



Implementation of 21st Century Learning Principles on Local Content of Javanese Elementary Schools in East Java

Heru Subrata¹, Ulhaq Zuhdi², Maryam Isnaeni Damayanti³, Asri Sri Susetyo Rukmi⁴

^{1,2,3,4} Universitas Negeri Surabaya

ARTICLE INFO	ABSTRACT
Published Online: 01 December 2022	This research needs to be carried out to find answers to the problem of local content of elementary school Javanese language learning in the East Java region. This study aims to collect information related to teacher competence, understanding of learning content, media use, learning design, and perspectives on information technology in Javanese language learning in elementary schools in East Java. This study used mixed/collaborative research methods (descriptive qualitative) and quantitative, in a sample of 194 elementary school teachers in the East Java region. This study used instruments in the form of structured observation sheets and questionnaires whose dissemination procedures used google forms. Observation data is processed descriptively and qualitatively and questionnaire data is processed with the help of SPSS software. The results showed that the implementation of Javanese language learning in elementary schools 80% has not implemented the principles of 21st-century learning, which among others require pedagogical, professional, and information technology elements. These results will be used as a basis for decision-making, to meet the needs of providing services for teachers in elementary schools, as well as in adobe technology in the practice of learning quality and useful Javanese local content as academic studies and for practical purposes for elementary school teachers.
Corresponding Author: Heru Subrata	
KEYWORDS: Javanese, information technology, elementary school	

INTRODUCTION

The problems of learning Javanese in elementary schools include the qualifications of Javanese teachers, limited teaching materials, and the lack of implementation of methods, strategies, models, and approaches that are following the demands of the 21st century. Policies on curricula that cannot be standardized on the grounds of local languages with different characteristics, both related to dialects, isolects, sociolects, and co/cortex, so that the curriculum of local content is prepared based on the governor's regulations in each province.

In East Java, the curriculum of local content of Javanese & Madurese is published following regional characteristics published by the Provincial Government Education Office (Regulation of the Governor of East Java concerning the implementation of Javanese language learning as a Mandatory Local Content in East Java Province Pergub No. 19 of 2014). This Regulation of the Governor of East Java contains arrangements for the implementation of the learning of Compulsory Local Content Subjects, namely Javanese.

Then it was published again for the latest version of the independent curriculum of Javanese local content dated July 15, 2022, with regional language learning achievements that must be achieved by students following developments by adjusting the potential and diversity of regions and needs at each level of education. The preparation of regional language learning outcomes is one of the efforts to maintain local culture through education. The results of research conducted by (Pergub No. 19 of 2014, Implementation of Javanese Language in East Java)(East Java Language Learning Outcomes & Madura Independent Curriculum in 2022)Rosni R resulted in findings that the competence of its application in learning is still in the category of not good. (Rosni, 2021) Limited standard textbooks that are only submitted to local, regional, and local areas. So the provision of textbooks and supporting books is very diverse and not standard. The textbooks on the market, have not fully referred to the curriculum in question, neither Curriculum 13 nor the regulations issued by the Governor as mandatory local content that must be implemented in schools. Observation

results show that there has been no uniformity of textbooks for both teachers and students, and even found in some elementary schools have not used textbooks. Meanwhile, the results of research from Suwardi, stated that textbooks of local content in Javanese are still not uniform and tend to follow the tastes of authors/publishers. (Suwardi et al., 2005; Wibawa, 2011)

Limited network and access to online activities is also the lack of information technology-based learning. The results of the study stated that the use of technology still did not show significant results. In addition to the problem of infrastructure, the use of technology is still hampered by the ability of teachers to operate their hardware and software. The use of technology is still limited to processing words, numbers, and usage for social media. The absence of activities that can support the implementation of equitable learning by utilizing information technology facilitated by related agencies, makes technology adoption run relatively slowly. (Ysh. dkk., 2019a)

Learning the local [Javanese] language in elementary schools is still left to the class teacher. The activities carried out are the initiative of the class teacher. It doesn't reach the entire county, either. This is also an obstacle in the dissemination of information technology in Javanese language learning. The nature of the locality, which is characteristic of Javanese language learning, is an obstacle in adjusting to the development of the times. This is what should be a concern for policyholders, to provide the widest opportunities and facilities to Javanese language teachers in elementary schools so that they can spur themselves, learn to develop, and always adjust to the development of learning like other fields of study. So that it can (Fitriyah Koyumiyah, 2018) increase understanding of 21st Century Javanese language learning.

