



Literature Review :The Effectiveness of Interactive *Mijiwa*Media to Write Javanese Script

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Abstrak

Perkembangan teknologi digital telah membuka peluang baru dalam pembelajaran Bahasa Jawa pada materi aksara Jawa yang selama ini cenderung kurang diminati dan sulit diajarkan. Dalam konteks tersebut, penting untuk mengkaji sejauh mana media berbasis web mampu menjawab tantangan pembelajaran berdasarkan pengalaman visual dan praktik menulis. Artikel ini membahas efektivitas *Mijiwa* (multimedia interaktif Jawa berbasis web), sebuah media pembelajaran berbasis web terhadap peningkatan keterampilan menulis aksara Jawa bagi peserta didik. Penelitian ini menggunakan metode studi pustaka dengan pendekatan deskriptif kualitatif terhadap publikasi ilmiah yang terbit pada periode 2020-2025. Hasil kajian menunjukkan bahwa *Mijiwa* memiliki keunggulan dalam menyajikan pembelajaran yang interaktif dan kontekstual melalui integrasi fitur multimodal dan latihan soal berbasis dinamis. Akses yang mudah melalui perangkat pribadi seperti smartphone memberikan kesempatan bagi peserta didik untuk belajar secara fleksibel, kapan pun dan di mana pun. Media ini juga mampu mendorong partisipasi aktif dan meningkatkan motivasi belajar siswa terhadap materi aksara Jawa. Dengan kemampuannya menjawab berbagai gaya belajar dan memfasilitasi pembelajaran mandiri, *Mijiwa* terbukti efektif meningkatkan keterampilan menulis aksara Jawa dan motivasi belajar siswa. Penelitian ini memberikan kontribusi penting sebagai dasar pengembangan media pembelajaran digital yang inovatif. Oleh karena itu, *Mijiwa* dinilai relevan sebagai inovasi pembelajaran Bahasa Jawa yang adaptif terhadap gaya belajar generasi digital.

Abstract

The development of digital technology has opened new chances in learning Javanese mainly in Javanese script in which many students were less interested in and hard to learn. So, it is important to study how far the web based media able to answer the learning challenge based on the visual and writing experience. This article discusses about whether *Mijiwa* (multimedia interaktif Jawa berbasis web) could improve the ability of writing Javanese script to the students. This study used literature study method through qualitative descriptive approach to the scientific publication released in 2020-2025. The result of the study showed that *Mijiwa* had superiority in interactive and contextual learning through the multimodal feature integration and

Article History

Accepted : 5 June 2025

Approved : 10 June 2025

Kata kunci:

Aksara Jawa, Media Pembelajaran, *Mijiwa*, Pembelajaran berbasis Web, Studi Literatur

Keywords:

The Javanese Script, Learning Media, *Mijiwa*, Web based Learning, Literature Study

dynamic based test. The easy access through smartphone gave chances to the students to learn flexibly both time and places. This media was also able to support the students to be active and improve the learning motivation to the Javanese script. With its ability to accommodate various learning styles and facilitate self-directed learning, Mijiwa has proven effective in enhancing students' Javanese script writing skills and learning motivation. This study provides an important contribution as a foundation for the development of innovative digital learning media. So, Mijiwa was identified relevant with adaptive Javanese learning innovation to the digital generation learning styles.

Introduction

Indonesia is rich of culture. However, in this global era, the young generation tends to be interested in abroad culture, so the local values starts to fade. Education has important role to keep the existence of local cultures through integration of cultural values into the curriculum and teaching materials. One of the local cultural aspect needed to be preserved is Javanese script. Javanese script is a part of the cultural heritage which is rich of historical and philosophical values (Maharani, 2025). However the learning of Javanese script at school still faced many obstacles, like the limitations of interesting and interactive learning media. To overcome, the use of digital technology became one of the main strategies to improve the learning quality in learning Javanese lesson (Setiyo Adi Nugroho & Risti Wulandari, 2020).

Web based media had big potency because it can provide material flexibly, interactively, and easy to accessed at any time (Saidah, 2023). The study by Gulo & Harefa (2022) proved that web based interactive learning media able to motivate the students to learn, beside that, it also could make the students understand more about the materials. The use of interactive technology like web and multimedia had already proved that it could improve the interaction actively the students in learning and their achievement (Septianingsih et al., 2025).

However the web based media especially designed to learn Javanese script was still limited. Most of the previous studies improved learning media of Javanese script like Android based application based Android, interactive multimedia desktop and educational games. The study of Febrianti & Insani (2023) showed that interactive game named *DhekBung (BedhekTembung)*. This media was designed to make the students easy to remember Javanese scripts. The study by Rinata et al (2023), Jenga media was developed in the form of pieces of woods with Javanese scripts. The game was done by arranging and moving the woods as high as possible without losing balance.

