

Improving Student Learning Outcomes in Javanese Language Lessons through Quantum Learning and Karsawa Learning Media

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Abstract

The formulation of the problem in this study is to determine the improvement of student learning outcomes in Javanese language subjects through Quantum Learning and Karsawa learning media. This study chose a quantitative method with a pre-experimental design research design and a one-group pretest posttest design. This study only uses one class with a sample of 21 students who will be given a written test of Javanese learning outcomes twice, namely a pretest before and a posttest after treatment. Based on the study results, the average pretest score was 60.57, and the average posttest score was 84.76. This shows an increase in the posttest score, which is higher than the pretest score in Javanese language lessons. It will be analyzed through the Wilcoxon test statistical test to strengthen this value. The significant number is $0.000 < 0.05$, indicating that Asymp.Sig. < 0.05 . From the results of the hypothesis test, it can be concluded that applying the Quantum Learning method assisted by Karsawa media has an effect on the learning outcomes of class III Javanese language at *Madrasah Ibtidaiyah* (MI) Mambaul Ulum. The Quantum learning method and Karsawa media can improve Javanese language learning outcomes, especially Javanese characters in students.

Keywords: Karsawa Learning Media, Learning Outcomes, Quantum Learning.

Abstrak

Rumusan masalah dalam penelitian ini adalah untuk mengetahui peningkatan hasil belajar siswa pada mata pelajaran bahasa Jawa melalui media pembelajaran *Quantum Learning* dan Karsawa. Penelitian ini memilih metode kuantitatif dengan desain penelitian *Pre-Experimental Design* dengan rancangan *one group pretest posttest design*. Penelitian ini hanya menggunakan satu kelas dengan sampel sebanyak 21 siswa yang akan diberikan tes tertulis hasil belajar bahasa Jawa sebanyak dua kali yaitu *pretest* sebelum dan *posttest* setelah perlakuan. Berdasarkan hasil penelitian diperoleh nilai rata-rata *pretest* sebesar 60,57 dan nilai rata-rata *posttest* sebesar 84,76. Hal ini menunjukkan adanya peningkatan nilai *posttest* yang lebih tinggi dibandingkan dengan nilai *pretest* pada pelajaran bahasa Jawa. Untuk memperkuat nilai tersebut akan dianalisis melalui uji statistik Wilcoxon test. Angka signifikansi sebesar $0,000 < 0,05$ yang menunjukkan bahwa Asymp.Sig. $< 0,05$. Dari hasil uji hipotesis dapat disimpulkan bahwa penerapan metode *Quantum Learning* berbantuan media Karsawa berpengaruh terhadap hasil belajar bahasa Jawa kelas III di MI Mambaul Ulum. Metode *Quantum Learning* dan media Karsawa dapat meningkatkan hasil belajar bahasa Jawa khususnya aksara Jawa pada siswa.

Kata Kunci: Keterampilan Membaca, Media Komik Digital, Media Pembelajaran.

INTRODUCTION

The younger generation needs to preserve cultural heritage, such as traditions, arts, customs, handicrafts, and local languages that reflect the identity of a region (Wardani, 2024). However, with globalization and technological advances, attention to preserving local culture is declining, especially among the younger generation. The rapid progress of Information and Technology (IT) has caused a loss of cultural values, which is characterized by the erosion of old cultural values in society (Sawitri et al., 2021). Besides, One contributing factor to moral degradation is the diminishing appreciation and affection for one's cultural heritage (Faizah et al., 2023). Local wisdom should be preserved by integrating it into early childhood education to ensure its transmission to future generations (Fithriyah et al., 2024; Sakti et al., 2024).

English as an international language has created new problems. In Malaysia, the use of the Malay language has begun to be abandoned, especially by the younger generation (Harwati & Sathian, 2024). Bilingual or international schools prioritize English over Indonesian or local languages in Indonesia (Maharani et al., 2024; Pradita & Arimi, 2024). Whereas Indonesia is rich in ethnic groups, one of the largest ethnic groups in Indonesia is the Javanese tribe, which uses the Javanese language. The Javanese language is still highly valued as an identity marker with the most significant number of tribes (Zen, 2021). One of the efforts that can be made to restore the function of local languages is through learning in schools (Rahman et al., 2022). Therefore, the Javanese language has been a subject since elementary school (Sulistiyani, 2020). Learning Javanese is an effort to maintain regional culture and as a tool to advance ethics, which are currently declining (Ekowati, 2018).

