



P-ISSN 2620-343X E-ISSN 2986-3074

Sabdasastra : Jurnal Pendidikan Bahasa Jawa

URL : <https://jurnal.uns.ac.id/sab/article/view/xxxxx>

DOI: <https://doi.org/10.20961/sabpbj.v5i2.xxxxx>

**THE IMPLEMENTATION OF AKSARITA APPLICATION
IN JAVANESE SCRIPT WRITING INSTRUCTION:
A CASE STUDY AT SMAN 9 SURAKARTA**

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Submitted: 16/07/2026

Accepted: 03/08/2026

Published: 26/09/2026

Abstract

Students' declining ability to write in the Javanese script has become a significant challenge for preserving local cultural heritage, highlighting the need for innovative learning approaches that accommodate the characteristics of today's digital generation. This study aims to explore the implementation of the Aksarita application in Javanese script writing instruction at SMAN 9 Surakarta. A qualitative case study design was employed. The participants consisted of one Javanese language teacher and Grade 10 students selected through purposive sampling. Data were collected through classroom observations, semi-structured interviews, and document analysis, and were analyzed using the Miles and Huberman interactive model, including data condensation, data display, and conclusion drawing and verification. Data trustworthiness was ensured through source triangulation, method triangulation, and member checking. The findings indicate that Aksarita effectively supports Javanese script writing instruction by integrating systematically organized learning materials, interactive exercises, assessments, and immediate feedback within a single digital platform. The application enhanced students' engagement, learning interest, and understanding of Javanese script writing conventions while assisting teachers in organizing instruction and monitoring students' learning progress. The findings demonstrate that Aksarita has considerable potential as an effective digital learning medium for promoting technology-enhanced regional language education while contributing to the sustainable preservation of the Javanese script through contextual, interactive, and learner-centered instructional practices.

Keywords: Aksarita application, Javanese script, digital learning media, Javanese script writing instruction.

Abstrak

Rendahnya kemampuan menulis aksara Jawa di kalangan peserta didik menjadi tantangan dalam pelestarian budaya lokal sekaligus menunjukkan perlunya inovasi pembelajaran yang mampu mengakomodasi karakteristik generasi digital. Penelitian ini bertujuan mendeskripsikan implementasi aplikasi Aksarita dalam pembelajaran menulis aksara Jawa di SMAN 9 Surakarta. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus. Partisipan penelitian terdiri atas seorang guru Bahasa Jawa dan siswa kelas X yang dipilih secara *purposive*. Data dikumpulkan melalui observasi, wawancara semi-terstruktur, dan dokumentasi, kemudian dianalisis menggunakan model Miles dan Huberman yang meliputi kondensasi data, penyajian data, serta penarikan dan verifikasi kesimpulan. Keabsahan data dijamin melalui triangulasi sumber, triangulasi teknik, dan *member checking*. Hasil penelitian menunjukkan bahwa Aksarita mampu mendukung pembelajaran menulis aksara Jawa melalui penyajian materi yang sistematis, latihan interaktif, evaluasi, dan umpan balik yang terintegrasi dalam satu platform digital. Implementasi aplikasi meningkatkan keterlibatan dan minat belajar siswa, mempermudah pemahaman terhadap kaidah penulisan aksara Jawa, serta membantu guru dalam mengelola pembelajaran dan memantau perkembangan belajar siswa. Temuan ini menunjukkan bahwa Aksarita berpotensi menjadi media pembelajaran digital yang efektif dalam mendukung transformasi pembelajaran bahasa daerah sekaligus memperkuat upaya pelestarian aksara Jawa melalui praktik pembelajaran yang kontekstual, interaktif, dan berkelanjutan.

Kata kunci: Aplikasi Aksarita, aksara Jawa, media pembelajaran digital, pembelajaran menulis aksara Jawa.

Citation: Pribadi, N.H., et.al. 2026. The implementation of Aksarita application in Javanese script writing instruction: A case study at SMAN 9 Surakarta. *Sabdasastra : Jurnal Pendidikan Bahasa Jawa*, 10(2), 36-44. DOI: <https://doi.org/10.20961/sabpbj.v5i2.xxxx>

INTRODUCTION

In the last few years, the use of Javanese script shows an ever more worrying downward trend (Pribadi et al., 2025). This condition is confirmed by a finding that even among Javanese people, the ability of using Javanese script well and correctly in written form is still relatively limited (Joeniarni & Mulyoto, 2022). Many factors contribute to the condition, including the lack of early habituation, the complexity of Javanese script writing rule, and the limited intensity of learning in either family or school environment (Agustina, 2013; Listiani et al., 2023; Windarti, 2021). These accumulated factors have an implication to the decrease in the use of Javanese script, particularly in young generation, thereby potentially endangering its conservation sustainability as the part of cultural heritage. Therefore, an exhaustive, systematic, and sustainable strategy is required to introduce and to teach Javanese script to the people, particularly as the fundamental phase in education realm.