The previous study used technology like Wulandari (2023) developed multimedia. Multimedia developed was *Microsoft PowerPoint* which was modified into interactive learning media by combining animation, audio, pictures and Javanese scripts illustration and interactive exercises. The next study done by Amanatulloh & Mariono (2023), used media in the form of learning application Android “Adobe Animate and software to make the display of Javanese scripts interactive, the animation of writing Javanese scripts, the narration and interactive exercises.

Multimedia Interaktif Jawa Berbasis Web (*Mijiwa*) was presented as digital learning media designed to help the students to learn how to write Javanese scripts through interactive and multimodal approach. This media presented the form of scripts and sandhangan, also gave dynamical exercises, animated video of how to write Javanese scripts and *game* of arranging Javanese scripts. *Mijiwa* was hoped to be able to connect the need of learning and the characteristics of the digital generations today.

So, it was important to review critically how far the web based media like *Mijiwa* could be effective in supporting the learning how to write Javanese scripts. *Mijiwa* could be accessed *online* through any kinds of devices, including cell phones possessed by all students. *Mijiwa* was easy to be accessed so the students could learn at any time and anywhere. So, *Mijiwa* not only could answer the need of more interactive and contextual learning but also aligned with the lifestyle of the young digital generations as expressed by Sufia & Vebriyanto (2024) that web based media like *Genially* made the students possible to access the learning materials at any time and any where, support independent learning, and improve the interaction of the students.

This review aimed to examine the current literatures about the effectiveness of *Mijiwa* media in learning Javanese, especially the material of writing Javanese scripts with its potency, and the challenges to implement at schools. The main stress was given to how the web based media could improve the learning quality and the students' activities in understanding how to write Javanese scripts at school.

This study develops a web-based learning media called *Mijiwa*, which is interactive and easily accessible, in contrast to previous static media. *Mijiwa* is designed to align with the learning styles of the digital generation and effectively enhance Javanese script writing skills. This topic was chosen due to the urgent need to modernize Javanese script learning

media to make it relevant to current technologies and student characteristics. Web-based media like *Mijiwa* can be a solution to improve learning interest and outcomes.

Method

This study used *literature review*, which reviewed and analyzed many relevant scientific sources to answer the focus of the effectiveness of web based media to improve the writing skill of Javanese scripts. This method aimed to identify the theory, result of study, and practice of learning which could understand the topic reviewed (Wulandari Wangi Ni Kadek, 2024).

The process of data collection was done by browsing the scientific journal articles, books, proceeding published between 2020 until 2025 through the database like Google Scholar, Garuda Kemdikbud, dan SINTA. The key word of searching used were web based media, Javanese scripts learning, and digital interactive media.

The analysis was done qualitatively by reading critically the content of each publication, identifying the findings patterns, and comparing the approach media used in previous studies as stated in the study (Rumahorbo(2020)). Rumahorbo in his study used descriptive qualitative approach and the literature study to study the used of web based media e-learning in learning Bahasa Indonesia. The analysis used by reading critically any kinds of publications, identifying the findings patterns, and comparing the approach of the media used in previous studies.

Result and Discussion

a. Web Based Learning Media

Web based learning media is a form of digital innovation in education which make the process of learning more flexible, interesting and interactive. Web as a learning platform functions not only provides information, but also build learning experiences needed now and aligned with the students' characteristics. The main advantages of web based media is on the ability to provide the learning materials visually with audio and kinesthetic, so it is suitable with the various of learning styles of the students. It was suited with what expressed by (Lestari et al., 2024) that web based media made possible that the learning materials conveyed multimodal, combined text, pictures, audio, video, and interactive stimulation which enrich the students understanding and improved the interactions of the students in

learning process. Web also support the access of learning freely at any time and any where which make it ideal for 21st century learning.

Findings by (Afkarina et al., 2025) also showed that the used of web based media in project based learning was able to improve the learning motivation and achievement of the students because they involved actively in learning improved significantly. In the context of Javanese learning, developed web based learning media to improve the students' achievements in Javanese lesson at SMAN 1 Losari. The result showed that the media was effective to be used as a tool in learning, improved the students' motivation and result of learning (Wiyono et al., 2024).