Javanese language lessons generally cover Javanese script, vocabulary, manners, literature, and everyday expressions, but their application still has many obstacles. Javanese language material is considered difficult to learn, including reading Javanese script. Javanese script consists of letters with shapes, images, and writing order in Javanese language and literature (Anifah et al., 2022). However, students' interest and motivation to learn Javanese script is still low (Sukoyo et al., 2021). Low knowledge of Javanese script among students includes: 1). lack of innovation in learning methods (Sulistiyani, 2020); 2). learning media in Javanese script is less interesting (Setiawan et al., 2022); 3). Using conventional learning models makes students less interested and do not play an active role during learning (Andani, 2023; Anggraini, 2017); 4). Students' motivation and perception

of Javanese scripts are complex, and the intensity of using Javanese scripts in everyday life is low (Wardani, 2024); 5). Students have difficulty remembering the form of the Javanese script (Puspaningrum, 2022). This further shows that learning Javanese script is still far from what is expected (Sukoyo et al., 2019).

Researchers conducted observations and interviews with teachers and students of class III MI Mambaul Ulum Dagan to explore deeper data. The lecture method is still used in the learning process, with questions and answers and discussions in learning the Javanese language on Javanese script materials, so learning seems monotonous, and the material cannot be adequately absorbed. So, almost all Javanese language learning outcomes are still under the KKM (Lestari, 2018). The existence of the above problems requires the application of appropriate learning methods to overcome the learning outcomes experienced by students.

One of the materials considered difficult in the Javanese language is the material on the origin of the Javanese script and the form of the Javanese script (P. R. Sari, 2020). Using the proper learning methods can awaken motivation, skills, and confidence and positively influence student learning outcomes through the suggestions given. One of the efforts that needs to be made to improve student learning outcomes is using learning methods that actively and have fun with students, one of which is Quantum Learning, which emphasizes fun learning (Wardana et al., 2019) so that the researcher will apply the *Quantum Learning* to improve learning outcomes in Javanese language.

Learning *Quantum Learning* is a fun, imaginative, not boring learning handle, the teacher's choice or facilitator. The usability of the *quantum learning* method is to create an effective learning atmosphere and the learning process in writing in a fun way (Basaria, 2016). Quantum Learning is to bring learners closer to the teacher, the value of the teacher of learners, and pass on the value of the teacher to the world of learners. To learners, which is better known as the TANDUR concept (Handayani et al., 2019).

TANDUR includes: 1) Grow (*Tanamkan*): Foster student interest by satisfying and utilizing the wealth of student experience. 2) Natural (*Alami*): Providing opportunities for students to conduct experiments or proofs. 3) Name (*Namai*): Provide other keywords, concepts, formulas, strategies, or methods. 4) Demonstrate (*Demonstrasikan*): The method of presenting lessons is by demonstrating to students a process, situation, or particular objects being studied, either done directly by the teacher or by other people who are more expert in the topic being discussed. 5) Repeat (*Ulangi*): Providing an opportunity to repeat the lessons taught by allowing students to teach others the new knowledge they have

gained. 6) Celebrate (*Rayakan*): Celebration can provide a sense of completion by honoring the effort, perseverance, and success that students have achieved (Porter & Hernacki, 2007).

This study uses Karsawa Karsawa Learning Media assistant to apply Quantum Learning. Karsawa (Javanese Language Card) is a visual media of cards written in Javanese script consisting of picture illustration cards and stacking cards (legena cards and clothing cards). This learning media helps learn as variation innovation and makes it easier for students to write Javanese scripts (Ariani & Subrata, 2020). Karsawa media learning is duplicated and modified from the learning media developed by Desti Ariani and Heru Subrata.



Figure 1. Legena Character Card and Gift Card

Several studies are related to the effectiveness of applying *Quantum Learning* to student learning outcomes. 1). Method *Quantum Learning* can prepare students to be able to think critically and imaginatively and improve students' memory to achieve good learning outcomes (Anggara & Rakimahwati, 2021); 2) Learning using *Quantum Learning* is better than learning using conventional methods (Rahmani & Muslihah, 2020); 3). Method *Quantum Learning* Helping with puzzle game media in Javanese script materials can influence student learning outcomes in Javanese script materials (Handayani et al., 2019). In previous research, many discussions have been about *the Quantum Learning* method to improve Javanese language learning outcomes. Still, no research has used learning media, especially in Javanese script materials. The novelty that will be carried out in this study is the use of *the Quantum Learning* method assisted by Karsawa media to improve student learning outcomes in Javanese language subjects.

