



Interactive Multimedia-Based Learning Media in Tajwid Learning

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Abstract: This study aims to examine the implementation of interactive multimedia-based learning media in Tajwid learning at MTs At-Taufiq Sambongdukuh Jombang. The background of this study is based on the low ability of students to read the Qur'an according to the rules of tajwid, and the learning method is still monotonous. The study used a mixed methods approach, with data collection through observation, interviews, documentation, and pretests and posttests. The results of the study showed that the use of interactive multimedia in the form of tajwid learning videos with animation, pronunciation audio, and interactive exercises was able to increase student learning motivation, active participation, and learning outcomes. This is indicated by an increase in the average value from 64.3 to 83.7 and an N-Gain value of 0.43, which is included in the moderate category. Students also stated that this media helped them understand the material more easily. Thus, interactive multimedia learning media have proven effective in improving the quality of tajwid learning as a whole at MTs At-Taufiq.

Keywords: Learning Media, Interactive Multimedia, Tajweed Learning

Abstrak: Penelitian ini bertujuan untuk mengkaji implementasi media pembelajaran berbasis multimedia interaktif dalam pembelajaran tajwid di MTs At-Taufiq Sambongdukuh Jombang. Latar belakang penelitian ini didasari oleh rendahnya kemampuan siswa dalam membaca Al-Qur'an sesuai kaidah tajwid serta metode pembelajaran yang masih monoton. Penelitian menggunakan pendekatan mixed methods, dengan pengumpulan data melalui observasi, wawancara, dokumentasi, serta pretest dan posttest. Hasil penelitian menunjukkan bahwa penggunaan media multimedia interaktif berupa video pembelajaran tajwid dengan animasi, audio pelafalan, dan latihan interaktif mampu meningkatkan motivasi belajar, partisipasi aktif, dan hasil belajar siswa. Hal ini ditunjukkan dengan peningkatan nilai rata-rata dari 64,3 menjadi 83,7 serta nilai N-Gain sebesar 0,43 yang termasuk kategori sedang. Siswa juga menyatakan bahwa media ini membantu mereka memahami materi dengan lebih mudah. Dengan demikian, media pembelajaran multimedia interaktif terbukti efektif dalam meningkatkan kualitas pembelajaran tajwid secara menyeluruh di MTs At-Taufiq.

Keywords: Media Pembelajaran, Multimedia Interaktif, Pembelajaran Tajwid

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Introduction

In the era of globalisation and rapid development of information technology, education is required to transform in order to meet the needs of the times (Aripin, 2024). One of the challenges faced is how religious education, particularly Qur'anic learning, can adapt to the characteristics of digital generation students. In this context, reading the Qur'an is not merely a ritual obligation but also a fundamental skill in Islamic education. This aligns with Allah's revelation in QS. Al-'Alaq: 1-5, which emphasises the importance of reading and learning as the foundation of human civilisation. Therefore, the ability to read the Qur'an properly and accurately must be a priority in the educational process, particularly through mastery of the science of tajwid.

The science of tajwid plays an important role in preserving the authenticity and meaning of the recitation of the Qur'an (Annuri, 2020). Proper pronunciation of letters according to their articulation points and recitation rules is a form of respect for the words of Allah. However, in reality, many madrasah students still lack adequate mastery of tajwid. This is due to various factors, one of which is the lack of varied teaching methods and insufficient support from engaging learning materials. Based on observations conducted at MTs At-Taufiq Sambongdukuh, Jombang, in March 2025, out of 35 eighth-grade students, 70% were unable to read the Qur'an according to tajwid rules. Additionally, 60% of students stated that tajwid lessons were boring because they only used lecture and memorisation methods without visual or audio media support. This situation results in one-way learning, a lack of interactivity, and an inability to stimulate students' interest in learning.

Previous studies have discussed innovations in tajwid learning. Research by Sinamo, (2024) emphasises that the use of digital-based learning media can significantly improve students' Al-Qur'an reading skills. This finding is reinforced by research by Tohet & Alfaini, (2023), which shows that interactive multimedia based on tajwid animation can increase students' motivation and participation in learning. Meanwhile, research by Laily et al., (2022) reveals that tajwid learning based on lectures without digital media makes students quickly bored and passive. These three studies highlight the importance of technology-based learning approaches in tajwid education; however, they have not specifically addressed the development and application of interactive multimedia media that are applicable in formal educational institutions such as MTs, nor have they described their impact on students' holistic understanding of makharijul huruf.