In Jawa language learning, the management of learning activities, in general, has been transformed with technology-based and internet learning. However, the adoption of online-based learning, which provides opportunities for student teachers to improve their competencies, has not been fully implemented. This new learning activity has the potential to maintain students' time to simplify outstanding tasks in modern learning by using the internet. The Internet allows teachers and students to communicate, entertain, and learn the latest news and obtain information that encourages different perspectives of knowledge. Therefore, conventional Javanese language learning should have to be adjusted and harmonized with the media in this era. (Churiyah dkk., 2020) (Geladze, 2015) (Deluge, 2016)

Although it provides a positive side, learning to use the internet is risky online for users, especially students. The most weakness is social isolation coupled with the lack of interaction from colleagues and teachers in applying communication skills (Bokayev et al, 2021; Lemay et al. 2021). In this case, the direct (face-to-face) interaction of teachers and students in learning is very important in

determining educational success (Koltsoupidot, 2014; Murks et al., 2018). Another disadvantage to online-based learning and the internet offers students the potential to cheat during exams, play games, access malicious websites, and chat online during lessons. This will also have an impact on learning Javanese which has the characteristics of local wisdom. (Hashemi, 2021) (Steinmayr dkk., 2019; Deluge, 2016) (Rawashdeh, 2021)

To minimize the negativity, teachers and students are required to have the ability to adopt the technology necessary for individuals otherwise known as digital literacy skills. With high digital literacy, it will benefit students to face online risks (Helsper and Smahel, 2020). Phuapan et al. (2016) note that digital literacy is the most important skill in utilizing technology, and communication tools to access, organize, coordinate, estimate, and provide information in society. The aforementioned study by Tejedor (2020) found the need to improve digital skills, in communication, teaching, and methodology. The reason behind this is that digital literacy can affect the output of learning outcomes and student academic achievement (Yustika and Isivati, 2020). Likewise, what happens in Javanese language learning, digital literacy, reading literacy ((Phuapan dkk., 2016) (Purnama et al., 2021) (Gottschalk, 2019) *ngoko* and *krama language*), Javanese writing literacy (Latin writing and Javanese writing) need to be given their attention. In addition to digital literacy, parent mediation also plays a big role in addressing online risks for their children. The fundamental reason is that children tend to operate technological problems by observing their parents. A positive parenting style and its principle is a form of parental mediation that can prevent children from being negatively affected when doing online activities. Parents also don't have a variety of mediation strategies, such as active co-use and interaction rules to reduce online risk. (Livingstone dkk., 2017) (Gottschalk, 2019) (Livingstone dkk., 2017; Rodriguez-De-god dkk., 2016)

Determination of regional language subjects depends on government policy. For DIY and Central Java Provinces, local content is filled with Javanese language subjects. East Java also participated in DIY and Central Java with the publication of the 2013 Gubernatorial Regulation on Local Content of the Javanese Language Curriculum 19 of 2014. Likewise for West Java, the local content was filled with Sundanese language subjects (Local Content on the Javanese Language Curriculum) 2013 Gubernatorial Regulation 19 of 2014 Per gubernatorial Regulation of East Java Number 19 of 2014 Concerning Regional Language Subjects as Compulsory Local Content in Schools/Madrasahs). (Aziz & Suwarno, 2017). (Ardiansyah, 2018) (Maruti & Kusumawati, 2018) (Wahyuhastufi, 2016) (Sulistiyono & Sudaryanto, 2011) (Palupi, 2016) (Sulistiyono & Sudaryanto, 2011). In terms of the competence of Javanese language teachers, until now there has been no special

education for Javanese language teachers in elementary schools. Thus, there is no special Javanese teacher who has mastered this field of study. So that it can be ascertained that the existing teachers are class teachers—from PGSD and non-PGSD graduates). Even though the challenges in the 21st century, teachers with adequate qualifications and following the times are needed. (Mujimin, 2010)(Subrata, 2016).



Figure 1. 21st-Century Learning Challenges

Related to content, learning Javanese in basic language contains four language skills, namely: listening (*nyemak*, *basa ngoko & basa krama*), speaking (*basa ngoko & basa krama*), reading (*maca basa Jawa writing Latin and basa Jawa writing Javanese*), writing (*writing Javanese base Latin writing and Javanese base Javanese writing*). In detail it can be seen in the following figure:



Figure 2. Content Structure of SD Javanese Teaching Materials

METHOD

Research methods are carried out using quantitative and qualitative approaches. The respondents in this study were elementary school class teachers in the East Java region, with a total of 194 teachers, both public and private teachers. For qualitative data obtained from structured observations, qualitative descriptive analysis is used. As for those related to data obtained from questionnaires through google forms, data analysis using SPSS statistical software.

The data retrieval procedure is carried out by reservation or observation. These observations or observations are necessary for the qualitative data collection process. The preparation of observation guidelines needs to be carried out by 1) establishing the object to be observed; 2) formulating an operational definition of the object to be observed; 3)

creating a description of the object to be observed; 4) creating and compiling short question items about the indicators of the observed object; 5) conduct trials and 6) refining and organizing the items of the question into a whole and systematic whole. The technique uses an Interview or Interview. This first step is carried out to obtain data on the academic background of teachers, how to implement the Javanese language learning curriculum in elementary schools, how Javanese language learning resources are obtained, how teacher competencies in carrying out Javanese language learning, what Javanese language learning books are used, what are the most difficult materials in learning Javanese, what are the obstacles faced by teachers in learning Javanese, how to overcome the obstacles that have been implemented so far, and whether there is a Javanese MGBS in elementary schools in the East Java region.