Urgency in research on Javanese language lessons, especially Javanese script, is a lesson that students must understand in addition to preserving culture. It is also an ethnic identity, however, with various existing problems. There needs to be technological breakthroughs that can arouse the interest of young people as the nation's next generation

to become familiar with Javanese script (Widiarti & Adji, 2024). Researchers try to offer solutions to overcome students' low understanding of Javanese using the Quantum Learning method assisted by Karsawa learning media. The problem formulations in this study are: 1) how is the application of the quantum learning method assisted by media in Javanese language lessons? 2) how is the effect of the quantum learning method assisted by media on Javanese language subjects?

RESEARCH METHODS

This study uses a quantitative research type with a Pre-Experimental Design research design of the One Group Pretest-Posttest Design type. This study uses two tests, the pretest and posttest, where the pretest is tested in the initial conditions before applying the Quantum Learning method. The posttest is tested after the Quantum Learning method is applied to determine the final results. The population in this study was 21 students of grade III MI Mambaul Ulum, who were selected using a saturated sample technique. The research instrument was a written pretest and posttest test of Javanese language learning outcomes. The data collection technique used a test of multiple-choice questions previously carried out at the validation stage. The validation carried out was validation of media, teaching modules, Javanese language learning outcome tests, and reliability tests. The data analysis technique for calculating the hypothesis used a non-parametric test (Wilcoxon) with the help of the SPSS version 22 application.

RESULTS AND DISCUSSION

Results

Before conducting research at school, researchers prepare learning tools through lesson plans and test instruments. These learning tools are validated by expert validation, namely PGMI Unisla lecturers. After the expert declares the learning tool valid, the researcher tests the test instruments, namely *the pretest* and *posttest*, to the respondents. The results of *the pretest* and *posttest* can be seen that learning outcomes have improved. The data of *the pretest* and *posttest* results are as follows:

Table 1. Pretest and Posttest Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	21	27	93	60,57	17,943
Posttest	21	53	100	84,76	13,881
Valid N (listwise)	21				

Table 1 shows that the result of the *Pretest* has an average of 60.57 with a minimum score of 27 and a maximum score of 93. The posttest results showed an average score of 78.40, with a minimum score of 53 and a maximum score of 100. With this, it can be concluded that the *posttest* experienced an increase in the pretest value. This can be seen in the graph below.

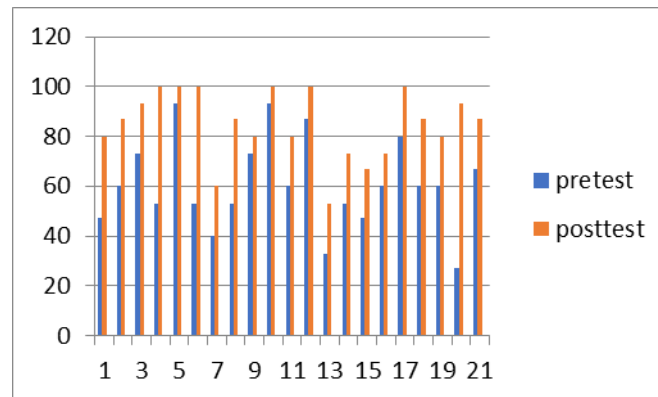


Figure 1. Pretest and Posttest Results

Figure 1 clearly shows a diagram of pretest and posttest data results where there is a difference between the initial test data (pretest) and the final test data (posttest), which is the same according to the learning outcomes table above. Hypothesis tests will be carried out with non-parametric tests with the help of SPSS version 22. However, before the hypothesis test, the researcher conducted a normality test as a prerequisite test. The normality test results of two variables, namely the independent variable and the study-bound variable, with a statistical test using Shapiro-Wilk. The results of the normality test can be seen as follows:

Table 2. Normality Test Results

Tests of Normality			
	Shapiro-Wilk		
	Statistic		
	s	Df	Sig.
Pretelst	,960	21	,520
Posttest	,906	21	,045

Based on Table 2, the normality test results show a significance value > 0.05 , meaning that the data is not normally distributed. The hypothesis test uses *pretest* and *posttest values* to determine the influence of applying the Quantum Learning method and answer the hypothesis test results where H_a is accepted, and H_0 is rejected. The hypothetical test used in this research is the Wilcoxon test with the help of SPSS version 22.