This study was conducted at MTs At-Taufiq Sambongdukuh Jombang, a madrasah located in Jombang Regency, East Java. This madrasah has a large number of students with diverse backgrounds in terms of their ability to read the

Qur'an. Although it has an adequate religious education curriculum, the teaching of the Qur'an and Hadith, particularly the subjects of tajwid and makharijul huruf, has not yet utilised learning technologies that are appropriate for the characteristics of the current digital generation. Against this backdrop, this study aims to address the gaps left unaddressed in previous research, namely by developing interactive multimedia-based tajwid learning media and testing its effectiveness in enhancing students' ability to read the Quran accurately and enjoyably.

This study aims to develop and implement interactive multimedia-based learning media in tajwid learning at MTs At-Taufiq Sambongdukuh Jombang. This study is expected to provide theoretical contributions to the development of technology-based learning media in Islamic education and practical contributions to teachers and educational institutions in creating attractive, effective, and contemporary learning models. As a result, it is hoped that students will better understand and practise the teachings of the Qur'an accurately, thereby improving the overall quality of tajwid learning.

Methods

This study uses a mixed methods approach with a sequential explanatory design model, which involves collecting and analysing quantitative data first, followed by qualitative data to explain and deepen the quantitative results. This approach was chosen to enable researchers to gain a comprehensive understanding of the effectiveness of interactive multimedia-based learning media in tajwid education, both in terms of improving students' learning outcomes and their responses to the learning process. As explained by Creswell, (2015), the mixed methods approach is highly suitable for addressing research questions that require both numerical data and contextual explanations.

The data collection techniques in this study were divided into two parts according to the approach. Quantitatively, data were obtained through pre-tests and post-tests designed to measure students' ability to understand and apply tajwid rules. The tests were administered before and after students participated in interactive multimedia-based learning. The test instruments were developed based on the basic competency indicators in the Al-Qur'an Hadith subject for the MTs level. Meanwhile, qualitative data was collected through participatory observation to assess student engagement and the effectiveness of the media in learning, in-depth interviews with Al-Qur'an Hadith teachers and six eighth-grade students selected purposively (based on reading ability), as well as documentation in the form of teaching materials, student test results, photos, and learning videos. According to (Sugiyono, 2015), this combination of methods strengthens the validity of the data and enriches the perspective in the analysis.

Quantitative data analysis was conducted using the paired sample t-test technique to examine differences in pretest and posttest scores, which were processed using statistical software (such as SPSS). This analysis aims to determine whether there is a significant improvement in student learning outcomes after using interactive learning media. Meanwhile, qualitative data analysis was conducted using an interactive model (Miles et al., 2014), which includes data reduction, data presentation, and conclusion drawing. Method and source triangulation was used to test data validity by comparing the results of observations, interviews, and documentation. The integration of both types of data was carried out at the interpretation stage to obtain a comprehensive and in-depth understanding of the effectiveness of using interactive multimedia media in improving the quality of tajwid learning at MTs At-Taufiq Sambongdukuh Jombang.

Results and Discussion

Results

Implementation of Interactive Multimedia-Based Learning Media in Tajwid Learning

Planning Stage

Observations and interviews with Qur'an Hadith subject teachers showed that before using interactive multimedia media, tajwid learning in class VIII MTs At-Taufiq Sambongdukuh was still conducted conventionally using the lecture method. The absence of visual and audio media made students tend to be passive and quickly lose focus.

The school had previously designed the use of interactive multimedia-based learning media. However, the implementation of this media had not been realised due to the teachers' limited ability to operate the technology. To address this issue, the school organised training and education and training (diklat) for teachers to improve their ability to use digital media. The principal explained:

“The activity is aimed at developing professional teachers, because improving the quality of teaching staff will have an impact on the outcome of classroom learning activities. A professional teacher is someone who can keep up with the times, and one of the requirements is that teachers must be able to use technology-based media so that teaching and learning activities do not fall behind the times.”

