Educational Journal of Learning Technology
Vol. 3, No. 3, pp. 228-235, May 2026
https://doi.org/10.58230/edutech.v3i3.88
Received June 02, 2026; Revised June 09, 2026; Accepted June 10, 2026

The Effectiveness of the Talking Pen Al-Qur'an Audio Visual Media in Improving the Ability to Read the 5 Makharijul Huruf (Experimental Study)

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Abstract. This study examines the use of the audiovisual Talking Pen Al-Qur'an media for learning the five Makharijul Huruf. The objectives are: (1) to determine students' understanding of reading the Qur'an after using the media, and (2) to determine their reading ability. This experimental study employed a one-group pretest-posttest design with 24 students (8 males, 16 females). Instruments included tests of understanding and reading ability, while data collection used tests, observation, and documentation. Data were analyzed using descriptive statistics. Results showed: (1) The average pretest score for understanding was 32.54 (very poor), which increased to 83.83 (good) after intervention. (2) The average pretest score for reading ability was 49.54 (poor), which increased to 80.54 (good) after intervention. Thus, the audiovisual Talking Pen Al-Qur'an media significantly improves both understanding and reading ability in Makharijul Huruf.

Keywords: Audio Visual Media; Talking Pen; Al-Quran; Makharijul Huruf.

1. Introduction

Education is a conscious and planned effort to create a learning environment and process so that students actively develop their potential for religious-spiritual strength, self-control, personality, intelligence, noble morals, and the skills needed by themselves and society (Khadavi et al., 2023). Qur'an education is indispensable for humans. Therefore, all elements of education continue to strive to improve their quality. The Qur'an is a guideline for the life of Muslims both in this world and in the hereafter (Pebrina, 2022). If guided by the Qur'an in every step, life will be directed towards goodness and away from evil, because studying the Qur'an is obligatory for Muslims.

Media comes from the Latin word medium, which means intermediary. Media is a tool used to convey messages from senders to recipients (Jauhari, 2018). Learning media has three important roles in learning: attentional (attracting students' attention), communication (serving as a communication facilitator), and retention (helping students remember important concepts).

The use of learning media is very important in the learning process because it allows for more effective and efficient learning (Hasriadi et al., 2023). One of the key elements in the learning process that must keep up with rapid technological developments is learning media. A good and high-quality learning process requires the use of learning media (Fakhrunnisaa et al., 2024). So, with the advent of audiovisual media, students can see new things, stimulating their thoughts, attention and

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interest in the learning process, making them more active in following the teaching and learning process.

Based on observations by researchers at the Jabal Nur Landfill in Radda Village, Baebunta District, North Luwu Regency, it was found that almost all students read the Quran fluently, but their letter pronunciation was still lacking. During the learning process, some students play. In contrast, others are slow to understand what is taught because the teacher teaches only the Quran, and the students then read it under the teacher's supervision without using any aids. So that students feel a little bored and make additional movements by playing and going in and out of the room during the learning process, some obstacles include limited resources to develop and update the curriculum according to students' needs, and different ages, which can hinder effective learning. Teacher competence and limited opportunities for ongoing training and competency development result in suboptimal understanding of Qur'an learning standards. The limitations of indoor support facilities, such as Makharijul literacy learning aids and separate practice areas, are also inadequate, affecting quality and comfort during the learning process.

There are so many ways to teach the Qur'an, all of which share the same goal: to help students read it properly and correctly. One way to do this is to include audiovisual media in the Qur'an learning process. Audio means it can be heard, visual means it can be seen, and audiovisual means it can be heard and seen (Lopez et al., 2022). Audio-visual media is modern instructional media that is in accordance with the times (advances in science and technology), including media that can be seen and heard.

Learning models that use audiovisual media have been applied in various studies to improve learning outcomes. One of them is a 2022 research study titled "The Application of Audio-Visual Media in Improving Student Learning Outcomes in PAI Subjects." The research shows that using audio-visual media in learning can improve students' learning outcomes by achieving cycle 1 by 31%, increasing cycle 2 by 73% (Nur Soleha Rahmasari et al., 2022).

