Development of wordwall-based e-learning materials to enhance students' mastery of tajweed rules at an naml qur'an house

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ABSTRACT

This research is based on the results of observations and interviews conducted with several elementary school students who attended the afternoon Al-Quran Education Park (TPA) at An-Naml Qur'an House, Surakarta that during the process of delivering tajweed material the teacher only used the lecture method, which is a classical method that only conveys material by using oral and students listen to it. As a result, this method does not involve students, so it is felt that this method is less effective for tajweed material which is the main support in learning the Koran. Based on these facts, researchers then conducted a study that aims to determine the effectiveness, practicality and validity of interactive multimedia-based "tajweed" teaching materials for elementary school students in learning the Quran. The model used in this development research is ADDIE. There are 5 stages carried out, namely analysis, design, development, implementation, and evaluation. The method was chosen to achieve the research objectives, namely the effectiveness of this interactive multimedia-based learning method.

Introduction

Indonesia is the country with the largest Muslim majority in the world, which means that almost 87.08% of Indonesia's population is Muslim(Sofa, 2024) . At least no less than 245.93 million people whose life guide is the Qur'an. However, the fact that occurs in the field is that almost half of the Muslim population in Indonesia does not use the Qur'an as a guide to their lives, (Maharani et al., 2022)can hardly even read it. This is due to the lack of self-awareness of the community, of the importance of learning the Qur'an

Tajweed learning is the science that regulates how to read the Qur'an properly and correctly, (Glmdk, 2021)so an understanding of tajweed is very necessary to avoid errors in pronunciation. In the context of education, mastery of tajweed not only improves the quality of students' reading(Syaifullah et al., 2021), but also deepens their understanding of the meaning

of the Qur'ān. Therefore, effective learning methods are indispensable to achieve this goal(Ainun & Kosasih, 2021).

Along with the times, students have become very familiar with technology which makes students' needs in learning also develop. Students tend to understand abstract concepts more easily if presented in an attractive visual form(Ummah, 2019), such as animations, videos, or infographics. Students also tend to like learning where students can be actively involved in learning,(Hambali et al., 2021)for example through simulations, games, or interactive quizzes. Students will feel bored and unable to receive learning well if the learning is delivered using methods that are not aligned with student needs(Ngaisah & Arifin, 2024).

In the current era of globalization, teachers need to have the ability to use computers or laptops and develop innovations to create a creative and new learning atmosphere. The use of interactive multimedia teaching materials is very important in achieving educational goals(Islami et al., 2024). Along with the development of information and communication technology (ICT), tajweed learning methods have also undergone a transformation, one of which is through the application of e-learning.(Izza Masrukhatur Rodhiyah & Mawaddatur Rohmah, 2022) E- learning-based learning offers an innovative and interactive approach, which can meet the needs of students in learning, increase student motivation and understanding of tajweed.

Learning media is used by educators to support the delivery of material so that students more easily understand the lesson.(Marta, 2022) The objectives to be achieved are changes in behavior and knowledge that can be observed and measured.

Method

This research aims to create and test an interactive learning tool called "WORDWALL" specifically for children who are studying at An-Naml Quran House, Surakarta. The process of creating and testing this learning tool uses a research method called "ADDIE MODEL".
The steps taken in this research are:

1. Needs Analysis: Researchers conducted direct observations and interviews with teachers at Rumah Quran to find out what difficulties students face in learning and what they need to learn more effectively.
2. Design: Based on the results of the analysis, the researcher then designed how the appearance and content of the learning tool "WORDWALL" to suit the needs of the students of An-Naml Quran House, and the material being taught.
3. Manufacture: After the design was finalized, the researcher started making the learning aid "WORDWALL" according to the plan that had been made.
4. Testing: The finished learning tool "WORDWALL" was then tested directly by the students of An-Naml Quran House. The researcher observed how the students interacted with "WORDWALL" and whether this learning tool helped them in learning
5. Evaluation: After testing, researchers evaluate the test results to find out whether "WORDWALL" is effective in helping students learn. Researchers also find out if there are any shortcomings or things that need to be improved on the "WORDWALL".

The main objectives of this research are Develop: Create a new and innovative learning tool for quran house students, Testing: Seeing if the new learning tool is effective in helping students learn, and Improving: Improve the quality of learning at An-Naml Quran House. The methods used to analyze the data in this study are: Researchers will analyze all data obtained from observations, interviews, and test results. This data analysis will focus on three main things, namely; Effectiveness: How useful the "WORDWALL" is in helping children learn, Practically: How Easy is "WORDWALL" to use by children and teachers, and Suitability: How appropriate the "WORDWALL" is to the learning objectives to be achieved.

In other words, this research is an effort to create a better and more enjoyable learning tool for students of An-Naml Quran House, so that they can learn more effectively and efficiently(Khamid et al., 2020).
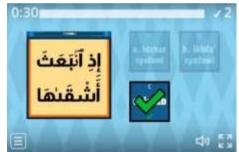
Result and Discussion

Results

The result of this research is the Development of E-Learning Learning Materials Based on interactive multimedia Wordwall to Improve the Understanding of Early Grade Elementary Students Towards the Law of Tajweed Nun Sukun and Mim Sukun. (Agus et al., 2024)Interactive learning media such as multimedia has been widely used, this indicates that educational technology has reached that level. Interactive multimedia is considered an effective alternative to get students actively involved in the learning process.(Ashadiqhi et al., 2020) This learning material can be accessed through smartphones, laptops, and computers. Interactive multimedia- based learning development media "WORDWALL" presents material that is easy for students to understand, equipped with images to help understand the Law of Tajweed Nun Sukun and Mim Sukun when meeting hijaiyah letters. In addition, there are quizzes in the form of mini games as a cognitive assessment of students after studying the "WORDWALL" learning material. This learning material can be shared through WhatsApp groups or other online platforms(Marta, 2022).