After completing the training, teachers began to develop lesson plans that integrated the use of interactive multimedia. According to Ustadzah Laili, a teacher of Qur'an Hadith:

“In preparing to teach, the most important thing to prepare is the material in the form of a lesson plan, which also includes the teaching media that will be used during the teaching and learning activities.”

After the lesson plan is completed, the teacher prepares learning media in the form of interactive videos. The teacher records the explanation of tajweed material, especially the laws of nun mati and tanwin. The video is then edited by adding interesting visual elements and clear audio pronunciation so that students can understand the material better. This media is designed to attract students' attention and facilitate auditory and visual learning styles.

Implementation Stage

Interactive multimedia media was used in the learning process during three meetings. Students learned through educational videos shown using a projector in the classroom. The videos featured explanations of tajwid reading rules and examples of pronunciation in visual and audio formats.

The teacher explains the rules of recitation, such as idgham, ikhfa, and iqlab, while showing interactive videos. Students follow the videos carefully and are given the opportunity to imitate the pronunciation demonstrated in the videos. This helps students understand the theory and immediately practise its application.

Most students responded positively to learning with multimedia. One student said:

“I am more enthusiastic about learning Tajwid because I can watch videos and hear examples directly. So I know how to read it correctly.”

During the learning process, students appeared more active and confident in answering questions and reading verses from the Qur'an. Despite technical constraints such as limited equipment and learning time, teachers overcame these challenges by scheduling videos to be played in turns and distributing learning files to students to study independently at home.

Evaluation Stage

The implementation evaluation was conducted through questionnaires, interviews, and analysis of student learning outcomes before and after the use of the media. Of the 35 students who responded, 86.7% stated that the media was interesting and facilitated their understanding of the material. In addition, 80% of students felt more confident in reading the Qur'an by paying attention to the rules of tajwid after using the media.

The Qur'an Hadith teacher stated that this media was very helpful in illustrating material that had previously been difficult to explain verbally, such as makharijul huruf and the rules of ghunnah reading. Students also appeared more active, and the classroom atmosphere became more lively.

From the pretest results, the average student score was 64. After learning with interactive multimedia media, the average score increased to 83 on the posttest. This shows a significant improvement in students' understanding of tajwid material, as well as an increase in student motivation and engagement in the learning process.

Improvement in Student Learning Outcomes

Quantitative data was obtained from students' pre-test and post-test results on the same tajwid material. The following is a summary of the data:

Table: Students' pretest and posttest results

Description	Average Score	Description	Average Score
Pretest			64,3
Posttest			83,7

An increase of 19.4 points shows that the use of interactive multimedia-based learning media has a positive impact on improving student learning outcomes in tajwid learning. Based on data from 35 students, a quantitative analysis was conducted using the Normalised Gain (N-Gain) formula to see the effectiveness of interactive multimedia-based learning media in improving tajwid learning.

Formula N-Gain:

$$\text{N-Gain} = \frac{\text{Skor Posttest} - \text{Skor Pretest}}{\text{Maximum Score} - \text{Skor Pretest}}$$

$$\text{N-Gain} = \frac{95 - 55}{100 - 95} = \frac{40}{5} = 8$$

Calculation Results:

Average N-Gain: $\approx 0,43$ (atau 43,12%)

Based on Hake's classification (1999), this value falls into the moderate category. ($0,3 \leq g < 0,7$)

Interpretation:

Eight students were in the low score category (range < 60)

Fourteen students were in the medium range (70–85)

Thirteen students achieved the high range (90–100)

The following bar chart shows the distribution of students' post-test results after using interactive multimedia-based learning media in tajwid learning:

Low category (<60): 1 student

Medium category (70–85): 14 students

High category (90–100): 13 students

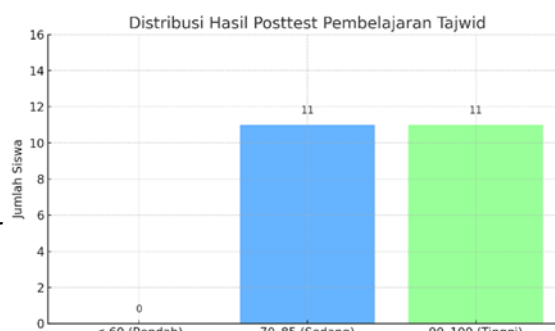


Figure. Bar Chart of Posttest Results Distribution

This diagram reinforces the finding that most students experienced a significant improvement in learning outcomes, with the majority falling into the moderate to high category. This indicates that interactive media is effective in improving tajwid comprehension.

