Development of 4C-Integrated Karthon (*Kartu Pacelathon*) as an Innovative Learning Media for Javanese Dialogue

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ABSTRACT

The ability of class VII students at SMPN 2 Semarang to write and recite Javanese dialogue remains relatively low, underscoring the need for effective learning media. This skill is crucial for fostering good manners, a core goal of Javanese language education. The study aims to: (1) identify the needs of teachers and students for developing "karthon" learning media, and (2) develop and validate a prototype of karthon media for teaching Javanese dialogue to class VII students. This study employed the ADDIE instructional design model, which includes Analysis, Design, Development, Implementation, and Evaluation. Data were collected using interviews and questionnaires, while data analysis was performed through qualitative and quantitative techniques. The research involved 288 students in class VII at SMPN 2 Semarang during the 2021/2022 academic year, with a randomly selected sample of 37 students. The needs analysis indicated a significant demand for card-based learning media to enhance Javanese dialogue skills. The developed prototype, consisting of writing and reading cards, was validated by experts and subjected to field testing. The results showed high suitability for classroom implementation, particularly in improving student engagement and learning outcomes. The prototype demonstrated the potential to address the gap in students' ability to write and recite Javanese dialogue. Its integration with the 4C (critical thinking, communication, collaboration, and creativity) framework suggests that the karthon media can serve as a practical solution for teachers at SMPN 2 Semarang. This research provides a validated, card-based learning tool that can improve Javanese dialogue instruction, contributing to better language skills and character development among students.

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1. INTRODUCTION

Javanese is a national cultural asset that needs to be preserved (Widianto, 2018). One effort to preserve the Javanese language is to make Javanese a subject based on local content and taught in Central Java, East Java, and the Special Region of Yogyakarta (Handayani, 2023). Javanese language learning aims to ensure that students can communicate politely in Javanese and have a noble character

that follows Javanese culture (Kurniati, 2015). It is in line with the opinion of Maesyaroh & Insani (2021) which states that Javanese language learning aims to build the character of students, which is reflected through *unggah-ungguh* materials. Therefore, it is important for an educator to always improve the quality of Javanese language learning.

In reality, learning Javanese is still very far from the expected goals (Latifah, 2019). Student learning outcomes in Javanese language subjects are still relatively low (Kholiq & Sukoyo, 2023). Javanese language learning taught from elementary to high school has not been able to improve language skills both written and spoken. Learning Javanese is considered a difficult lesson by students (Nazhiroh et al., 2021). Apart from that, many students think that learning Javanese is boring and uninteresting (Akbar & Nita, 2023). This factor is further aggravated by the minimal use of learning media, which makes the student learning outcomes unoptimizing(Kartikasari & Rahmawati, 2022). Therefore, the quality of Javanese language learning should be improved.

Based on initial observations carried out at SMPN 2 Semarang, it is known that many students complain that they cannot speak Javanese, so interest in learning Javanese is still very low. The reason that the students are not interested in learning Javanese is that they have not mastered Javanese vocabulary. In addition, the students more often use Indonesian and even foreign languages in daily communication. The use of learning media is still minimal, so students become bored quickly and are not interested in following lessons. It is proven by the large number of student learning outcomes that are below the Minimum Completeness Criteria (KKM) in the Javanese dialogue material (*pacelathon*).

To address these issues, this research proposes the development of *karthon* learning media, which incorporates 4C competencies—Communication, Collaboration, Critical Thinking, and Creativity—to enhance Javanese dialogue learning. 4C competencies are the competency abilities needed to innovate and adapt to face the challenges of the 21st century (S. Nopiani et al., 2023). 4C competencies include Communication, Collaboration, Critical Thinking, and Creativity (Partono et al., 2021). It is very important to implement these 4C competencies because 4C competencies will facilitate the creation of a generation that has skills and can compete according to the challenges they face.

Pacelathon learning in Javanese language learning aims to improve students' oral and written skills. Students are expected to be able to write pacelathon texts and recite them orally well and correctly. Based on observations made at SMPN 2 Semarang, pacelathon learning in class VII still encounters many obstacles. Apart from that, the application of 4C in learning Javanese pacelathon texts is still not optimal. The 4C first implementation, namely critical thinking, experienced obstacles in the form of students not yet having a critical thinking attitude. The students tended to be passive and never asked questions during learning. The second, namely creativity, encountered obstacles in the form of many students who still had difficulty choosing vocabulary. The third, namely communication, the students experienced difficulties in presenting pronunciation, intonation, and vocabulary selection using Javanese. It occurred because the students more often use Indonesian in daily communication. The fourth, namely collaboration the teachers had not familiarized the students with collaboration competencies such as discussions or working in groups so the students were still very individualistic in learning Javanese dialogue. It was further aggravated by the large number of students who obtained scores below the KKM (Minimum Completeness Criteria). Therefore, it is important to improve the quality of Javanese language learning through implementing 4C.