Mijiwa as web based media used the superiority to support writing skill of Javanese scripts. This platform provides not only interactive learning videos, but also designed to overcome the limitation conventional media in learning Javanese scripts. So, web based media had potency to improve the effectiveness of learning because it could give chances for more interesting and pleasant interactions for the students. Beside that, the web based media could become innovative solution in improving learning media, especially in the context of preservation and learning local language (Jawa) needed contextual and current approach.

b. Challenge of Learning Javanese Scripts

Learning Javanese scripts at school faced various challenges, either from the students, teachers, or learning environments. According to Sariyanti & Said, (2024) there were some challenges, namely:

- Low interest and motivation of the students

Many students thought that Javanese scripts difficult to learn and less relevant with daily lives. It caused low motivation to learn Javanese scripts. So, it needed interactive and pleasant learning method to make the students involved in learning.

- Limitation of learning media

The used of monotonous and less interactive learning media made the students hard to understand the materials. To overcome, it needed to develop innovative learning media and technology based like web based which were able to attract attention and improve the involvement of the students.

- The various competence of the teachers

This challenge explained that not all Javanese teachers had the ability to teach Javanese, so it made that learning was not optimal. The worse part the teachers were

not real Javanese. The solutions, the teachers could improve their competence through training and workshops about Javanese learning, and also to join the community to enrich the learning strategy to teach.

- Limited learning time

The time allocation for Javanese Lesson was usually limited, and the learning materials could not be conveyed in detail. To overcome this problem, the teachers could use another time outside of formal learning, through independent tasks and also gave the students chances to ask the teachers when they still don't understand about the learning materials through daring learning including WhatsApp or another learning platform.

Some of challenges above showed that Javanese learning needed creative approach and could be suited with the need of the students. The application of innovative media learning, like *Mijiwaweb* based media could be the answer of the problems in learning how to write Javanese scripts.

Before proceeding further, it is important to review several previous studies that have demonstrated the success of web-based and multimedia media in Javanese script learning. These studies form a strong foundation that highlights the urgency and relevance of developing *Mijiwa* as an innovative learning alternative in the digital era. Research by Febrianti & Insani (2023) showed that web-based media directly improved the Javanese script writing skills of 5th-grade elementary students. The development of the educational game *Monopoli Aksara Jawa* confirmed that web-based game formats enhance student engagement as well as reading and writing skills in Javanese script (Febrianti & Insani, 2023). Therefore, *Mijiwa* emerges as an innovation that combines the strengths of web-based media and game interactivity, responding to the positive results of previous research.

c. *Mijiwa* : The Solution of Learning Media How to Write Javanese Scripts

Mijiwa is short of Multimedia Interaktif Berbasis Web. *Mijiwawas* developed because of the obstacles faced in learning how to write Javanese scripts at school, mainly in low of learning motivation of the students in the materials of Javanese scripts. Beside that, the limitations of learning media caused the students were difficult to write Javanese scripts (Sariyanti & Said, 2024). With the advent of digital technology and the younger generation's proximity to internet-connected gadgets, the development of web-based learning material is a viable alternative. *Mijiwa* is here to meet these demands by delivering learning media that is

conveniently available at any time and from any location, as well as a more participatory and engaging way for students.

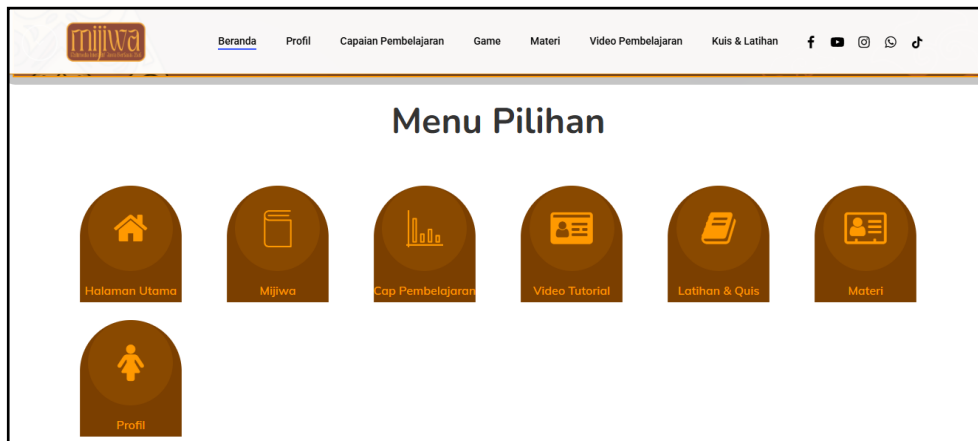
Mijiwa is a web-based learning platform that assists students in improving Javanese script writing skills. The primary qualities of Mijiwa Media include:

- Interactive, encouraging learners to actively learn.
- Flexible and accessible, can be used independently and easily accessed on various digital devices such as laptops, tablets, smartphones anywhere without any restrictions.
- Responsive to learning styles, provides a variety of media and learners can choose their preferred media.

