



A Descriptive Study of Grade XII Students' Ability to Write Javanese Paragraphs at SMK Negeri 2 Semarang

Katarina Dupitasari^{1*}, Alfiah², Bambang Sulanjari³

¹²³Universitas PGRI Semarang, Indonesia

*Corresponding author's email: dupitasari@gmail.com

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ABSTRACT

This study aims to describe grade XII students' ability to write paragraphs in the Javanese script at SMK Negeri 2 Semarang during the 2025/2026 academic year based on eight aspects of assessment: content and paragraph length, *aksara pasangan*, *aksara sandhangan*, *aksara angka*, *aksara murda*, *aksara rekan*, *aksara swara*, and the form and neatness of writing. The research method used was quantitative descriptive research with a total of 142 students. The instrument is a performance test for writing paragraphs with three theme choices. The data was analyzed using descriptive statistics. The results showed that the average score of writing Javanese paragraphs was 57.17 (Less category), with the highest score of 93.75 and the lowest score of 25.00. Overall, 64.1% of students fell into the less and very less categories. The content and paragraph length aspect was the strongest aspect with an average of 3.30 (82.6%), while the *aksara murda* was the weakest aspect with an average of 0.92 (22.9%). *Aksara rekan* and *aksara swara* also showed low performance, at 34.3% and 37.3%, respectively. These findings indicate the need to revitalize Javanese script learning, especially in the complementary script aspects (*murda*, *swara*, *rekan*) through a more contextual and technology-based approach.

Introduction

The Javanese script consists of 20 main characters (*carakan*) which are equipped with *aksara pasangan*, *aksara sandhangan*, *aksara murda*, *aksara rekan*, and *aksara swara* (Darusuprta, 2002). The Javanese script is not only used as a written medium, but also reflects the cultural identity and philosophical values of the Javanese people. The Javanese script plays an important role in preserving cultural heritage and develop character education for the Javanese people (Rochim et al., 2026). The existence of this script is not only historical, but also a cultural identity that must be preserved in the midst of globalization. The Regional Government of Central Java, through Regional Regulation Number 9 of 2012 concerning Javanese Language, Literature, and Script which was realized in Governor Regulation Number 57 of 2013 (Central Java Provincial Government., 2013), expressly requires the learning of Javanese script at all levels of education, including

Vocational High Schools (SMK). This policy strengthens the position of the Javanese script as a compulsory local content that must be mastered by all students.

However, various studies show that students' ability to write Javanese script is still relatively low. Research conducted by (Mahakarti et al., 2022), students have difficulty in writing *aksara pasangan* and *aksara sandhangan* because of the limited facilities that the school has. By applying the Cycle Learning Method method, students are more active and enthusiastic during the learning process. Other research by (Sumanto, 2023), some students show behavior that does not support the learning process, low participation in learning activities, and not asking questions. The Project Based Learning model has been proven to improve Javanese writing skills in sentences in grade VIIIA students of SMP Negeri 2 Grabag, which is accompanied by an improvement in the behavior of students who are more responsible, active, independent, and dare to ask questions in the learning process.

Similar research has reported that have also reported that students' interest in learning Javanese script is still low (Wulandari et al., 2025). The study indicates that the ability to recognize Javanese script forms and writing accuracy are in the "Good" category, while the ability to construct words and sentences and neatness are still in the "Sufficient" category. In line with the research conducted by (Rinata et al., 2023), the needs of students and teachers for interesting Javanese script learning media are very high, one of which can be met with Javanese script *jenga* media. With the use of learning media that attracts, students' abilities can be more optimal.

Although existing research has made significant contributions to the development of Javanese script learning, several limitations remain, indicating a research gap. First, most studies were conducted at the elementary and junior high school levels. One study, however, focused on Javanese script writing skills in vocational high schools, is still very limited. Second, previous research generally focused on the effectiveness of learning models or learning media, so that writing ability assessments focused more on learning outcomes than on comprehensive analysis of writing ability. Third, the research instruments used in previous studies were limited to basic aspects, such as the accuracy of *writing aksara nglegena* and *aksara pasangan*, word and sentence structure, and did not comprehensively evaluate the mastery of complementary scripts, such as *aksara murda*, *aksara rekan*, *aksara swara*. As a result, students' Javanese script writing ability profiles have not been comprehensively described because they have not used a multidimensional assessment rubric that covers all important components in Javanese script writing.

Based on these gaps, this study aims to describe the ability to write Javanese script paragraphs of grade XII students at SMK Negeri 2 Semarang using a comprehensive assessment instrument based on eight aspects, namely, the accuracy of writing *aksara angka*, *aksara sandhangan*, *aksara murda*, *aksara rekan*, *aksara swara*, word and sentence arrangement, and neatness and readability of writing. The use of this multidimensional rubric is expected to provide a more in-depth picture of students' strengths and weaknesses in each aspect of Javanese script writing so that it can be a basis for developing more effective learning strategies and assessment systems.