In addition to reservations or observations, questionnaires or questionnaires are also used, which are in the form of some written questions used to obtain information from respondents. The use of questionnaires is used to capture data from many respondents in a relatively short time. The questionnaire is divided into Perception of the use of technology in the teaching and learning process, Use of technology in the teaching and learning process, Ability to design technology in the teaching and learning process, and information technology platforms in learning activities,

RESULTS AND DISCUSSION

a. Implementation of Javanese Language Curriculum

The elementary school Javanese language learning curriculum is carried out with the aim that students can communicate effectively according to the prevailing uploads, appreciate and be proud to use Javanese, enjoy and utilize Javanese literary and cultural works to improve ethics and improve knowledge and language skills. In East Java, the K13 curriculum and local content curriculum are implemented with the allocation of 2 hours of learning every week. (Pegub East Java No. 19 Year, 2014 Compulsory Local Content Subjects in Javanese)

This Javanese language learning curriculum is implemented to improve listening, speaking, writing, and listening skills in using Javanese. In several elementary schools in East Java, data on the use of curricula other than the 2013 Curriculum and the East Java Governor's Regulation were found, namely local curricula made by teachers themselves or in groups in one sub-district area. The curriculum of the teachers' thoughts is considered appropriate to the school environment. The observation results found the reason that the curriculum created by these teachers has a specificity, especially in the content and local language used. In addition to this, there is also the use of the school curriculum, from the thoughts of class teachers.

The most widespread use of the Javanese language curriculum, in general, is combining the 2013 curriculum with the local content curriculum of the East Java Governor's Regulation 9 of 2014, and even data is still found in some schools that use the KTSP curriculum. However, the material taught to students is adjusted to the 2013 curriculum standards. In its application, teachers make adjustments so that they can be aligned and effective in their implementation. For example, in grades I and II, Javanese language learning is quite taught about reading and writing words and short sentences in Javanese that are used in everyday life coupled with lessons in communicating with simple sentences. In grades III, IV, V, and VI, they began to be taught about language knowledge, both language, and literature. The implementation of the Javanese language curriculum in elementary schools is carried out from the first grade to the sixth grade with adjustments to the time allocation in each school.

Table 1. Use of Javanese Curriculum

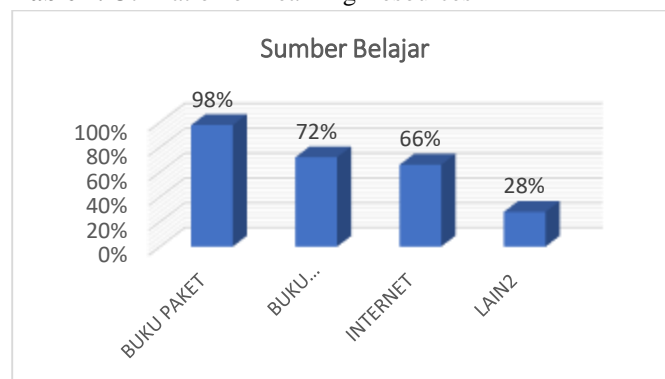


b. Learning Resources

Javanese language learning resources generally use textbooks that are following the curriculum and are following the East Javanese language. PBJW Learning Resources are books that have been determined by the government following the 2013 Curriculum (K13), as well as the 2013 Curriculum of the East Java Governorate Number 19 of 2014. There are books There are learning resources provided by the school such as package books and supporting books. However, many schools (due to limitations) have not been able to facilitate the book. So that teachers use books from free publishers that teachers and students can get independently. These books include LKS (Student Worksheets), tembang books and geguritan books, and puppet story books.

In addition to books, learning resources are obtained from the internet, social networks, videos from the youtube platform, and so on. Conventional learning resources are still used by taking content according to the needs of the surrounding environment.

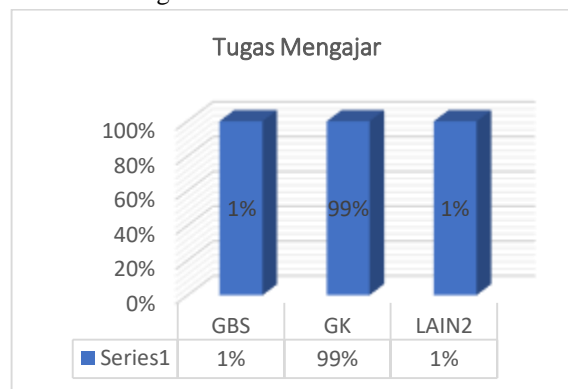
Table 2. Utilization of Learning Resources



c. Teacher

In elementary schools throughout East Java, there are no teachers in the field of Javanese language studies. Learning is carried out by class teachers who do not have competence in learning Javanese. If there are only auxiliary teachers or honorees who are not fixed.

Table 3. Teaching Duties



d. Sourcebooks used by teachers and students

Main books: Tantri Basa, Ngleluri Basa Jawa, Wasis Basa, Pandhawa, Sekar Basa Jawa, Matoh Basa Jawa Bojonegoro, Student handbook: Tatri Basa, Wasis Basa, Aku Bisa Basa Jawa SD Grade 2 K13 Yudhistira, Sinau Basa Jawa Grade II SD/MI Yudhistira. The supporting books used include Kawruh Basa, Pepak, Ngleluri Basa Jawa, Kresna, and Sapala Basa Jawa.