Talking pen is a program that can play sounds (Iffah & Rodiyah, 2022). A talking pen is an electronic device that allows easy, convenient reading or listening to the recitation of the Qur'an. This pen is equipped with a sensor that can detect Arabic writing on the pages of the Qur'an that have been specially programmed, so that when the pen touches a certain verse or surah, it will read or emit a reading sound for that verse.

The book of Makharijul huruf is a textbook that discusses the place of the coming out of letters in Arabic, especially in reading the Quran(Jaisy, 2023). This book explains the correct pronunciation of Arabic letters, as well as their origins, such as the letters that come from the throat (Al-halq), tongue (Al-lisan), lips (Ash-intercession), and nose (Al-khaisyum). By studying the Makharijul huruf, readers can improve the pronunciation of the Quran and understand the meaning of the verses more accurately. The talking pen of the Qur'an, paired with the Makharijul huruf book, is suspected to be a very effective learning tool for students because the book helps them understand where the letters appear.

Based on the description above, this study focuses on the application of audio-visual media talking pen al-Quran on 5 Makharijul huruf to find out the understanding of students in reading the Qur'an after using the Audio Visual Talking Pen al-Quran Media on 5 Makharijul huruf and also to know the ability to read the Qur'an after using the Audio Visual Talking Pen al-Quran Media on 5 Makharijul huruf.

2. Method

The research method used by the researcher is the Experimental Research method, which is the core of all types of research because it involves a series of activities that control, manipulate, and observe. Experimental research has four types of designs, namely: Pre-experimental design, Quasi-experimental design, True experimental design, and Factorial experimental design (Rusdy A Siroj, 2024). The experimental research used is pre-experimental in the form of a one-group pretest-posttest design (M. Farhan Arib dkk, 2020). This research was conducted at the Jabal Nur Landfill in Radda Village, Baebunta District, North Luwu Regency, for 2 months, from July to September 2025. The sample in this study comprised 24 students. The data collection techniques used included tests, observations, and documentation, and data analysis employed descriptive statistics. It is used to analyze data by describing the data collected.

3. Result

Understanding Makharijul Huruf

Based on research conducted at the Jabal Nur Landfill in Radda Village, Baebunta District, North Luwu Regency, data were collected using a letter comprehension test sheet to assess students' learning outcomes. The results of the letter comprehension test sheet given by students during the pre-test and post-test were obtained for the material of 5 letter Makharijul in TPA Jabal Nur students of Radda Village, Baebunta District, North Luwu Regency, as seen in the following table:

Table 1. Statistics of the results of the assessment of the understanding of the meaning of the letters by the students

No.	Statistics	Statistical Value	
		Pre-test	Post-test
1	Sample Size	24	24
2	Ideal Score	100	100
3	Maximum	55	100
4	Lowest Value (minimum)	10	70
5	Low Value (Range)	45	30
6	Mean	32,54	83,83

If the results of the Makharijul comprehension test for the students' letters are grouped into five applied categories, then the frequency distribution is obtained.

Table 2. Distribution and percentage score results of the assessment of students' letter comprehension before being given treatment (pre-test)

No.	Interval	Category	Nilai Pre-Test	
			Frequency	Presentase
1	85-100	Excellent	-	-
2	70-84	Good	-	-
3	55-69	Enough	-	-
4	40-54	Less	8	33,33%
5	0-39	Very less	16	66,66%
			24	100%

Table 3. Distribution and percentage score results of the assessment of students' letter comprehension after being given treatment (post-test)

No.	Interval	Category	Post-test scores	
			Frequency	Presentase
1	85-100	Excellent	12	50%
2	70-84	Good	12	50%
3	55-69	enough	-	-
4	40-54	less	-	-
5	0-39	Very less	-	-

	24	100%

Based on the statistical table, the assessment results for students' letter understanding show that learning outcomes have improved and are categorized relative to the average pre-test and post-test scores.