Based on research objectives, the formulation of this research problem is: (1) What is the general ability of grade XII students of SMK Negeri 2 Semarang in writing Javanese paragraphs? (2) In what aspects do students show strengths and weaknesses in writing Javanese script? The results of the research are expected to provide input for Javanese language teachers, curriculum developers and education policy makers in designing more comprehensive learning and assessment systems for Javanese script writing skills.

Research Methods

This study uses a quantitative descriptive design, which describes phenomena based on numerical data collected systematically (Sugiyono, 2019). The study was conducted at the State Vocational High School (SMK) 2 Semarang in the even semester of the 2025/2026 academic year. The participants were grade XII students, with a research sample of 142 people. The research sample was determined using the cluster sampling technique by selecting 5 classes out of 12 available classes, and 1 class was used for research instrument trials. The research instrument is in the form of a writing performance test which asks students to write a paragraph in Javanese script by choosing one of three themes: (1) Industrial Work Practice Experience in the Company (*Pengalaman Praktik Kerja Industri ing Perusahaan*), (2) Organizational or Extracurricular Activities at School (*Kegiatan Organisasi utawa Ekstrakurikuler ing Sekolah*), and (3) Future Plans After Graduating from SMK (*Rencana Masa Depan Sawisé Lulus saka SMK*). The selection of this student experience-based theme is based on the principles of authentic learning that encourage students' cognitive and motivational engagement more optimally.

The assessment is carried out with a holistic rubric that covers eight aspects, each on a scale of 1 to 4, so that the maximum score is 32. The aspects assessed include the suitability of the content and length of the paragraph, the use of *aksara pasangan*, *aksara sandhangan*, *aksara angka*, *aksara murda*, *aksara swara*, *aksara rekan*, accuracy of form and neatness of writing. The final score is calculated by the formula: $\text{Score} = (\text{Score} / 32) \times 100$. Validation was ensured through expert judgment involving two senior lecturers from the Regional Language and Literature Education Study Program at PGRI Semarang University. The two validators reviewed the suitability of the indicators, the clarity of the descriptions of each aspect, and the suitability of the rubric. The validation results showed a 92% inter-validator agreement, indicating that the rubric had excellent content suitability and was suitable for use as a research instrument. Input provided by the validators included improvements to the wording of the indicators and assessment criteria, which were then accommodated through revisions before the instrument was used in the trial and data collection stages. Furthermore, the consistency of the assessment results was analyzed using inter-rater reliability to ensure consistent application of the rubric throughout the assessment process. The grade categories refer to the classification: Excellent (≥ 80), Good (70-79), Sufficient (60-69), Less (50-59), and Very Less (< 50). Data were analyzed using descriptive statistics including average, median, standard deviation, minimum value, maximum value, and frequency distribution per category.

Findings

The findings are presented as follows, data were obtained: Descriptive Statistics of Javanese Writing Ability, Distribution of Value Categories, and Analysis of Assessment Per Aspect.

Descriptive Statistics of Javanese Writing Ability

Analysis of the data revealed of the writing test results of 142 grade XII students of SMK Negeri 2 Semarang, an overview of the ability to write Javanese paragraphs as presented in Table 1 is obtained.

Table 1 Descriptive Statistics of Javanese Writing Ability

Statistics	Value	Remarks
N (Subject)	142	Grade XII students of SMK Negeri 2 Semarang
Minimum Score	25.00	Very less
Maximum Value	93.75	Excellent
Average (Mean)	57.17	Categories Less
Median	56.25	Categories Less
Standard Deviation	13.97	Quite high variety

The data in Table 1 shows that the average value of Javanese script writing ability of grade XII students is 57.17. The average score shows that most students have not achieved optimal mastery of Javanese writing skills. These findings suggest that learning the Javanese script at the vocational high school level still faces various challenges.

The median score of 56.25 is relatively close to the average indicating that the distribution of students' abilities tends to be even in the less category. Low Javanese writing skills are not only experienced by a small group of students, but are a condition that is generally experienced by most students. These findings reinforce that the Javanese script is still a material that is difficult for most students to understand. The difficulty in learning the Javanese script is inseparable from the characteristics of the Javanese script which has many rules for writing and use *aksara pasangan* and *aksara sandhangan* that must be understood correctly.

The maximum score of 93.75 shows that some students have been able to master Javanese script writing skills very well. Meanwhile, the minimum score of 25.00 shows that there are still students with very low ability to write Javanese script. This finding may be attributed to the low level of training provided to students, the limited implementation of the Javanese script in daily life, and the lack of interactive learning media. The significant difference between the maximum and minimum values reflects the heterogeneity of students' ability to apply the rules of writing the Javanese script.