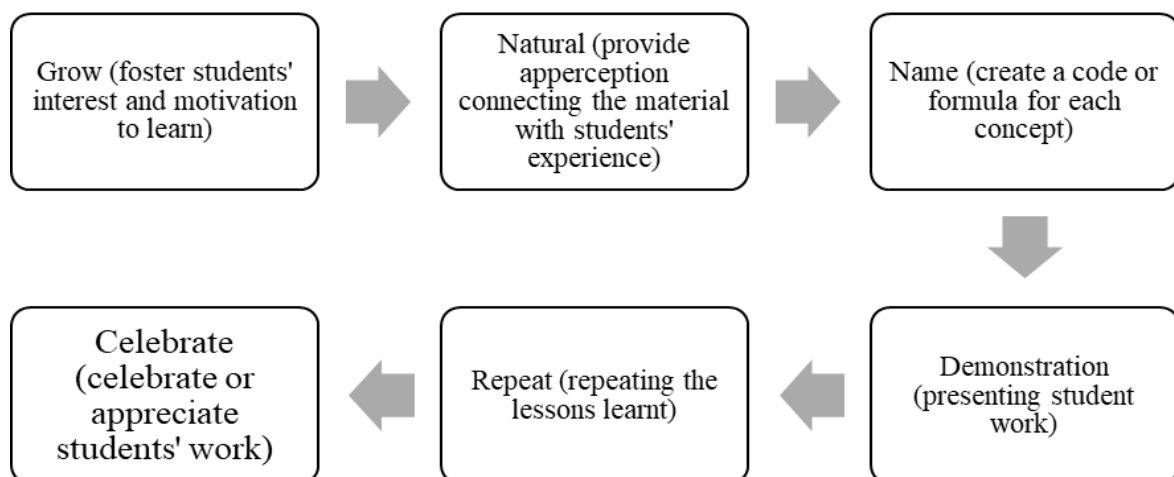
Table 3. Hypothesis Test Results

Test Statistics	
	Posttelst – Pretelst
Z	-4,054b
Asymp. Sig. (2-tailed)	,000

Based on Table 3, the results of the non-parametric test with the SPSS version 22 results were obtained from the Asymp.sig data. [2-tailed] value 0.000. If the value is $0.000 < 0.05$, it can be concluded that the hypothesis is accepted. This means there is a difference between the results of the Javanese language teaching, so it can be concluded that there is a Quantum Learning translation method assisted by Karsawa learning media on the results of Javanese language teaching in class III of MI Mambaul Ulum. Based on the description above, this study aims to determine the application and influence of *the Quantum Learning method* assisted by Karsawa Media on the learning outcomes of the Javanese language.

Discussion

This research was carried out 6 times in class III MI Mambaul Ulum. The first meeting of the researcher provided *a test of pretest* questions. Then, the 2nd meeting to the 5th meeting on applying *the Quantum Learning* method, and the sixth meeting conducted *a posttest* question test. In the second to fifth meetings, the researcher applied *the quantum learning* method assisted by Karsawa media with the following steps:

**Figure 2.** Steps of the Quantum Learning Method Assisted by Karsawa Learning Media

In the second meeting, the learning process took place in the classroom using the Quantum Learning method. Students were not yet optimal because students were not used to using new learning methods. Students are also still adapting to the use of Karsawa learning media. In the third meeting, by applying demonstration steps, students began to

use enthusiasm in the learning activities, and the students were self-confident in conveying the results of their dissecting in the classroom. Students have started to get used to the quantum learning method and the use of Karsawa learning media. Quantum learning will enhance the benefits of increasing motivation, skills, and self-confidence (Mike, 2015). It aligns with Hapudin's understanding of cognitive learning, which involves stimuli, responses, and very complex thought processes (Hapudin, 2021).