Based on the student needs questionnaire, several reasons were identified for students' difficulties in writing and pronouncing *pacelathon*. The first factor is the inability of students to use Javanese, both spoken and written, which reached 42%. The second factor is the low interest of students in learning pacelathon which reached 34%. The third factor is the minimal use of learning media and fun learning models with a percentage reaching 24%. These factors can be worsened by students' perception that learning Javanese is very boring, ancient, difficult, and meaningless. It caused an unconditioned learning situation in the classroom. The students are less enthusiastic about learning Javanese. Therefore, the teachers should create learning that is fun and supports students.

One of the ways to create fun learning and to increase students' learning motivation is to use learning media (Nurrita, 2018). Through learning media, learning will become more effective (Hasiru et al., 2021). Learning media is anything that can be used to convey information or messages in the teaching and learning process so that it can stimulate students' attention and interest in learning (Sapriyah, 2019). Learning media can help teachers convey learning material so students have an interest in the learning materials presented (A. P. Wulandari et al., 2023).

To overcome problems in learning Javanese *pacelathon* for class VII at SMP N 2 Semarang, it is necessary to learn the media of *karthon* (*kartu pacelathon*) as a development of learning media in Javanese dialogue skills. *Karthon* media integrated with the application of 4C can accustom students to being critical, creative, collaborative, and communicative. The *karthon* learning media is a learning media that helps students to improve 4C competency which has become the goal and dream of learning Javanese. Students can think critically and creatively through how students individually or in groups present a dialogue according to the theme being presented. In addition, students can communicate by speaking through dialogue well and correctly. Collaborating with friends and teachers through group assignments given using *karthon* learning media can improve the quality of technology-based Javanese dialogue learning. In addition, it can make students will be more optimal, happy, and skilled in speaking according to etiquette (*unggah-ungguh*).

Integrating 4C competencies is essential for fostering the skills needed to meet 21st-century challenges. These competencies are expected to improve students' critical thinking, creativity, communication, and collaboration skills, thus making Javanese language learning more effective and engaging. The learning media of *karthon* (*kartu pacelathon*) is a learning media in the form of cards. Learning media in the form of cards is a fun learning medium and it can make learning enjoyable (I. Wulandari et al., 2020). *Karthon* consists of 2 types, namely auxiliary cards and cards. auxiliary cards aim to help students develop writing skills and Javanese dialogue aims to develop students' oral skills. The advantage of card learning media is that the material contains short and clear material, and there are pictures on certain cards (Aulya et al., 2021). Therefore, this *karthon* learning media is very suitable for use in *pacelathon* learning.

Research regarding the learning media development of *karthon* (*kartu pacelathon*) has never been carried out before. Research by Widiatmoko et al (2020) developed picture cards as a learning medium for writing news. Research by Nida et al (2020) developed character education-oriented picture cards in Balinese language subjects. Mahanani's research (2018) improved *pacelathon* text writing skills through pop-up media. Putra's research (2022) improved Javanese dialogue skills using the media of *Moja* (*monopoli Bahasa Jawa*). These studies provide contributions related to research on the development of cards in language learning. This research will complement previous research, namely the development of cards in Javanese language learning. This research is different from previous research because this research will develop media in the form of cards that integrate 4C competencies in Javanese language learning.

Based on the above, it is essential to conduct research on the development of 4C-integrated karthon media as a tool for teaching Javanese dialogue. This research aims to: (1) identify the needs of teachers and students in developing karthon learning media, and (2) develop and validate a prototype of karthon media specifically designed for teaching Javanese dialogue to class VII students at SMPN 2 Semarang. The findings from this study are expected to provide teachers with an effective solution for enhancing students' Javanese dialogue skills while incorporating the 4C competencies. Additionally, the use of engaging and interactive media can help create a more enjoyable learning environment, preventing student boredom.