Table 4. Sourcebook



e. Obstacles in Javanese Language Learning

The *first* obstacles faced in learning Javanese include a decrease in interest in learning Javanese. From observations, only 15% of students like Javanese. Meanwhile, the other 85% do not like Javanese because Javanese is considered difficult, and is rarely used in daily communication.

The *second* obstacle is in terms of vocabulary and sentence material. that there has been a shift in the use of the language from the local language to the national or international language. The use of Javanese in its social sphere has also shifted, so it is used less and less. The level of use of the language "basa ngoko, basa madya, and basa krama" is also an obstacle in learning Javanese, because in everyday life the Javanese language used is a variety of "ngoko" and even the ngoko language is innocent. Data shows that the use of mixed languages is more dominant in students' daily lives, making it difficult for students to understand and implement Javanese in learning. More than 50% of Javanese vocabulary contained in learning materials is rarely encountered in everyday life, so it is also an obstacle for students and teachers to implement Javanese in the context of learning. In addition to this, the habituation of Javanese correctly in the surrounding environment makes students unfamiliar with Javanese vocabulary. It was found that more than 80% of students did not understand the meaning of words and sentences in Javanese, and there was difficulty reading Javanese sentences. In terms of time allocation, Javanese language material is only given two hours (2X35 minutes) per week, thus reducing the opportunity to provide adequate practice of Javanese language skills. The practice of language skills is very necessary for accelerating the acquisition of Javanese.

The *third* obstacle, from the material side, is the ability of "macapat" and "dolanan" balance. Javanese tembang "macapat" and tembang "dolanan" are currently rarely found in everyday life. Tembang macapat maskumambang, mijil, sinom, kinanthi, gambuh, dhandhanggula, pangkur, durma, megatruh, pucung, has become rare and rarely even heard by students and teachers (Subrata, 2016). Likewise, dolanan tembangs, such as cublak-cublak suweng, gundul-gundul pacul, pitik tukung, lindri, kupu kuwi, menthog-menthog and so on (Subrata, 2022) have rarely been listened to by students in everyday life.

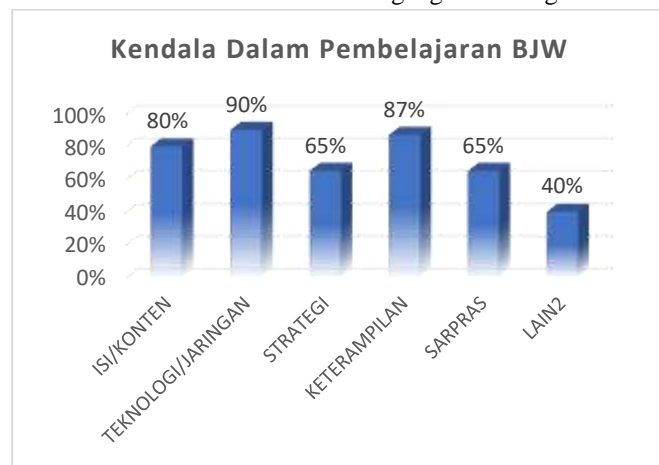
The *fourth* obstacle is the absence of standard textbooks that are enforced throughout East Java so that the implementation of Javanese language learning in elementary schools is based on the conditions of each region. Meanwhile, supporting books in learning are very diverse and tailored to your needs.

The *fifth* obstacle is related to the ability of teachers to design learning with innovative approaches, methods/models, strategies, and learning techniques based on information technology. In teacher learning, 67% is still conventional. Teachers have not been able to use strategies that can attract students' attention. The teacher's knowledge in terms of information technology innovation is limited to only

fundamental knowledge and cannot yet be adequately applied.

The *sixth* obstacle is the constraints of media and tools in the implementation of learning. The problem is the provision of very limited internet access facilities and infrastructure, both for teachers and students. Students do not yet have adequate learning facilities. Only in certain areas are affordable means well. Then the ability of teachers—who are not pure Javanese teachers or pure Javanese graduates—who are very lacking contributes to this problem.

Table 5. Obstacles in Javanese Language Learning



f. Efforts to overcome obstacles

Some of the efforts made by schools to overcome obstacles are very diverse, including: *first*, by doing habituation using the correct Javanese language. Especially in the use of good and correct language in schools, for example, habituation every Wednesday in Javanese. Teachers must also apply this when learning Javanese. Communicate with Javanese intensively on the day so that students get used to it.

Second, it is done by (a) reorganizing the curriculum of Javanese subjects. (b) learning the Javanese language that is adapted to the current situation and conditions, (c) utilizing media and mastering learning models, (d) exploring Javanese cultural characteristics and local wisdom for learning noble ethics, for example being honest, prioritizing the interests of the community, wise and wise, considering its origin, *sudibya*, *Aja dumeh* and so on.