Interactive multimedia-based learning development media "WORDWALL" in this study has involved validation from media experts and material experts.(Nurrohim, 2019) This teaching material was tested on several subject groups, namely teachers of An-Naml Qur'an House with a limited test and students of the Qur'an House in a broad test or field test. The interactivity of this teaching material arises from its ability to allow student interaction. Specifications of the "WORDWALL" quiz teaching material in the form of a game (figures 1 and 2).

Quiz in game form

Discussion

In this research and development, researchers succeeded in designing a tajweed learning (material on the Law of Tajweed Nun Sukun and Mim Sukun) using "WORDWALL" media using interactive multimedia for students of An-Naml Qur'an House. This product is designed with a variety of interesting quizzes for children related to learning material, ("Implementasi Pembelajaran Tajwid Membaca Al-Quran Siswa Kelas V MI Mazraatul Ulum 02 Paciran-Lamongan," 2021)aims to attract students' attention and help them understand the material being taught. In addition, this "WORDWALL" teaching material makes it easy to review the material taught with quizzes in the form of games.(Al-ghoni et al., 2025)

The specifications of the "WORDWALL" teaching materials include: 1) The development of interactive multimedia-based teaching materials uses Canva design media, with a design that is in accordance with the material about the Law of Tajweed Nun Sukun and Mim Suku and is equipped with interesting pictures. 2) This interactive multimedia-based "WORDWALL" teaching material can be accessed via students' cellphones or smartphones, making it easier for students in the learning process. 3) This teaching material is equipped with a quiz or evaluation in the form of a game so that students can measure their abilities after studying the teaching material "WORDWALL".(Nurchari et al., 2023) In line with Choiyum's view, teaching materials are defined as a set of materials and resources that assist teachers and students in the learning process. Teaching materials include materials, methods, boundaries, and ways to

evaluate which are attractively designed so that learning objectives can be achieved.(Anggreini & Putra, 2022)

The philosophical foundation behind the development of "WORDWALL" is to underline the importance of using interactive media in learning. (Law & Law, 2021)In this context, interactive media is considered as an effective means to increase student engagement in the learning process. The results of this study are supported by previous research which states that interactive learning media can improve student learning achievement.(Sudiarjo et al., 2015) By utilizing multimedia technology, "WORDWALL" provides flexibility of access through various devices, so that students can learn independently without being bound by space and time.(Anshara & Nurrohim, n.d.)

The validation of this teaching material involves the participation of media experts and material experts to demonstrate its quality and reliability ("Development of Learning Media Using AR Assemblr Edu in the Subject of Application of Electronic Circuits | Oktaviona | Voteteknika (Vocational Engineering Electronics and Informatics)," n.d.). The results of experiments involving teachers and students of An-Naml Qur'an House, both in limited trials and those involving a large number of participants, are very helpful in assessing the extent to which "WORDWALL" is acceptable and effective. The feedback received can be used as a basis for further improvement and development.(Fathurohman & Nurrohim, 2010)

Alignment with the Education Curriculum ensures that "WORDWALL" conforms to the applicable curriculum standards, thus remaining relevant and supporting the achievement of learning objectives. Meanwhile, the presentation of Obstacles and Challenges throughout the development process opens up opportunities for reflection and continuous improvement, demonstrating a commitment to quality and readiness to meet user needs.(Hidayat et al., 2024) The discussion of Expansion Opportunities and Future Development reflects the foresight of "WORDWALL." Plans to include additional modules, adapt content, or expand coverage of materials reflect the determination to continuously improve and adapt to curriculum developments on an ongoing basis. Impact on Student Achievement is an important aspect that can be assessed through a positive assessment of the effects of "WORDWALL.". "WORDWALL" learning media can affect students' learning motivation.(Maarif et al., 2018) Findings and data regarding student performance after using this media can be used as a guide to their success in supporting the understanding and application of the rules of nun sukun and twin.

Collaboration with Related Parties, whether involving schools, parents, or other educational institutions, provides a broader context for the acceptance and support of this teaching material within the educational community. (Adolph, 2019)Overall, "WORDWALL" is not just a learning product, but an educational solution that accommodates modern needs while trying to create an immersive and fun learning experience for students. Stated that "WORDWALL" impresses students by playing while learning in accordance with the learning model used.(Nadawiyyah & Anggraeni, 2021) Given that students have characteristics as members of generation Z who are more inclined to audio-visual, interactive, and entertainment preferences, it is certainly more appropriate to choose the use of this application rather than relying on conventional media which is generally monotonous, rigid, and less interesting.(Nesia et al., 2023)

Conclusion

This research focused on the development of Wordwall-based E-Learning Learning Materials to improve the understanding of students of An-Naml Qur'an House on the Law of Tajweed Nun Sukun and Mim Sukun. Observation shows that the teaching method that has been used, namely lecture, is less effective in engaging students and delivering tajweed material well. Therefore, this study aims to create and test the effectiveness of interactive multimedia teaching materials that can increase student involvement in the learning process.

In this study, researchers used the ADDIE model which consists of five stages: analysis, design, development, implementation, and evaluation. The results of the study show that the use of interactive learning media such as Wordwall can facilitate students' understanding of tajweed laws in a more interesting way and is easily accessible through various devices. The learning materials are supplemented with quizzes in the form of games that are not only entertaining but also serve as cognitive assessments for students.

Overall, the development of Wordwall-based e-learning materials proved effective in improving students' understanding of tajweed, as well as providing a more enjoyable and interactive learning experience. This shows the importance of innovation in learning methods to meet the needs of modern education in the digital era

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