2. METHODS

This research employs a Research and Development (R&D) methodology, specifically aimed at producing and validating educational learning products. The focus of this study is the development and validation of *karthon* (*kartu pacelathon*) learning media. This research used the ADDIE (Analysis,

Design, Development, Implementation, and Evaluation) design developed by Reiseer and Mollenda. The ADDIE design was chosen because it is easier to understand and simpler (Purnamasari, 2019). Apart from that, ADDIE designs also produce products that have been tested on materials and media (R. Nopiani et al., 2021).

The ADDIE design research steps carried out in this research are 1) the analysis stage aims to analyze the needs of teachers and students regarding the urgency and desire for the development of learning media; 2) the design stage aims to design learning media; 3) the development stage aims to implement the product design that has been designed and obtain prototype validation tests from media experts and material experts to produce a worthy product; 4) implementation aims to apply the product in learning; 5) evaluation aims to carry out a final evaluation based on teacher and student assessments. This research will only apply the ADDIE design research stage to the third stage or development stage due to limited time, resources, and costs.

This research was conducted at SMPN 2 Semarang from January to April 2022. The subjects of this research were class VII students at SMPN 2 Semarang for the 2021/2022 academic year, consisting of 288 students. The sample for this research was carried out randomly, namely 37 students. Data collection techniques were carried out using interviews and questionnaires Interviews were conducted with 2 Javanese language teachers at SMPN 2 Semarang and questionnaires were distributed to students and Javanese language teachers at SMPN 2 Semarang. Interviews were conducted to determine students' constraints and obstacles as well as teachers' needs regarding learning media, while questionnaires were used to determine students' needs regarding learning media. The required data, subjects, and instruments are explained in the following table:

Table 1. The required data, subjects, and instruments of the research

The required data	Research subjects	Research instruments
The need for card media in pacelathon learning	37 students of SMPN 2 Semarang	The needs questionnaire of the students
The prototype assessment of karthon (kartu pacelathon)	Lecturer in The Department of Javanese Language and Literature as a media and materials expert	*

Data analysis was carried out using qualitative and quantitative descriptive techniques. Qualitative techniques are used to analyze interview data while quantitative analysis techniques are used to calculate data in the questionnaire. The qualitative descriptive analysis model used is the Miles & Huberman (1994) model. In conducting data analysis, Miles & Huberman use an interactive analysis model with the flow: (1) data collection; (2) data; (3) data presentation; and (4) conclusion. Quantitative data analysis techniques were used to analyze the percentage of student questionnaire answers and the prototype assessment of the *karthon* (*kartu pacelathon*).

The validation test for material experts and media experts of *karthon (kartu pacelathon)* was tested by lecturers in the Javanese Language and Literature Department at Universitas Negeri Semarang. The validation test for material expert and media expert of *karthon (kartu pacelathon)* was converted using the following table (Azizah et al., 2023).

Table 2. The Assessment Category from Material and Media Experts

Category	Score
Very Good	4
Good	3
Poor	2
Very Poor	1

The scores obtained were then averaged and converted into statements to determine the feasibility of the learning media prototype. The conversion criteria are presented in the following table.

Table 3. Conversion Criteria for Assessing the Feasibility of the Learning Media Prototype

Percentage	Criteria	
81-100%	Very Feasible	
61-80%	Worthy	
41-60%	Decent Enough	
0-40%	Worthy	

3. FINDINGS AND DISCUSSION

3.1 The analysis of student and teacher needs for karthon (kartu pacelathon) in pacelathon learning

The analysis of student and teacher needs was carried out at SMPN 2 Semarang in February 2023 through interviews and filling out questionnaires. Interviews were conducted with 2 Javanese teachers at SMPN 2 Semarang and 37 students of class VII at SMPN 2 Semarang filled out the questionnaire. Data obtained from 2 Javanese teachers and 37 students of SMPN 2 Semarang will be used as a guide for developing *karthon (kartu pacelathon)* in *pacelathon* learning.

Based on the questionnaire, it is known that all class VII students at SMPN 2 Semarang with a percentage of 100% wanted to achieve enjoyable learning. More specifically, 94.6% of students wanted games in learning. Based on the questionnaire, it was found that 64.9% of students realized that they experienced difficulties in dialogue using Javanese. More specifically, 62.2% of students experienced difficulty in pronouncing Javanese sentences or dialogues. Apart from that, 56.8% of students experienced difficulty in writing Javanese dialogue. In line with the results of interviews with Javanese teachers at SMPN 2 Semarang, it happened because the majority of students used Indonesian more often in their daily lives. The Javanese language teachers at SMPN 2 Semarang also expressed students' difficulties with Javanese dialogue material because the learning model was still conventional and the lecture method was often considered boring.