The standard deviation of 13.97 indicates a fairly high variation between individuals, reflecting a significant ability gap among students. The distribution of scores that are quite diverse shows that the students' Javanese writing skills are not yet at a uniform level. These differences are related to the variation in students' initial competencies, interest in learning

the Javanese language, the frequency of use of the Javanese script, and learning experiences that are different at the previous level of education.

Distribution of Value Categories

The distribution of students based on grade categories is presented in Table 2 below.

Table 2 Distribution of Javanese Paragraph Writing Ability Value Categories

Category	Value Range	Frequency	Percentage (%)
Excellent	≥80	8	5.6
Good	70-79	18	12.7
Sufficient	60-69	25	17.6
Less	50-59	52	36.6
Very Less	<50	39	27.5
Total		142	100

Table 2 shows that most students (64.1%) are in the Less (36.6%) and Very Less (27.5%) categories. The dominance of these two categories shows that most students do not have adequate mastery in the skills of writing paragraphs using Javanese script in accordance with the applicable rules. This condition emphasizes that students' Javanese literacy skills are still at a relatively low level.

Meanwhile, students in the Sufficient category were (17.6%). The data shows that students have an initial understanding of Javanese script writing, but are not yet fully able to apply the writing rules accurately. In the Good (12.7%) and Very Good (5.6%) categories, the lack of percentage in the Good and Very Good categories emphasizes that the competence to write Javanese paragraphs comprehensively is still not developed optimally in most students.

The distribution of students' achievements shows that the process of learning the Javanese script at the vocational high school level still faces quite complex challenges. The low level of students' mastery can be influenced by the lack of optimal frequency of Javanese script writing exercises and the limited use of Javanese script in daily activities.

Analysis of Assessment by Aspect

To obtain a more detailed picture, an analysis was carried out on the average achievement of assessment per aspect. The results are presented in Table 3.

Table 3 Average Assessment Score by aspect

Assessment Aspects	Max Score	Average	Percentage (%)	Category
Content & Paragraph Length (<i>Isi & Panjang Paragraf</i>)	4	3.30	82.6	Excellent
Aksara Angka	4	2.92	73.1	Good
Shape & Neatness (<i>Bentuk & Kerapian</i>)	4	2.87	71.7	Good
Aksara Sandhangan	4	2.76	69.0	Sufficient
Aksara Pasangan	4	2.66	66.5	Sufficient
Aksara Swara	4	1.49	37.3	Less
Aksara Rekan	4	1.37	34.3	Less
Aksara Murda	4	0.92	22.9	Very Less

Table 3 reveals the profile of students' ability to write Javanese paragraphs which varies significantly among the eight aspects. The content and paragraph (*isi dan panjang paragraf*) length aspects were the strongest aspects with an average of 3.30 (82.6%) in the Very Good category, indicating that students were able to organize ideas in Javanese adequately despite experiencing difficulties in the technical aspects of writing. This finding shows that students have a good enough ability to compose paragraphs according to the structure and theme that has been determined. This ability indicates that content development skills and paragraph content preparation are not the main reasons for students, because these skills have gone through a language learning process that takes place on an ongoing basis.

The scores for *aksara angka* (73.1%), and writing form & neatness (*bentuk dan kerapian*) (71.7%), were classified as Good categories. These results show that the majority of students have been able to write *aksara angka* and shape & neatness (*bentuk dan kerapian*) Javanese script with a good readability level. This achievement is influenced by the characteristics of the material that are simpler and easier to recognize visually than other aspects of Javanese script writing, so that it is easier for students to understand and practice in learning activities.

The *aksara sandhangan* (69.0%) and *aksara pasangan* (66.5%) aspect were classified in the Sufficient category. These results show that students still face difficulties in applying writing rules related to phonological changes and the incorporation of script forms. Errors found generally include misalignment of placement *aksara sandhangan*, the use of *aksara pasangan* that is not accurate, as well as inconsistencies in the application of the rules of writing the Javanese script.

The *aksara swara* (37.3%) and *aksara rekan* (34.3%) aspect were classified in the Less category. These findings show that students' mastery of the use of voice characters and peer scripts is still not optimal. The low achievement in both aspects is suspected to be related to the lack of intensity of use *aksara swara* and *aksara rekan* in daily learning activities. These two characters are generally used in certain vocabulary with a relatively limited frequency

of occurrence, so that the opportunity for students to practice and understand their use contextually is less than optimal.

Aksara murda (22.9%) is in the Very Less category. These results show that the majority of students are still not able to use *aksara murda* in accordance with the applicable writing rules. Students' low level of mastery of *aksara murda* is related to the specific rules governing its use and its relatively low frequency in everyday writing.