Mijiwa has elements such as interactive script writing exercises, instructional games, and automatic evaluation, which make learning enjoyable. This is consistent with the findings of Hartiyani et al (2023), who developed an Android-based multimedia application and discovered that visual and interactive aspects can boost students' interest in learning Javanese characters. *Mijiwa* may be reached directly through the internet address <https://mijiwa.smpn10madiun.sch.id/>, more details regarding the features contained in *Mijiwa*, along with the description, can be viewed in the accompanying image.



Picture 1.Mijiwa homepage view



Picture 2. *Mijiwa* 's fitur

The following describes the features of Mijiwa: main page (homepage), profile, learning outcomes, games, materials, learning videos, quizzes.

1. Home (front page), contains a view from the beginning about Mijiwa Media. This page displays an attractive visual welcome to go to other main features. Here users will know briefly about Mijiwa Media.
2. Profile, contains the bio of the Mijiwa developer as supporting information about his background.
3. Learning Outcomes, explains the learning objectives and achievement indicators achieved after applying *Mijiwa* media.

4. Game.

Through this game, students are invited to hone their ability to recognize and arrange Javanese characters in a fun way. Although static in nature, this feature is able to increase student engagement in the learning process through a more interactive and interesting approach.

5. Learning material

The learning material feature presents a theory of Javanese script content systematically divided into several main parts, namely nglegena script, sandhangan and Javanese script pairs. this material is designed using Canva templates that are visually appealing and equipped with descriptions in interactive form to facilitate students' understanding.

6. Learning video.

Through this feature, learners can easily access video tutorials that present the steps of writing Javanese characters visually and practically. The presence of this video helps to clarify the material, as well as strengthen students' understanding through real and easy-to-follow examples.

7. Quiz

The quiz feature is dynamically designed, allowing a variety of questions that can be updated or adjusted at any time according to learning needs. This flexibility provides room for educators to adjust the level of difficulty and scope of material tested to students.

Mijiwais is a multimedia-rich web-based learning tool that combines text, graphics, audio, video, and interactive features on a single platform. This approach offers students a more diversified, dynamic, and enjoyable learning experience, particularly in mastering Javanese script content, which has previously been regarded tough and monotonous. Implementing educational features such as video lessons for writing characters, interactive quizzes, and character stacking games might motivate learners to participate actively. *Mijiwa's* design not only provides the material, but also fosters a joyful and meaningful learning environment.

d. Potential Effectiveness of Mijiwa Based on Literature Review

In this digital era, the use of Information and Communication Technology (ICT) in learning Javanese script is relevant. Various studies have shown that ICT-based learning media can improve students' understanding and motivation to learn Javanese characters. *Mijiwa*, as an interactive web-based learning media, is designed to overcome the challenges in learning Javanese script. Through features such as video tutorials, interactive quizzes, learning materials and educational games, *Mijiwa* aims to make Javanese script learning more interesting and accessible to learners. The following literature review will discuss the effectiveness of *Mijiwa* in the context of Javanese script learning, based on findings from various previous studies.

Hapsari and Yuda (2022) found that using mobile-based Javanese script writing learning material greatly enhanced student accomplishment. The average student score rose from 66.67 to 75.95 after using the media, with statistical tests indicating a significant increase. Furthermore, Nastiar's (2025) research revealed that ICT-based Javanese script learning media, particularly in mobile form, were the most popular, accounting for 80% of all

usage. Interactivity characteristics were used up to 65%, demonstrating that interactive media is popular in Javanese script learning. This trend reflects the rising use of mobile technology in education, particularly for teaching Javanese script.

Furthermore, Setiawan and Putra's (2021) research found that the average value of students' Javanese writing skills corresponded to the skill indicators, which were 20% writing accuracy, 20% writing neatness, and 60% writing form. Furthermore, the experimental class that employed learning media had a higher average score than the control class that did not receive this therapy. This demonstrates that pupils' writing skills improve when compared to traditional learning methods.

Based on the three research shown above, it is possible to infer that web-based learning media has a high potential for improving the effectiveness of Javanese script learning. In this situation, including *Mijiwa*, the utilization of interactive elements and accessibility in digital media can assist learners grasp and retain Javanese script in a more engaging and enjoyable manner.

Conclusion

This literature review underlines the significance of learning media innovation in facilitating Javanese script learning, particularly through web-based platforms like *Mijiwa*. The creation of interactive and contextual media is critical to overcoming the challenges of traditional learning. It is predicted that with the right use of technology, Javanese script learning will become more fascinating and effective, while also helping to preserve local culture. Future research should include empirical testing to determine the effectiveness and impact of using *Mijiwa* directly in the learning process. This is critical to ensuring that the media makes a significant contribution to the development of Javanese script writing skill.

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