According to students, learning Javanese more often uses visual learning media in the form of slides (40.5%). The other learning media used in learning Javanese are books, online media, and audio. Learning media in the form of books and printed materials occupy the second position as the most frequently used learning media. There are 13.5% of students who stated that learning Javanese uses online media. Apart from that, 8.1% of students stated that learning Javanese had used audio media. The Javanese language teachers at SMPN 2 Semarang also clarified that learning Javanese more often uses media in the form of slides and books because they feel it is easier. Until now, there is no special media to improve students' dialogue skills at SMPN 2 Semarang.

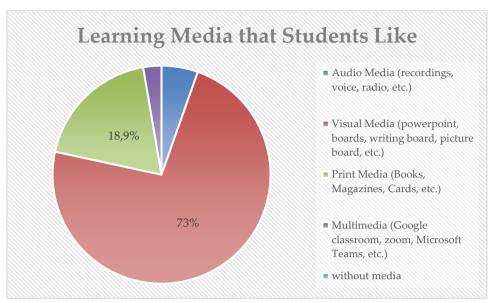


Diagram 1. Learning Media that Students Like

Based on diagram 1 regarding the learning media that students like, it is known that 73% of students said that they preferred and understood learning media in the form of visual media such as slides or whiteboards with pictures. In addition, 18.9% of students preferred learning media in the form of print media. The others like audio and multimedia learning media. Thus, it can be concluded that students at SMPN 2 Semarang preferred and needed learning media in visual form.

Based on a questionnaire regarding student needs for *pacelathon* card learning media, it was found that 97.3% of students wanted colored cards. Apart from that, 100% of students wanted to use the *ngoko* variety in the *pacelathon* card learning media. In addition, 94.6% of students also wanted Javanese characters and Javanese-effect fonts on the *pacelathon* cards.

3.2 Learning Media Prototype of Karthon (Kartu Pacelathon)

The development of the learning media prototype was grounded in a comprehensive needs analysis. The software used to create the karthon (kartu pacelathon) prototype was Canva, chosen for its user-friendly design tools and flexibility in customizing educational materials. Karthon was designed to be visually appealing and easy for students to comprehend, with the goal of fostering an engaging learning experience.

The development process began with the creation of a framework for karthon. The cards were designed with dimensions of 12 cm x 8 cm to optimize space for content while maintaining portability and ease of handling. The karthon (kartu pacelathon) consists of two types of cards: writing cards (kertu tulis) and reading cards (kertu maca), with 20 cards of each type, carefully crafted to enhance both written and verbal skills in Javanese dialogue.

As the name suggests, the writing cards (kertu tulis) are intended to help students write Javanese dialogue or pacelathon. These cards provide students with auxiliary words, which serve as prompts and vocabulary suggestions to inspire and guide the creation of meaningful Javanese conversations. By incorporating these auxiliary words, students are expected to improve both their vocabulary and structure in Javanese dialogue writing.

The first card type designed was the writing card (kertu tulis), which features a front and back view. The front side was crafted to be highly engaging and visually attractive to draw students' attention, using colors and fonts that are both appealing and functional, supporting a stimulating learning environment.



Figure 1. Front appearance of kertu tulis

The back view of *kertu tulis* designed to accommodate learning content. The display was designed by adjusting the front appearance of *kertu tulis*.



Figure 2. Back appearance of kertu tulis

Apart from *kertu tulis, karthon (kartu pacelathon)* also consists of *kertu maca. Kertu tulis* consists of 2 views, namely the front and the back appearances. The front of *kertu tulis* was designed very attractively.



Figure 3. Front Appearance of kertu maca

The back appearance of *kertu maca* was designed to accommodate learning content. The display was designed by adjusting the front appearance of *kertu maca*.



Figure 4. The back appearance of kertu maca

3.3 Validation results of the material expert

The material expert validation test of the learning media prototype of *karthon (kartu pacelathon)* was carried out by Rahma Ari Widihastuti, S.Pd., M.A. who is a lecturer in the Javanese language and Literature Department at Universitas Negeri Semarang. The material expert assessment of the *karthon* learning media prototype of *kertu tulis* consists of 9 indicators which are divided into 2 aspects, namely the completeness of the material (3 indicators) and the accuracy of the material (6 indicators). The validation results show that the completeness aspect of the material with 2 indicators getting a score of

3 and 1 indicator getting a score of 4, and aspects of material accuracy, 1 indicator getting a score of 2, 3 indicators getting a score of 3, and 2 indicators getting a score of 4.