Third, the institution seeks to carry out learning by utilizing information technology, and equipping teachers with supporting skills through courses or training such as by participating in the Javanese MGBS, to further explore the material before being taught. However, data is still found that there has not been maximum effort in dealing with these obstacles. There are still some principled teachers whose learning is important to be delivered according to what is in the book and the questions in it are done and then corrected, but there are still efforts to habituate the Javanese language according to the recommendations of the city government

g. Information Technology Adopsi in Javanese Language Learning

The adoption of contemporary information technology in learning such as the internet and digital media is carried out in online learning, and this helps teachers develop online learning materials easily. The use of appropriate BJW learning media Learning resources used online in Javanese language learning to access textbooks, LKPD (Student Worksheets), digital books, digital geguritan books, and other supporting sources, namely wayang stories using learning media in the form of videos from *the Youtube platform*.

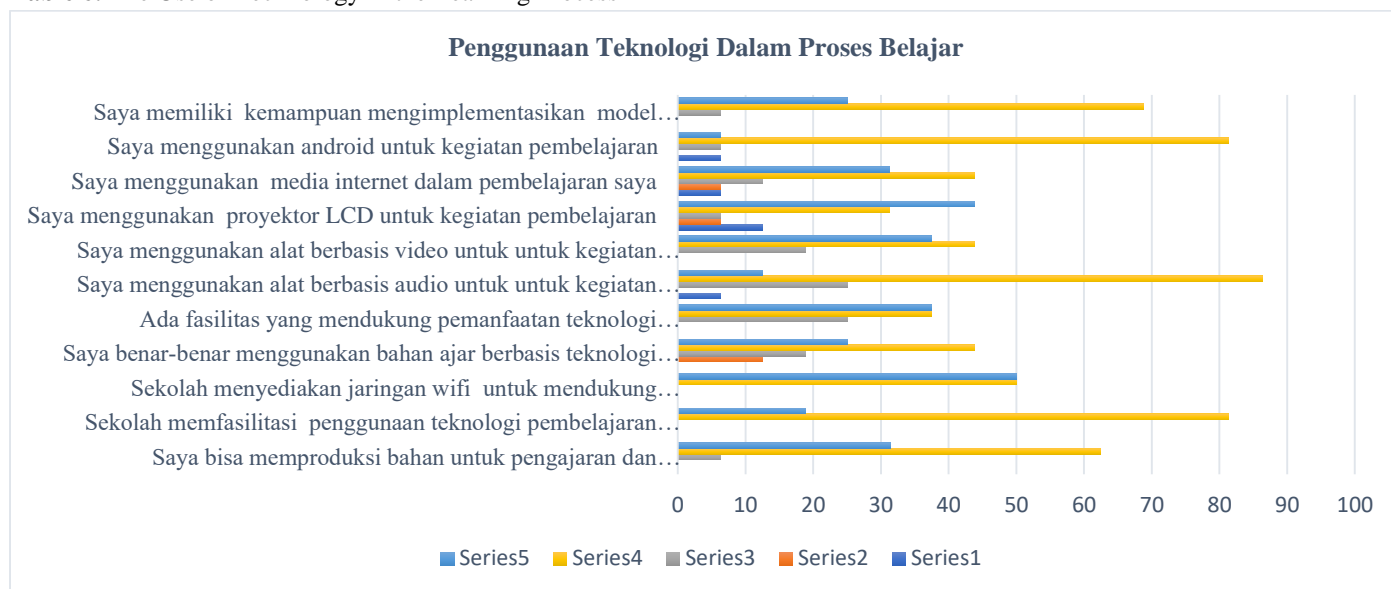
Using the adoption of information technology, some materials that require practice, in online learning also tasks are carried out using the help of software such as *Microsoft Word, power points, canva, excel*, and other similar software. In addition to this, learning videos that have animated models and Javanese songs as an introduction to Javanese language learning content also contribute to the adoption of this

technology. So, elementary schools are adopting information technology in Javanese language learning to facilitate practice or to overcome skill limitations such as developing macapat or nembang dolanan.

Elementary schools in East Java not only use technology but still use media directly or factually, even using learning media in the environment around students. Students are invited to preclude directly with dialogue or dramatization in class, for example: When hosting at home, serving dishes to guests, talking to guests using *basic manners*, and so on. If children in practice still use the wrong or mixed language, it can be corrected directly by the teacher.

Another finding is that there are still schools—albeit small in number—that have not used the adoption of learning media technology. Teachers only use it when necessary, as in the material. Because teachers are not proficient in learning, YouTube is used as a teaching medium.

Table 6. The Use of Technology in the Learning Process



h. Institutional Support for Javanese Language Learning in Schools

In this case, the school supports Javanese language learning by providing supporting books in the school library. All facilities needed for BJW learning are generally adequate and can be carried out without significant obstacles.

The Institution supports Javanese language learning by providing textbooks for students for 2 semesters in addition to providing a wifi network for teachers to access media and materials online if the material is not yet available in print media. Another support that can be expressed from the results of observations is to provide the widest possible opportunity for teachers to develop and vary strategies in learning. There was an activity every Wednesday before school lessons were collected and then used Javanese for habituation. Every Wednesday must speak *in the language* either between friends or with teachers.