School, as an educational institution, holds one of important roles in inculcating Javanese script literacy through learning process implemented comprehensively (Nadhiroh & Setyawan, 2021). Javanese script instruction through

educational institution not only equips the students to know and comprehend Javanese script correctly, but also involves a means of inculcating the consciousness of the importance of conserving local cultural heritage as the part of national identity (Septianingsih et al., 2025). This process is expected to be a strong foundation of students' knowledge, skill and positive attitude over the sustainable use of Javanese script. Nevertheless, this process is inseparable from numerous challenges such as students' low learning interest and motivation resulting in the less optimal achievement of learning objective for Javanese script writing skill (Pratiwi & Rofi'ah, 2024). On the other hand, learning process is still dominated by a teacher-centered conventional approach relying on text book and written exercises, while the utilization of interactive and innovative learning media is still limited (Anwar & Sukoyo, 2025). Nowadays, a learning process requires appeal, active participation, and technology implementation, including Javanese script writing instruction. The mismatch between learning system and civilization development potentially lowers learning interest and inhibits the achievement of learning outcome in Javanese script writing.

Various comprehensive efforts have been taken to deal with the low level of Javanese script writing skill at school. The strategy involves the use of visual media, cooperative learning model, game-based learning, and project-based approach considered capable of creating more active learning experience and giving the students broader opportunity to practice writing Javanese script (Bahari et al., 2025; Fitriani et al., 2022; Pratama et al., 2025; E. N. Sari et al., 2024). In line with digital technology development, learning innovation is increasingly directed at utilizing interactive multimedia, Android-based application, educative game, and various digital learning platform designed to facilitate the introduction or practice of Javanese script writing (Asiyah et al., 2026; Ismiati et al., 2025). Digital media is able to present a more interactive, attractive, and student-centered learning, thereby encouraging the students to grow learning motivation, engagement, active participation, and learning outcome achievement (Novitasari et al., 2025). Accordingly, digital learning media is needed, the one not only presenting material in interesting manner but also capable of integrating practice, evaluation, and feedback activities continuously to support the improvement in the students' learning interest and outcome in writing Javanese script.

Aksarita is developed as a digital learning media integrating material presentation, practicing writing skill gradually, giving direct feedback, and evaluation in one interactive learning platform. The characteristics are designed to support more participative learning process, providing the students' opportunity to practice independently, and to enable teacher to facilitate the Javanese script writing instruction. Primary indicators highlighted are attracting students' learning interest as affective aspect and improving their skill of writing Javanese script. The combination of both indicators is based on the understanding that the improvement of learning outcome is influenced not only by the quality of learning media but also by the growth of learning interest encourage the students' active participation during learning process (Agustin et al., 2024). Nevertheless, the application implementation in the learning context at school has not been studied widely,

particularly related to its application in the class. In addition, the research on the implementation of Aksarita is important to provide empirical overview of the practice of utilizing digital learning media in the Javanese script writing instruction and enriching the study on the integration of technology into regional language and culture conservation through education. Therefore, this research aims to describe the implementation of Aksarita application in the Javanese script writing instruction in SMAN 9 Surakarta through case study approach in learning activity, students' response to its use and various factors supporting and inhibiting the implementation of application in the Javanese script writing instruction.

METHOD

This research employed a qualitative approach with case study design to delve into the implementation of Aksarita in the Javanese script writing instruction in SMA N 9 Surakarta. Case study design was selected because this research focused on studying a contemporary phenomenon in the real context (Radianto et al., 2025). Through this approach, this research not only describes the procedure of application implementation, but also explores the students' response and various factors supporting and inhibiting its application in the Javanese script writing instruction (Fajariah et al., 2026).

Research participants were selected using purposive sampling technique involving a teacher of Javanese language subject as the executor of learning and 10th graders of SMAN 9 Surakarta attending the Javanese script writing instruction using Aksarita application. The selection of students were carried out considering their active participation during learning process, thereby capable to give rich information on learning experience, response to application use, and learning dynamics occurring. Data were collected through observation to observe the implementation of Aksarita application, teachers' activity, and students' engagement. Semi-structured interview was conducted to acquire more in-depth information on the experience with using application, perception on the ease of use, perceived benefit, obstacles encountered, and factors influencing the application implementation in the class. Documentation study was carried out during the process as the research supporting data. Data trustworthiness was maintained through technique and source triangulations, by comparing the results of observation, interview, and documentation, and confirmed again to the informants to ensure the match between interpretation result and participants' experience.

Data were analyzed following Miles and Huberman's (1994) model. The first stage was data collection, compiling data through observation, interview, and documentation. The second stage was data condensation, selecting coding, grouping, and simplifying data in accordance with the focus of research. The third stage was data display, organizing data in the form of narration, matrix or thematic table to make the connection between findings more understandable. The last stage was conclusion drawing or verification, interpreting the finding and verifying the conclusion through source triangulation, technique triangulation, and member checking to ensure the credibility of research result.