Discussion

The use of learning media is an important element in supporting an effective, efficient, and meaningful learning process. Choosing the right media not only helps teachers deliver material but also makes it easier for students to understand the concepts being taught. According to (Aliansyah dkk., 2021), educational media refers to anything that can be used to convey educational messages, thereby stimulating students' attention, interest, thoughts, and emotions during learning activities. In this context, teachers are required to select media that align with the characteristics of the material and the learning objectives to be achieved. Fitria also emphasises that understanding the types and characteristics of media is very important so that their use can be tailored to the needs of students in and outside the classroom (Fitria dkk., 2023).

At MTs At-Taufiq, the use of learning media is still very limited. Observations show that most teachers still rely on one-way lecture methods and PowerPoint presentations. This approach tends to place students in a passive role, thereby discouraging their active involvement in the learning process. This is in line with the opinion of Azizah et al., (2024), who state that lecture methods are teacher-centred and less able to stimulate maximum student participation. In the context of learning the Qur'an and Hadith, especially tajwid material, which is abstract and requires clear phonetic visualisation, a verbal approach alone often makes it difficult for students to understand the concept as a whole.

Tajwid learning requires media that can present sound, text, and visuals in an integrated manner so that students can more easily understand the makharijul huruf and reading rules concretely. However, the limitations of teachers' competence in mastering and implementing multimedia technology are the main obstacles. Research conducted by (Muharrani & Murhayati, 2025) shows that low teacher skills in the use of digital media have a direct impact on the low

effectiveness of learning, especially in religious subjects that require a contextual and multisensory approach.

Planning Stage

As a solution to the problem of low tajwid learning effectiveness due to limitations in conventional media and methods, researchers implemented interactive multimedia-based learning media in the learning process. The initial step taken was the planning stage, which involved developing a Lesson Plan (RPP) specifically integrating the use of interactive video as the primary medium. This planning process referenced the views of Hasan et al., (2024), who emphasised that effective lesson planning must accommodate media relevant to the characteristics of the subject matter and students' learning needs. In this context, interactive video media is designed to systematically explain tajwid concepts, accompanied by reading examples, visual animations for reading rules, and audio that demonstrates correct pronunciation.

This approach is also in line with the view of Firmadani, (2020), who states that audio-visual media can provide a more concrete learning experience, clarify information conveyed verbally, and foster student motivation to learn. Through the combination of sound, text, and animation, students can understand abstract concepts in tajwid, such as ikhfa, idgham, or qalqalah, more clearly and enjoyably. Research by (Sopiaty & Amin, 2025) also shows that the use of interactive videos in tajwid learning can significantly improve students' understanding compared to conventional lecture methods. This is because videos can accommodate various learning styles of students, whether visual, auditory, or kinesthetic, thereby creating a more comprehensive learning experience.

Implementation Stage

The learning process was conducted in class VIII of MTs At-Taufiq using interactive video media displayed through a projector as the main medium. During the learning process, students showed high interest in learning and active involvement. They did not merely listen to explanations but also actively observed visualisations of tajwid rules, imitated pronunciation examples, and participated in group discussions about the application of tajwid recitation in Quranic verses. This activity exemplified an active, collaborative, and contextual learning process, far removed from the monotony typically associated with conventional lecture-based methods.

This learning medium not only succeeded in enlivening the classroom atmosphere but also reduced learning fatigue and enhanced students' focus on the material. This aligns with the view of Kustandi & Darmawan, (2020), who assert that interactive multimedia-based learning media can activate students' senses such as hearing, vision, and kinesthetic perception, thereby strengthening their

overall engagement in the learning process. According to them, when the senses work simultaneously in absorbing information, the learning process becomes more effective, efficient, and has a long-term impact on understanding.

In line with this, Firmadani, (2020) explains that visual and audio media play an important role in creating concrete and meaningful learning experiences, especially for abstract subjects like tajwid. Visual elements in the form of animation of reading rules, audio in the form of examples of correct pronunciation, and the text of the Qur'an verses displayed work together to strengthen students' understanding of tajwid concepts such as idgham, iqlab, ikhfa, and others.