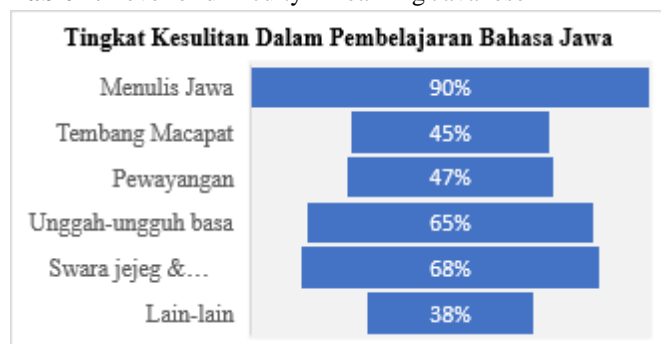
Some schools provide a WANI stage as a place to support the habituation of the Javanese language, namely there are BJW language paribasan, counting, gamelan names on the stage, colors, and wayang names. In addition, children are told to display their ability to develop Javanese or tell stories using the Javanese language both children who come forward to perform on the WANI stage are scheduled and spontaneous. For children who dare to perform of their own accord, the school gives rewards to the child. School institutions in general strongly support the existence of Javanese language learning, including the provision of facilities and infrastructure needed in learning Javanese.

i. The Most Difficult Materials in Javanese Language Learning

The most difficult materials in learning Javanese include 90% related to writing Javanese aksara, murdha script, rekan script, swara script, and number script, and 45% about

Javanese *tembang* (*Macapat and Dolanan*). The use of uncommon language, namely using the Kawi language, makes it difficult for students to understand the meaning of *tembang*, then in the literature students and teachers are often confused to distinguish the characteristics of *tembang macapat* such as *dhandhang gula, gambuh, mijil, kinanthi, pangkur, durma, asmaradana, pucung, maskumambang*). 47% also relates to puppetry and its empire. This is because nowadays it is rarely performed and heard by puppetry so things related to his puppetry and his kingdom are not known by students. Furthermore, 65% have difficulty distinguishing the application of *ngoko, ngoko andhap, madya, krama, and krama inggil, and* 68% have difficulty distinguishing phonemes (*swara jejeg and italicized script*). Another difficulty is pragmatic skills in the use of the formal Javanese variety (*antawacana*). The percentage of overall problems in Javanese language learning in elementary school can be seen in the diagram figure below.

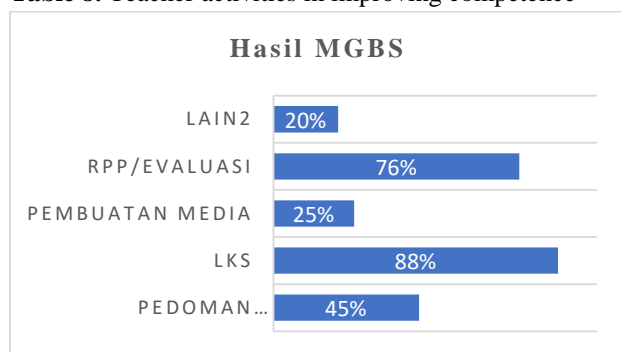
Table 7. Level of difficulty in learning Javanese



j. Teacher Deliberation in the Field of Javanese Studies

There is no Teacher Deliberation in the Field of Javanese Studies, there is only for the junior and senior high school levels. Because the Javanese teacher in elementary school is a class teacher and there is no special teacher yet. In some areas, there are teacher working groups that aim to make Javanese language devices and student worksheets, as support for learning Javanese. The most results were 88% compiling LKS. MGBS results are as follows:

Table 8. Teacher activities in improving competence

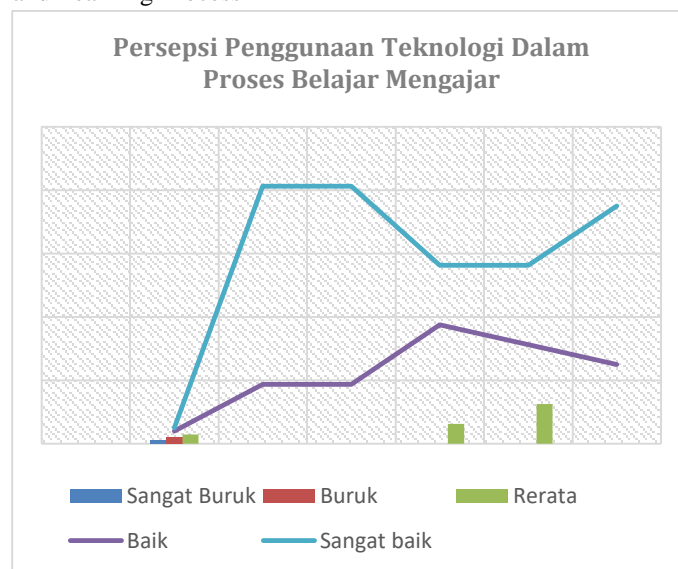


k. Use of Information Technology

1. Perception of the use of technology in the teaching and learning process

The perception of the use of technology in the teaching and learning process of Javanese shows a significant number. Eighty percent reflects the presence of a positive perception. The use of technology has the advantage of being able to promote teaching and learning that follow the times. The survey results also show that technology not only helps teachers but also helps students to remember and retain what is learned longer. There are even 80% more stated that technology not only makes learning more effective but is also considered important because it helps the teaching and learning process. The full picture can be seen in table 9 below.