At the fourth meeting, the condition of the class was conducive. Through the naming steps, the teacher helps students find codes or formulas in the material with the help of karsawa media and sung to make it easier to remember. Each student can memorize and cultivate teaching activities smoothly and efficiently. It is connected with the advantages of the Quantum Learning method, which emphasizes students' academic and skill development and creates comfortable and fun learning (Indrayani et al., 2019). There were no obstacles at the fifth meeting, and the teaching and learning process went smoothly, and students felt happy. This is in connection with the principle of Quantum Learning (Li et al., 2020). Celebrating success is expected to provide feedback and motivation to improve student learning outcomes (R. T. Sari, 2015). When students are given learning using the Quantum Learning method, students are more active in group discussions. Following the opinion that students are more active in learning because it is packaged by applying the TANDUR design, students find it easier to receive the material (Maruti & Anggraini, 2022; Maruti & Utomo, 2023).

Students are taught to be brave and confident when speaking in front of the class, especially when introducing Javanese script material. Students have been able to explain and distinguish Javanese characters and can explain Javanese characters in front of the class with the help of Karsawa learning media. That agrees with (Yustiyawati, 2021) that this method can help foster self-confidence and help develop communication skills. Students can find concepts or codes in the material used to make it easier to understand the learning material. In line with Rahmani and Muslihah, the Quantum Learning method can increase student creativity, and students can carry out joyful learning that is accepted and understood by students (Rahmani & Muslihah, 2020). It follows the opinion that *Quantum Learning* Makes students more active, creative, and imaginative. Learning becomes fun, making the material easier for students (Hidayatusholikah et al., 2023).

The results described above can be concluded that using Quantum Learning with the help of Karsawa media can improve learning outcomes compared to previous ones centered on teachers. By using this method, students can find out the origin of the Javanese

script and the form of the Javanese script and be able to interpret it and arrange words in the Javanese script (Nurhadi, 2020). Students preserve culture through Javanese language lessons (Prestoza et al., 2020). The Quantum Learning method's effect on students involves student activeness in thinking and finding concepts (Khozaei et al., 2022). Students are trained to be brave and confident to speak in front of and create a pleasant learning atmosphere so that the material is more easily accepted by students so that student learning outcomes can increase (Kamal, 2018). After the research was conducted, students could understand and know the origin of the script and the form of the Javanese legena script. It is evidenced when students can do the questions correctly through the code given with the help of Karsawa learning media. Using Karsawa media can improve understanding and make it easier for students to learn Javanese script material (Fravika, 2017).

The Quantum Learning method is very suitable to be applied to Javanese language learning, especially on Javanese script material in class III MI Mambaul Ulum. Using the Quantum Learning method can improve student learning outcomes, train confidence to speak in front of the class, and work with the group. Students are more enthusiastic about learning because they use the Quantum Learning method assisted by Karsawa Media, which has never been applied before in class III MI Mambaul Ulum, so it feels fun during the learning process (Syafuruddin, 2020). When the Quantum Learning method is used with the help of karsawa learning media in class III Javanese language subjects, students can gradually accept and follow the learning process well. Learning media, especially visual media, can improve understanding of Javanese script lessons. (Afriyani & Senoprabowo, 2025; Azzahra & Sukardi, 2023). In the teaching and learning process, students become more active and excited when carrying out learning when using the Quantum Learning method assisted by carcass media, so this can improve student learning outcomes.

By combining the Quantum Learning method with the help of karsawa learning media, it is expected that students will achieve, among others: 1) Students are taught to be active in discussing with friends in a group (Anggara & Rakimahwati, 2021; Dewi et al., 2022)); 2) Students are taught to be brave and confident (Yustiyawati, 2021) ; 3) Students are taught to find concepts or codes in the material that are used to make it easier for students to understand learning material (Muslihah, 2020); 4) The learning process is fun so that it is readily accepted and understood by students (Hidayatusholikah et al., 2023).

CONCLUSION

It can be concluded that there is an increase in student learning outcomes through the Quantum Learning method and Karsawa learning media. Quantum Learning and Karsawa learning media make Javanese *aksara* material easier to understand and fun for students. These findings imply that integrating innovative teaching strategies with contextual learning media can significantly enhance student engagement and comprehension, especially in culturally rooted subjects like Javanese *aksara*. Given that this study was limited to one locus, namely a third-grade class in a private *Madrasah Ibtidaiyah* with 21 students, the results may not be generalizable to other contexts. Therefore, future research should involve a larger and more diverse sample across different school settings and grade levels to validate and expand upon these findings. Additionally, further exploration of the long-term impact of Quantum Learning and similar media on student retention and motivation would be beneficial.

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