The difference in achievement in each aspect of the assessment showed that the level of mastery of the participants was still heterogeneous. Students tend to show better mastery of basic aspects that have a higher frequency of use in learning, while aspects related to special orthographic rules are still the main obstacles for students. These difficulties are mainly seen in the use of *aksara pasangan*, *aksara sandhangan*, *aksara murda*, and *aksara rekan* which requires more thoroughness and understanding of the rules of writing.

Discussion

The results of this study are in line with various previous studies that stated that mastery of the Javanese script is still a challenge in learning the Javanese script. This complexity arises because students must understand the system of symbols and orthographic rules that are different from the Latin writing system used daily. On the other hand, the Javanese script learning process is still dominated by conventional methods and oriented to memorization, this causes students to lack meaningful learning experiences, resulting in students experiencing obstacles in understanding and applying the rules of writing Javanese script correctly.

The results of this study indicate the importance of innovation in learning Javanese script to improve Javanese script writing skills for students. Implementing contextual, participatory, and practice-based learning strategies needs to be developed so that the learning process becomes more meaningful and able to increase student involvement. In addition, the use of digital media and collaborative learning approaches may provide an effective strategy in creating Javanese script learning that is more interesting and adaptive to the times.

The use of digital technology and the application of collaborative learning can be an alternative strategy to help students understand the rules of using the Javanese script in a more structured and contextual manner. Through this approach, learning the Javanese script is expected not only to be able to improve technical skills in writing, but also to foster students' awareness of the importance of preserving the Javanese language and culture.

The findings of this study are consistent with the results of the study (Zein et al., 2022) the aspect that is most difficult for students to understand is the *aksara rekan* and *aksara murda*. The researcher developed the *Pincaka media (pintar hanacaraka)*, android-based learning media that presents Javanese text that can support students' ability to write Javanese paragraphs. From a cognitive linguistic perspective, *aksara murda*, *aksara swara*, dan *aksara rekan* has a higher cognitive load because its use requires a contextual understanding of when a word requires *aksara murda*, when vowels are written

independently as *aksara swara*, and which foreign absorption words require *aksara rekan*. Without adequate and patterned practice, learners cannot integrate this procedural knowledge.

The low achievement of Javanese writing skills is not only influenced by internal factors of students, but also related to pedagogical aspects in the learning process. The dominance of conventional learning methods that focus on memorization causes students to lack interactive and contextual learning experiences. The lack of use of innovative learning media also affects the low involvement of students during learning process activities. As a result, students experience obstacles in understanding and applying the rules for writing Javanese script correctly in writing Javanese script paragraphs.

The practical implications of these findings lead to the need to restructure the Javanese script learning approach. A study by (Ismiati et al., 2025) show the application of media such as Rjagita media in learning to write *aksara Jawa* in class IXG students of SMP Negeri 7 Madiun by utilizing technology using Javanese script fonts can have a good influence on improving writing skills *aksara Jawa*. The use of digital-based Javanese script in the learning process shows the integration between knowledge disciplines, especially in the fields of art and informatics. The use of technology in learning reflects efforts to adapt to the rapidly growing digital technology transformation in the world of education (Putri, 2024).

The relevant collaborative learning approach encourages students to develop the ability to think critically, creatively, and innovatively (Alfiah et al., 2026). The application of group learning techniques also contributes positively to improving learning outcomes. Through group activities, students also show the ability to collaborate well (Firdausy et al., 2024). Structured training activities can be an alternative in improving Javanese literacy while maintaining the sustainability of Javanese cultural heritage (Wijayanto et al., 2025).

Conclusion

The findings indicate the ability to write Javanese paragraphs for grade XII students of SMK Negeri 2 Semarang for the 2025/2026 school year as a whole is in the Less category with an average score of 57.17 and a median of 56.25. As many as 64.1% of students are still in the Less and Very Less categories, while only 18.3% reach the Good and Very Good categories. The ability profile per aspect shows three groups: (1) strong aspects (content and paragraph/*isi dan panjang paragraf* = 82.6%; *aksara angka* = 73.1%; shape & neatness/*bentuk dan kerapian* = 71.7%); (2) medium aspect (*aksara sandhangan* = 69.0%; *aksara pasangan* = 66.5%); and (3) weak aspects (*aksara swara* = 37.3%; *aksara rekan* = 34.3%; *aksara murda* = 22.9%). The third weakest aspect is the complementary script whose use requires contextual understanding and is rarely practiced in everyday life. Based on these findings, the following recommendations are proposed: (1) teachers need to intensify practice in the use of *aksara murda*, *aksara swara*, and *aksara rekan* through authentic contextual activities; (2) developers of teaching materials are advised to provide digital interactive media that specifically stimulates the use of complementary scripts; (3) further

research needs to be conducted to identify specific factors causing low complement script mastery, including motivational, pedagogical, and linguistic environment factors of students.

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