Ability to Read the Qur'an

Based on research conducted at the Jabal Nur Landfill, Radda Village, Baebunta District, North Luwu Regency, data collected through Qur'an reading tests were used to determine students' ability to read the Qur'an, thereby enabling assessment of their learning outcomes. The results obtained by the students during the pre-test and post-test in the form of practicing reading the Qur'an were analyzed descriptively for the ability to read the Qur'an of TPA Jabal Nur students in Radda Village, Baebunta District, North Luwu Regency, as seen in the following table:

Table 4. Statistics on the results of the assessment of students' Qur'an reading ability

No.	Statistics	Statistical Value	
		Pre-test	Post-test
1	Sample Size	24	24
2	Ideal Score	100	100
3	Maximum	80	93
4	Lowest Value (minimum)	27	60
5	Low Value (Range)	53	33
6	Mean	49,45	80,54

If the results of the students' practice test on reading the Qur'an are grouped into a five-category scale, a frequency distribution is obtained.

Table 5. Distribution and percentage of scores from the assessment of students' Qur'an reading ability before being given treatment (pre-test)

No.	Interval	Category	Nilai Pre-Test	
			Frequency	Presentase
1	85-100	Excellent	-	-
2	70-84	Good	2	8,33%
3	55-69	enough	6	25%
4	40-54	less	10	41,66%
5	0-39	Very less	6	25%
			24	100%

Table 6. Distribution and percentage of scores from the assessment of Qur'an reading ability after being given treatment (post-test)

No.	Interval	Category	Post-test scores	
			Frequency	Presentase
1	85-100	Excellent	10	41,66%
2	70-84	Good	11	45,83%
3	55-69	Enough	3	12,5%
4	40-54	Less	-	-
5	0-39	Very less	-	-
			24	100%

Based on the statistical table, the assessment of students' Qur'an reading ability shows that the ability to read the Qur'an after using the visual-audio media has increased and is categorized as higher than the pre-test and post-test scores.

4. Discussion

Understanding Makharijul Huruf

The results of the study show significant changes among students. This can be seen from the pre-test of the assessment of the understanding of the meaning of the letters of the students, the

average score of the results of the assessment of the understanding of the meaning of the letters of the students is 32.54 with the criteria of being very lacking, namely 16 students with a percentage of 66.66%, the criteria are lacking, there are 8 students with a percentage of 33.33%, the criteria are sufficient, the criteria are good, and the criteria are very good, there are no students with a percentage of 0%,. Meanwhile, the students' understanding assessment had an average post-test result of 83.83. So the learning outcomes of students after using audio visual media talking pen al-Qur'an on 5 makharijul huruf have better learning results, besides that the percentage of student understanding assessment results is very lacking, criteria are lacking, and criteria are sufficient, there are no students with a percentage of 0%, good criteria there are 12 students with a percentage of 50%, and very high criteria there are 12 students with a percentage of 50%, and very high criteria there are 12 students with a percentage of 50%

The results of this study convincingly show that the use of visual-audio talking pen media for the 5 makharijul huruf significantly improves students' understanding of the makharijul huruf when reading the Qur'an. The innovation in audiovisual talking-pen media positively impacts students' motivation to learn. It reduces boredom during learning, as evidenced by observations indicating that students are more enthusiastic when using audiovisual media.

Efforts to improve students' understanding with the use of audio-visual learning media have proven to be more effective in improving learning understanding compared to lecture learning methods (Rozi & Alawiyah, 2021). Other research also shows that the use of audio-visual media affects the development of a person's understanding and abilities. One of them affects the understanding of the Qur'an. This can be seen in students' ability to read hijaiah letters, as previously, several students had difficulty understanding how to read them. After showing a video about the pronunciation of letters according to the Makharijul of the letters of the students who previously had difficulty understanding the reading of Hijaiah letters in accordance with the Makharijul of the letters (Siti Fatimah, 2024).

Multimedia cognitive theory is based on the principles of cognitive psychology. It is based on an understanding of how the human brain processes information when learning from multimedia materials such as text, images, animations, and sounds. Cognitive theory in multimedia learning is based on three main principles, namely dual-channel, limited capacity, and active-processing(Mayer, 2001). This theory states that people learn better when words and pictures are used together rather than just words. This is in line with research on reading the Quran: the use of audiovisual media allows students to see the Quran text (visual) while listening to it (audio). This combination helps reinforce correct comprehension and pronunciation. The application of multimedia cognitive theory in learning can explore various emotions or awaken students' mental feelings.