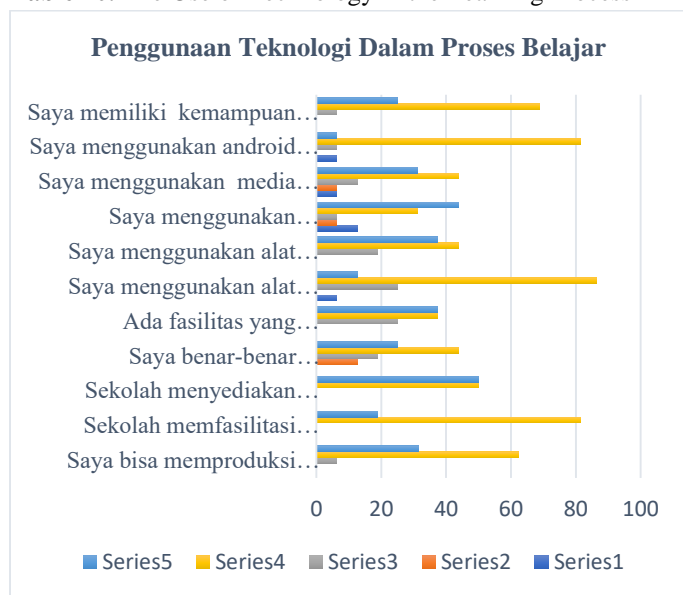
Table 9. Perception of the Use of Technology in the Teaching and Learning Process



2. The use of technology in the teaching and learning process In Javanese language learning in elementary schools, the use of technology has not been fully implemented. Internet usage, video usage, and LCD, less than 50%. The data also shows a lack of technology utilization due to the lack of adequate network availability of 50%, but what is quite encouraging is that >60% of respondents have been able to produce teaching materials. The highest achievement was the use of audio-

based tools—for balanced media—which reached 87%, then the use of android media—for student assignments—by 81% (see Table 10).

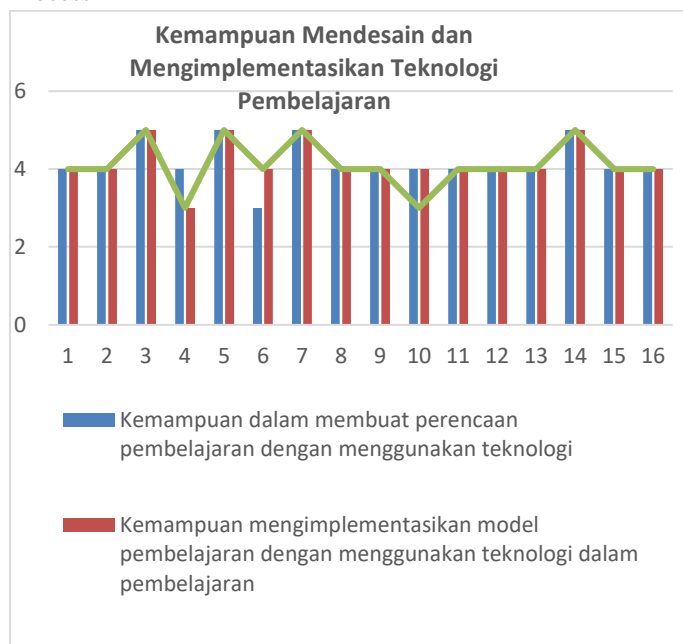
Table 10. The Use of Technology in the Learning Process



3. Ability to design technology in the teaching and learning process

The ability of teachers to design technology in the teaching and learning process shows a figure of 87%. This is a good result. There is a picture of equality between the ability to plan and the implementation of learning technology. However, the ability to choose the right media according to the learning model shows a low number. See table 11 below,

Table 11. Ability to Design Technology in the Learning Process



4. Technology platforms in learning activities

The technology platforms used in learning activities, are LMS, Web Learning, SMS/Messenger, WhatsApp, Telegram, Facebook, Instagram, Google Classroom, Google Translate, Google Forms, Google Quiz, Quizis, and Google Drive. Whatsapp usage ranked the highest, following google forms, google drive, google classroom, and quizzes. The full percentage of use of this information technology can be seen in table 12 below:

Table 12. Technology platforms in learning activities



DISCUSSION

1. Key Findings

The purpose of this study is to examine in depth how teacher competencies, curriculum, tech books/textbooks, and problems in learning local content in Javanese elementary schools in East Java are implemented. Then how can information technology that characterizes the principles of 21st Century learning in the local content of Javanese elementary schools in East Java be applied?