The material expert assessment of the *karthon* learning media prototype, *kertu maca*, consists of 11 indicators which are divided into 3 aspects, namely completeness of the material (3 indicators), language (4 indicators), and accuracy of the material (4 indicators). The validation results show that the completeness aspect of the material with 3 indicators getting a score of 3, the linguistic aspect of 2 indicators getting a score of 2, and 2 indicators getting a score of 3, and the accuracy aspect of the material with 1 indicator getting a score of 3 and 3 indicators getting a score of 4.

3.4 Validation results of media expert

The material expert validation test of the *karthon* learning media prototype was carried out by Mujimin, M. Pd. who is a lecturer in the Javanese Language and Literature Department at Universitas Negeri Semarang. The media expert assessment of the learning media prototype of *karthon* (kartu *pacelathon*), namely *kertu tulis*, consists of 12 indicators which are divided into 4 aspects, namely design and images (4 indicators), layout (2 indicators), design attractiveness (3 indicators), and motivating quality (3 indicators). The validation results show that the design and image aspects with 4 indicators received a value of 4, the layout aspect of 2 indicators received a value of 4, the design attractiveness aspect of 1 indicator received a value of 3, and 2 indicators received a score of 4.

The media expert's assessment of the *karthon* learning media prototype, namely *kertu maca*, consists of 12 indicators which are divided into 4 aspects, namely design and images (4 indicators), layout (2 indicators), design attractiveness (3 indicators), and motivating quality (3 indicators). The validation results show that the design and image aspects with 4 indicators received a value of 4, the layout aspect of 2 indicators received a value of 4, the design attractiveness aspect of 1 indicator received a value of 3, and 2 indicators received a value of 4.

Discussion

The results of the research show that many class VII students at SMPN 2 Semarang still experience difficulties in writing and pronouncing the *pacelaton*. This certainly cannot be left to chance, considering that this skill is one of the fundamental skills in learning and forms politeness in the context of the Javanese language. The Javanese language teachers at SMPN 2 Semarang admitted that they have limitations in using learning media. Teachers found it difficult to find appropriate learning media. So far, teachers have only considered aspects of learning media that are easy to develop and easy to understand. It is in line with the findings of Febrianti & Insani (2023) that Javanese language teachers consider using learning media that is fun, easy to understand, and appropriate to learning objectives. Therefore, students need to obtain media that suits their needs and can improve learning outcomes.

Until now, learning is required to implement fun learning (Rafikasari et al., 2021) and integrate the 4C (Prameswari & Lestaringrum, 2020). Enjoyable learning can increase student motivation and learning outcomes (Wiadnyana et al., 2022). Based on the results of interviews with Javanese language teachers at SMPN 2 Semarang, it is known that Javanese language learning has rarely implemented games as an effort to create enjoyable Javanese language learning.

Based on the needs analysis above, it can be seen that students at SMPN 2 Semarang needed *pacelathon* learning media with learning media characteristics in the form of visual, enjoyable, and integrating 4C. One of the learning media that answers the needs of students at SMPN 2 Semarang is learning pacelathon *karthon* (*kartu pacelathon*). In line with the results of the student questionnaire, it was discovered that 100% or all students wanted learning media in the form of cards in the *pacelathon* material.

The front card of *kertu tulis* was designed by combining 2 types of brown. The color brown was chosen because brown is very identic with Javanese culture (Muhadiyatiningsih & Fathonah, 2020).

Apart from that, the front card of the writing card displayed information about the type of card, type of material, school identity, images of typical Javanese attributes, and Javanese cartoon characters. The card type information was written according to the type of card, namely *kertu tulis*. The type of material in the learning media of *karthon* (*kartu pacelathon*) is a dialogue in Javanese or called *pacelathon*. At the bottom was written the identity of the school you will go to, namely SMPN 2 Semarang. Typical Javanese attributes were also included in the design of the front of *kertu tulis*. The typical Javanese attribute used in the design of *karthon* (*kartu pacelathon*) is *wayang gunungan*. Wayang or puppet was chosen because it is one of the identities of the society and a form of Javanese culture (Siswantari & Mukarromah, 2021). Additionally, cartoon characters typical of Javanese society appear as the main identity in *pacelathon*learning. Javanese cartoon characters become special identities or characteristics on *karthon* (*kartu pacelathon*) that have been designed.