These findings are reinforced by the results of a study Loka et al., (2024) which shows that the use of interactive multimedia in religious education at the madrasah level can improve the quality of student participation and material absorption. They note that students are more motivated to learn when the media used is interesting and allows them to interact directly with the learning material.

Evaluation Stage

The evaluation stage was conducted to assess the effectiveness of using multimedia-based interactive learning media. The evaluation was carried out by administering a pretest before learning and a posttest after learning with the same material. The pretest results showed an average score of 64.3, while the posttest results increased to 83.7. This increase of 19.4 points indicates a positive change in the students' mastery of the material. To measure effectiveness more objectively, an analysis was conducted using the Normalised Gain (N-Gain) formula from data on 35 students. The results of the calculation showed that most students experienced moderate to high improvement. This indicates that interactive multimedia-based learning media has a significant influence on improving tajwid learning outcomes.

This finding aligns with Mayer's multimedia learning theory, which states that learning is more effective when students can build mental representations of words and images presented simultaneously (Mulia, 2019). Multimedia learning allows students to connect verbal and visual information, resulting in deeper and more lasting understanding. In the context of tajwid learning, visualising reading rules through animations and sounds provides a concrete and practical learning experience.

Additionally, the results of this study are supported by research Faishol et al., (2023) showing that the use of interactive videos in fiqh learning significantly improves students' learning outcomes. A similar study by Ilmiani et al., (2020) also found that interactive animation-based media in Arabic language learning can increase student activity and understanding. Both studies support the conclusion that interactive media is effective for application in subjects that require visualisation and active participation.

Student engagement during the learning process has also increased. Students appear more enthusiastic, actively answer questions, and are not hesitant to try reading verses from the Qur'an in accordance with the tajwid rules they have learned. According to Fitria et al., (2023), interactive multimedia is capable of creating meaningful learning experiences because students are not merely passive listeners but can also interact directly with the material. Learning that involves active participation like this contributes to better learning outcomes.

Thus, the evaluation results show that the use of interactive multimedia-based learning media in tajwid learning at MTs At-Taufiq not only improves students' understanding of the material but also increases motivation, active participation, and the quality of interaction in the classroom. This media can be an effective alternative learning strategy to be applied in Islamic education, especially for abstract subjects such as tajwid. As emphasised by (Firmadani, 2020), appropriately selected learning media can bridge students' understanding of abstract concepts to make them more concrete and easier to understand.

Conclusion

This study demonstrates that the implementation of interactive multimedia-based learning media in tajwid instruction at MTs At-Taufiq Sambongdukuh Jombang significantly improves student learning outcomes, motivation, and engagement. Quantitative data from pre- and post-tests show an increase in average scores from 64.3 to 83.7, with an N-Gain value of 0.43, classified as moderate. These results indicate that interactive media can help students understand tajwid material more easily, enjoyably, and practically. These findings support the research objective, which is to enhance the effectiveness of tajwid learning through technology-based media innovation.

Theoretically, the research results reinforce Mayer's multimedia learning theory, which states that learning is more effective when students build mental representations through the combination of words and images. Practically, this research contributes to teachers and Islamic educational institutions in considering the use of more varied and contextual digital media, especially in religious education, which has traditionally been monotonous and one-sided. Interactive multimedia media has proven to be a tool that bridges abstract concepts like tajwid rules into more concrete and easily understandable ones.

This study has several limitations. First, the developed media focused solely on one aspect of tajwid (the rules of nun mati and tanwin), so the results do not represent the entirety of tajwid knowledge. Second, limitations in classroom technology and learning time pose challenges for broader implementation. Additionally, this study has not examined the long-term impact of using this media on students' knowledge retention.

For future research, it is recommended to develop more comprehensive interactive multimedia media covering various other tajwid materials such as mad, qalqalah, and makharijul huruf. Future research could also expand the scope of the subject by involving more madrasahs and different levels of education to obtain broader generalisations. In addition, a more in-depth exploration of the integration of interactive media with active learning approaches such as project-based learning or flipped classrooms is needed to strengthen student participation and independence in learning Islamic education in the digital age.

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