In the first problem, data was found that teacher competence, curriculum, tech books/textbooks, and problems in learning local content in Javanese elementary schools in East Java, showed numbers below the standard. The competence of the teacher shows a very low figure. In table 1, 90% of elementary school teachers in East Java do not have competence as Javanese language teachers. This is because until now no institution academically opens special education majoring in Javanese for the elementary school level. So that the Javanese language teacher was handed over to the class teacher. The results of other studies, as conducted by Rita, in several regions stated that the factor of teacher competence is the main element in the problem of learning Javanese. Incompatible competencies lead to a lack of understanding and qualifications of teachers in the use of appropriate approaches, methods, strategies, and learning models for the field of study of Javanese. In addition to this, there is also a lack of interest in learning Javanese by students in elementary schools. In another study conducted by Ulfa, it was found that the problem faced by teachers in learning Javanese is that they consider learning important to be applied. Javanese teachers must also arrange their teaching materials to arrange books to

match teaching materials and using Javanese as the language of instruction makes it difficult for teachers to understand teaching materials to their students. Meanwhile, on the other hand, Javanese language learning, as well as a common phenomenon that other lessons in schools in Indonesia also face, has difficulty with the application of the learning process boldly, so face-to-face meetings and conventional learning are still an option. (Ysh. and to the., 2019c)(Rita & Utari, 2013)(Ulfa, 2015b)(Utami & Zustiyanoro, 2022)

The second finding relates to the inadequate use of information technology in most schools. More than 67% of schools still have difficulty utilizing information technology. Its utilization has not been evenly distributed and has not been supported by adequate facilities. Schools in urban areas are also experiencing network problems, especially elementary schools in rural areas. However, survey data, which specifically includes: perceptions of the use of technology in the teaching and learning process, the use of technology in the teaching and learning process, the ability to design technology in the teaching and learning process, and technology platforms in learning activities, show relatively good numbers. It found data that technology is changing the perception of teachers as educators and activating cognitive processes that make the quality of learning improve. In addition, it shows that Javanese language learning technology provides five broad functions, some of which play a transformative role in learning. Technology is also able to provide efficiency for educators and students, making daily routines such as checking and assessing homework faster and easier. It also found information that teachers use technology to enable access to a wider range of learning resources. Better access also helps teachers to adapt or personalize teaching to meet a variety of learning needs.

2. Implications for Practice

The findings of this study have implications for Javanese language learning in elementary schools throughout East Java. The application of standard curriculum and textbooks in Javanese language learning is the main choice in policy-making so that the achievement of successful Javanese language learning can be measured. To improve Javanese language teaching and learning, **First**, the findings in this study reinforce that policymakers should provide affirmation of the uniformity of curriculum and textbooks, although it is still allowed to use local versions of teacher thoughts and creations following environmental conditions. Schools institutionally can also be a catalyst in the implementation of policies so that the two can be implemented in harmony. **Second**, it emphasizes attention to policies that support the optimization of technological infrastructure, both institution-driven, and by teachers. These findings can be combined and developed so that they can be useful and aligned with the key needs of schools to design and implement technology integration. **Third**, Encourage teachers to share their knowledge and skills in the use of certain technologies to be

able to optimize Javanese language learning. Information technology resources can be shared and transformed with other colleagues or teachers continuously. Another major implication of the use of information technology lies in optimizing the ability to use technology that can contribute to the success of Javanese language learning in elementary schools.

3. Study Limitations

This research has several limitations, **First**, the lack of research on Javanese language learning in elementary schools that can be used as a reference. So this research produces findings that need to be tested again with further research findings in the field of learning in elementary schools. **Second**, findings regarding the role of technology and its implementation in Javanese language learning in elementary schools will be more challenging if supported or adequate technological infrastructure. **Third**, a fairly wide scope of classroom observation and a fairly diverse variety of school characteristics will have the possibility that the results of this study will be biased. Therefore, it is very necessary to use strategies and techniques for the use of information technology.

CONCLUSION

The competence of Javanese language teachers in elementary schools has not met the requirements. In elementary schools, Javanese language learning is carried out by class teachers, who do not have teaching qualifications in the field of Javanese language studies. The curriculum used is not standard. In addition to using curriculum 13, the local content curriculum of East Java Governor Ate No. 14 is also used. In some schools, the use of local curricula from teacher deliberations is also found. The textbooks/textbooks used also vary greatly according to local needs.

Problems in Javanese language learning, in addition to being related to the ability of teachers to design learning with an approach and the absence of standard textbooks, are also related to innovative learning methods/models, strategies, and techniques based on information technology. No less important factors are related to the content of vocabulary and sentence material, the severity of the "macapat" and "dolanan" balance, as well as the non-optimal use of media and tools in the implementation of learning. Finally, from the student side, is a decline in interest in learning Javanese, The implementation of the 21st-century learning principles on the local content of Javanese elementary schools in East Java, which specifically includes: perceptions of the use of technology in the teaching and learning process, the use of technology in the teaching and learning process, the ability to design technology in the teaching and learning process, technology platforms in learning activities have not been able to run as they should. The cause is the limited network and lack of ability of teachers to design information technology-based learning. So that the implementation is also limited to

the use of certain platforms such as LMS, Web Learning, SMS / Messenger, WhatsApp, Telegram, Facebook, Instagram, Google Classroom, Google Translate, Google Forms, Google Quiz, Quizis, and Google Drive.

RECOMMENDATIONS

To obtain representative and measurable results from research on Javanese language learning in elementary schools, a combination of qualitative research design (with observations and interviews), and survey-based quantitative like this is an option. The use of collaborative methodologies allows it to be used to measure teaching strategies. If designed and implemented well, research with collaborative methods can contribute to significant results and contribute positively to Javanese language learning in primary schools in general.

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