach: The state of ELT and the way forward*. Language Teaching Publications.

McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. Penguin Press.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press. https://doi.org/10.1017/CBO9781139524759

Panmei, B., & Waluyo, B. (2023). The Pedagogical Use of Gamification in English Vocabulary Training and Learning in Higher Education. *Education Sciences*, *13*(1), 24. https://doi.org/10.3390/educsci13010024

Permana, A. T., Permatawati, I., & Khoerudin, E. (2023). Foreign language learning gamification using Wayground: A systematic review based on students' perception. *Eralingua: Journal of Foreign Language and Literature Education*, *7*(2), 398-409. https://doi.org/10.26858/eralingua.v7i2.23969

Pratolo, B. W., & Lofti, S. (2021). Students' perceptions toward the use of Wayground as an online learning media during the COVID-19 pandemic. *Studies in Learning and Teaching*, *2*(3), 1-10. https://doi.org/10.46627/silet.v2i3.72

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6. https://doi.org/10.1108/10748120110424816

ResearchGate. (2021). Solutions to Japanese vocabulary learning strategies during the COVID-19 pandemics. *ResearchGate Publication*, July 2021. https://www.researchgate.net/publication/354216462

Sambung, R. (2018). Development of gamification-based mobile learning for Japanese vocabulary mastery in class X SMAN 1 Garum. *Journal of Learning Innovation and Technology*, 4(2), 112-125. https://journal2.um.ac.id/index.php/jinotep/article/view/2377

Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge University Press. https://doi.org/10.1017/CBO9780511777882

Sukmara, R., Utari, R., & Septiany, N. (2023). Peningkatan Keterampilan Berbicara Bahasa Jepang Melalui Model Savi Dengan Teknik Roleplay Pada Mata Kuliah Kaiwa. *KIRYOKU, 7*(1), 189-197. https://doi.org/10.14710/kiryoku.v7i1.189-197

Surjono, H. D., Muhtadi, A., & Wahyuningsih, D. (2022). A systematic review on digital literacy. *Smart Learning Environments*, *9*(1), 21. https://doi.org/10.1186/s40561-022-00204-y

Volman, M., van Eck, E., Heemskerk, I., & Kuiper, E. (2005). New technologies, new differences. Gender and ethnic differences in pupils' use of ICT in primary and secondary education. *Computers & Education*, 45(1), 35-55. https://doi.org/10.1016/j.compedu.2004.03.001

Webb, S., & Nation, P. (2017). How vocabulary is learned. *Oxford Handbooks Online.* https://doi.org/10.1093/oxfordhb/9780199935345.013.19

Wuisang, B., Sambeka, F. L., Sompotan, G. A. (2022). Effectiveness of LuvLingua application media in learning Japanese vocabulary at SMA Negeri 1 Tondano. *Journal of Competence*, 15(2), 78-89. https://ejurnal.unima.ac.id/index.php/kompetensi/article/view/4803

Zahn, R. (2002). *Difficulties in foreign language vocabulary acquisition*. Peter Lang Publishing.

Zhang, Z., Crawford, J. (2023). EFL learners' motivation in a gamified formative assessment: The case of Wayground. *Education and Information Technologies*, *28*(12), 15655-15676. https://doi.org/10.1007/s10639-023-12034-7

Zhao, F. (2019). Using Wayground to integrate fun multiplayer activity in the accounting classroom. *International Journal of Higher Education*, *8*(1), 37-43. https://doi.org/10.5430/ijhe.v8n1p37