The back of *kertu tulis* was designed by combining 2 types of brown. The back card of *kertu tulis* displayed information on the type of card, theme, *tembung pitulungan*, images that were typical Javanese attributes, and Javanese cartoon characters. The card type information is written according to the type of card, namely writing card. The theme was written according to *tembung pitulungan*, while *tembung pitulungan* was an auxiliary word that can be used by students. Typical Javanese attributes are also included in the design of the back of the *kertu tulis*. The typical Javanese attribute used in the design of *karthon (kartu pacelathon)* is wayang gunungan. Typical Javanese cartoon characters are also featured as the main identity in *pacelathon* learning. The typical Javanese cartoon characters on the front and back cards are different. It aims to enable students to recognize the variations in Javanese community identity which are reflected through clothing.

The design of the front side of the kertu maca was intentionally made similar to that of the kertu tulis, ensuring visual consistency between the two types of cards. The back of the kertu tulis featured a combination of two colors, orange and blue, which not only enhanced the aesthetic appeal but also helped distinguish between different card types. The front of the kertu tulis included several key elements: information about the type of card, the material being taught, the school identity (SMPN 2 Semarang), illustrations of traditional Javanese attributes, and cartoon characters representing Javanese culture. These elements were carefully designed to engage students and reinforce their connection to Javanese cultural identity. As Clark and Lyons (2010) suggest, visual design plays a crucial role in enhancing learning by creating connections between new information and learners' existing knowledge.

The card type information was clearly labeled on the kertu maca cards, corresponding to the material being taught, which was Javanese dialogue, or pacelathon. The bottom section of the *kertu* tulis identified the school, while Javanese cultural symbols, such as the wayang gunungan, were incorporated to reflect the cultural context of the learning material. Furthermore, the cartoon characters were slightly modified from the kertu tulis to the kertu maca, introducing visual variation while maintaining cultural relevance, which, as Mayer (2020) notes, is essential for maintaining student engagement through contextualized and meaningful visuals.

The back of the *kertu maca* cards also featured the orange and blue color scheme and provided a description of the card type along with the Javanese dialogue (pacelathon) text. The dialogues were written in the ngoko variety of Javanese, which is the informal register used for everyday conversation, typically between friends or those of equal status (Poedjosoedarmo, 2006). This register, consisting of dialogues between two characters, was chosen to ensure accessibility for students, as it mirrors conversational contexts they might encounter outside the classroom.

In terms of quantitative evaluation, the kertu tulis received a total score of 29, with an average score of 3.22, corresponding to 90.55%, which categorizes it as "very good." This high score suggests that the visual design and content were effective in meeting learning objectives. In contrast, the kertu maca scored 34, with an average of 3.09, or 77.27%, falling into the "good" category, though

improvements are needed based on feedback from material experts. This suggests that while the kertu maca cards were effective, there are areas for refinement, particularly in how the material is presented (Smaldino et al., 2019).

The overall feasibility of the karthon learning media was affirmed by the validation tests conducted by material and media experts. With a total score of 46 and an average score of 3.83, equating to 95.75%, the karthon learning media was classified as "very feasible" for classroom application. This validation indicates that the learning media aligns well with educational standards and is effective in supporting students' acquisition of Javanese dialogue skills (Reiser & Dempsey, 2017).

4. CONCLUSION

The findings of this research indicate a clear need for effective learning media to support Javanese dialogue instruction for class VII students at SMPN 2 Semarang. Many students face difficulties in both writing and engaging in Javanese dialogue, highlighting the importance of media that incorporates elements such as audio-visual aids, vibrant colors, game-based learning, and the integration of 4C skills (critical thinking, communication, collaboration, and creativity). The *karthon* media (*kartu pacelathon*), consisting of *kertu tulis* and *kertu maca* cards, was developed to address these needs. The *kertu tulis* cards help students write Javanese dialogue by providing auxiliary words, while the *kertu maca* cards focus on practicing dialogue between two characters. Validation from material and media experts shows that both card types are considered good and feasible for classroom use, with *kertu tulis* receiving a 90.55% rating and *kertu maca* a 77.27% rating from material experts, and both receiving 95.75% ratings from media experts. However, the study's scope was limited to a single school and a relatively small sample size, which may affect the generalizability of the findings. Future research could expand the scope by testing the media across different schools and larger populations, and explore the incorporation of more interactive and technologically advanced features, such as digital platforms, to further enhance student engagement and learning outcomes.

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