Ability to Read the Qur'an

The assessment of students' Qur'anic reading ability in the form of Qur'an reading practice is 49.45 with very poor criteria there are 6 students with a percentage of 25%, the criteria are lacking there are 10 students with a percentage of 41.66%, the criteria are sufficient there are 6 students with a percentage of 25%, the good criteria are there are 2 students with a percentage of 8.33% and the criteria are very good there are no students with a percentage of 0%. Meanwhile, the results of the post-test assessment of students' ability to read the Qur'an in the form of Qur'an reading practice obtained an average score of 80.54 with very poor criteria and less criteria there were no students with a percentage of 0%, the sufficient criteria there were 3 students with a percentage of 12%, and the good criteria there were 11 students with a percentage of 45.83%, and the good criteria there were 10 students with a percentage of 41.66%.

These findings demonstrate that audiovisual media play an important role in improving students' Qur'an reading ability, as the combination of hearing and sight helps them understand makhraj and achieve correct intonation. Visualization of the Qur'an text with the Qur'an's audio-talking pen guide allows students to imitate correct pronunciation, correct mistakes, and deepen their understanding of the holy verses, thereby improving their ability to read the Qur'an. The use of audio-visual media significantly improves the quality of reading the Quran for students through

the presentation of interesting and interactive materials; By listening to professional reciters and seeing text visualizations, students can more easily understand and imitate correct pronunciations, correct tajweed errors, and improve their understanding of the verses of the Quran, which ultimately enriches the learning experience and improves the ability to read the Quran better.

The results of this study are in line with the results of the study, which states that the use of audio-visual media has a significant positive impact on students' reading ability and can also reflect improved reading skills and better understanding of the material (Fauziah & Ninawati, 2022). Using audio-visual media, students are more enthusiastic about learning and become more active (Hambali et al., 2021). This study confirms that the use of audiovisual media in learning can increase student enthusiasm, motivation to learn and understanding of the teaching materials, as well as create conducive and fun classroom conditions.

The use of audiovisual media also helps teachers in creating a more interesting and interactive learning climate (Indri Khairunnisa Erwinsyah, 2025). The use of appropriate learning media can increase interaction between teachers and students and can reduce boredom during the learning process (Kristina et al., 2022)

The theory that supports the results of this study is the Cognitive Load Theory, which states that all learners have a limited cognitive capacity to process new information or ideas and explains how information is processed in the mind (Chandler & Sweller, 1991). This is in line with findings from researchers who show that using audiovisual media can reduce cognitive burden because information is presented through two channels (visual and auditory). This allows learners to more easily process and store information on how to read the Quran correctly.

Based on the observation results, there were changes among the students: at the beginning of the meeting, several students engaged in other activities and were indifferent during the learning. This is evident in the first meeting, when the students paid little attention to the lesson. During the second meeting, the students' attention began to focus on the lesson after the teacher explained, using audio-visual media, the talking pen, the al-Quran, and the Makharijul huruf book. At the beginning of the meeting, only a few students were active. Still, after the teacher introduced the audiovisual media, the talking pen al-Quran on 5 makharijul, the students' curiosity increased. Students began to focus and show enthusiasm for learning the Makharijul huruf, and were active in asking questions, so other students were motivated to participate and not go in and out during learning. The descriptive statistical analysis of observations carried out proves that the application of audio-visual media, the talking pen al-Qur'an, influences students' understanding of letter meanings and the quality of their Qur'an reading at TPA Jabal Nur, Radda Village, Baebunta District, North Luwu Regency.

5. Conclusion

Based on the research conducted, it can be concluded that the application of the audiovisual media talking pen Al-Qur'an has a significant influence on improving students' understanding and ability to read the Qur'an for the material on the 5 letters makharijul. Before using the media, students' understanding was in the very poor category, with an average pre-test score of 32.54, and their reading ability was in the poor category, with an average score of 49.54. After being given treatment using the audio-visual media talking pen Al-Qur'an, there was a quite drastic increase in both aspects. Students' understanding improved to a good category, with an average post-test score of 83.83. At the same time, their reading ability also improved to a good category, with an average post-test score of 80.54. Thus, the audiovisual media talking pen Al-Qur'an has proven effective and is recommended for learning the Qur'an, especially for the material on makharijul huruf, to increase students' motivation, activity, and learning quality.

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