RESULT AND DISCUSSION

The implementation of Aksarita application in the Javanese script writing instruction in SMA N 9 Surakarta demonstrates that digital media can be an alternative learning relevant to the characteristics of students in digital era. Aksarita is developed as the application to learn literacy or reading and writing Javanese script intended to everyone who wants to understand Javanese script comprehensively. This application is designed to facilitate the learning gradually, starting from history, introduction of *legena* letters, *sandhangan*, and *pasangan*, to their application in writing. In addition, the application is equipped with learning material, interactive exercise, evaluation, and direct feedback so that the learning process takes place more systematically and is student-centered. Interactive exercise, feedback, and evaluation functions to improve learning quality and students' engagement (Komara et al., 2025; Yuliana & Listiadi, 2021). The characteristics indicate that Aksarita functions not only as a media to deliver material but also as a contextual learning instrument through students' active participation in constructing their understanding.

The result of interview with students shows that Aksarita is perceived as a complete and attractive learning medium aligning with current technology development. The application, according to students, provide various complementary features, such as information on the history of Javanese script, learning material, writing practice, quiz or evaluation question, and various supporting menus facilitating the learning process. The interface features modern design to increase students' interestedness, because modern appearance and more understandable navigation contribute to providing more comfortable learning experience than the learning relying on textbook only (Julyananda et al., 2022). The integration of digital technology into material presentation also makes the learning more interactive, thereby capable to retain the students' attention in attending the learning. This is in line with Ali et al. (2025), explaining that modern learning media with complete feature and attractive appearance can alter the learning into interesting joyful experience and visualize abstract concepts into concrete ones, thereby helping students understand the material better. Material is also presented systematically using attractive visual appearance, and containing exercise and evaluation in one platform enabling the students to learn more independently and to get feedback to their learning outcome all at once. The systematic material presentation equipped with exercise, evaluation, and feedback significantly affects the students' learning outcome (Ulhaq & Lubis, 2023). This finding indicates that Aksarita as a technology-based media is one of important factors in constructing more positive experience in learning Javanese script, presenting innovation in media aspect and also creating learning environment more adaptive to the digital generation's needs.

Viewed from teachers' perspective, Aksarita contributes significantly to the implementation of Javanese script writing instruction. The application helps explain the material so far considered as complex enough by the students, particularly in the

mastery of letter shapes, the use of *sandhangan* and *pasangan*, and their application in word or sentence writing. The presence of material arranged gradually facilitates the teachers in organizing learning activity, while exercise and evaluation features help monitor the development of students' understanding during the learning process (P. M. Sari & Yarza, 2021). Additionally, the application also provides a more flexible alternative learning method because it can be utilized not only during the learning process in the class but also it can also serve as an independent learning media out of class. It is in line with Sari (2019) explaining that a learning media that can be used anytime and anywhere encourages students' participation and improves their skill. This finding indicates that Aksarita functions as a learning supporting media complementing rather than replacing teachers' role. Teachers remain to serve as facilitators guiding the learning process, while the application provides learning source, exercise, and feedback enriching the students' learning experience. Synergy between teachers and digital media is an important factor in creating a more effective, contextual, and student-centered Javanese script writing instruction (Tran et al., 2025).

The implementation of Aksarita also affects positively the students' learning process. Based in the result of try out carried out during the research, teachers observe the increase in students' score and understanding following the utilization of the application in the Javanese script writing instruction. The increase can be seen not only in the ability of recognizing the shape of letters and the rule of writing, but also in the students' ability of applying Javanese letters in reading and writing practices. These findings indicate that hierarchical material presentation, repeated practice (exercise), and feedback directly give students an opportunity to correct their mistake and to strengthen their understanding gradually. Overall, the result of research shows that the implementation of Aksarita contributes positively to the Javanese script writing instruction in SMA N 9 Surakarta. Therefore, this application implementation can be an alternative innovation of regional language learning supporting the technology-based educational transformation and all at once strengthening the attempt of conserving Javanese script through a contextual, interactive, and sustainable learning.

CONCLUSION

This research found that the implementation of Aksarita application is an effective innovation of digital learning in supporting the Javanese script writing instruction in SMA N 9 Surakarta through systematic material presentation, interactive exercise, evaluation, and feedback that can improve students' participation, learning interest, and understanding on the rule of Javanese script writing. Viewed from teachers' side, this application serves as a supporting media facilitating material delivery, facilitating learning development monitoring, and encouraging independent learning without reducing teachers' role as facilitators. These findings indicate that that the integration of digital technology into regional language learning potentially strengthens the effectiveness of learning and supports the attempt of conserving Javanese script more contextually and sustainably. Although this research is limited to one school context using case study approach,

the result gives empirical contribution to the technology-based development of regional language learning and becomes the basis for further research to examine the effectiveness of Aksarita in broader context, educational level, and research design.

Acknowledgement

We give thanks to the Research and Community Service Institution (*Lembaga Penelitian dan Pengabdian kepada Masyarakat* or LPPM) of Universitas Sebelas Maret (UNS) for supporting this research implementation through providing research fund with the Number: 463/UN27.22/PT.01.03/2026.

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