



Interactive Learning Application: Exploring World Islamic Figures through Multimedia

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Abstrak

Aplikasi pembelajaran interaktif semakin populer dalam beberapa tahun terakhir karena kemampuannya menghadirkan pengalaman belajar yang dinamis dan imersif. Aplikasi ini mengintegrasikan elemen gamifikasi, simulasi, dan realitas virtual untuk menciptakan lingkungan belajar yang lebih partisipatif dan menarik. Selain itu, aplikasi ini dapat menyesuaikan berbagai metode dan preferensi belajar, sehingga cocok untuk digunakan oleh pendidik dan peserta didik. Aplikasi pembelajaran interaktif memungkinkan pemberian umpan balik dan evaluasi secara real-time, yang membantu pendidik memantau kemajuan siswa dan menyesuaikan materi sesuai kebutuhan. Penerapan gamifikasi melalui insentif, tantangan, dan pemantauan kemajuan terbukti efektif dalam meningkatkan keterlibatan dan motivasi belajar. Penelitian ini menggunakan metode Research and Development (R&D) dengan model ADDIE, yang meliputi tahap Analisis, Desain, Pengembangan, Implementasi, dan Evaluasi. Tahap implementasi mencakup pengkodean, pengujian, dan penyempurnaan untuk memastikan aplikasi berjalan lancar. Model ADDIE membantu mengidentifikasi dan memperbaiki kesalahan dalam fungsionalitas sistem sebelum produk dirilis. Dalam studi ini, aplikasi pembelajaran interaktif dirancang untuk memperkenalkan tokoh-tokoh Islam dengan pendekatan yang menarik dan informatif, dilengkapi fitur kuis interaktif, latihan audio, dan alat pelacakan kemajuan. Hasil penelitian menunjukkan bahwa aplikasi yang dikembangkan dapat meningkatkan minat belajar sejarah Islam, khususnya bagi pelajar dan masyarakat umum yang memerlukan sumber belajar yang mudah diakses.

Kata kunci: Metode R&D, Model ADDIE, Aplikasi Pembelajaran Interaktif

Abstract

Interactive learning applications have gained popularity in recent years due to their ability to offer dynamic and immersive learning experiences. These applications integrate elements such as gamification, simulation, and virtual reality to create a more participative and engaging learning environment. Moreover, they accommodate various learning methods and preferences, making them suitable for both educators and learners. Interactive learning applications enable real-time feedback and evaluation, allowing educators to monitor student progress and adjust content as needed. Gamification features like incentives, challenges, and progress tracking effectively enhance engagement and learning motivation. This study employs the Research and Development (R&D) method with the ADDIE model, encompassing the stages of Analysis, Design, Development, Implementation, and Evaluation. The implementation stage includes coding, testing, and refinement to ensure smooth application functionality. The ADDIE model aids in identifying and correcting system functionality errors before product release. In this study, an interactive learning application was designed to introduce notable Islamic figures in an engaging and informative manner, featuring interactive quizzes, audio exercises, and progress-tracking tools. The study results indicate that the developed application can increase interest in learning about Islamic history, especially for students and the general public in need of accessible learning resources.

Keywords: R&D Methods, ADDIE Model, Interactive Learning Applications

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INTRODUCTION

Contextual information on interactive learning applications Interactive learning applications have gained significant popularity in recent years owing to their capacity to engage users in a more dynamic and immersive educational experience. These programs frequently integrate components like gamification, simulations, and virtual reality to foster a more participatory and engaging educational atmosphere for users. Moreover, interactive learning programs can accommodate diverse learning methods and preferences, rendering them a versatile resource for both educators and learners. Through the use of interactive learning applications, instructors may deliver tailored educational experiences that address individual needs and interests. These tools facilitate real-time feedback and evaluation, allowing educators to monitor progress and modify training as needed. Interactive learning apps have transformed the presentation and assimilation of information, enhancing the enjoyment and efficacy of learning for individuals of all ages. Besides their versatility and efficacy, interactive learning applications also enhance engagement and motivation among learners. By integrating gamified components, including incentives, challenges, and progress monitoring, these programs foster a more engaging and pleasurable educational experience. This not only maintains learners' engagement and concentration but also promotes their active involvement in their education. Moreover, the interactive characteristics of these programs promote cooperation and communication among peers, facilitating a more dynamic and engaging learning environment. Interactive learning applications provide the capacity to markedly improve the educational experience and enable learners to realize their full potential.

Language learning applications such as Duolingo employ gamification to captivate users through interactive exercises, quizzes, and challenges, rendering the process of acquiring a new language enjoyable and gratifying. Progress monitoring elements offer learners immediate feedback on their performance, encouraging them to persist in training and enhancing their language abilities. Interactive learning programs can tailor lessons to address each learner's unique strengths and limitations, thereby accommodating their specific requirements and objectives. Moreover, the accessibility and ease of these applications enable users to learn at their own pace and according to their own schedules, facilitating the integration of learning into their hectic life. As technology progresses, interactive learning apps will increasingly become more sophisticated and effective in facilitating skill and knowledge acquisition. The significance of examining prominent Islamic personalities We cannot overstate the significance of historical events. Examining the lives and achievements of these individuals enhances our comprehension of the intricate and multifaceted nature of Islamic culture and civilization. Scholars, scientists, emperors, and poets have all significantly influenced the world and profoundly impacted the path of history. By examining these significant individuals, we may genuinely comprehend the complexity and expanse of Islamic history and its lasting impact. Examining the lives and accomplishments of these prominent Islamic personalities provides essential insights into the ideals and concepts that have influenced Islamic civilizations throughout history. Their narratives impart lessons on resilience, creativity, leadership, and compassion, all of which are vital attributes for individuals to develop in order to effectively impact society. Moreover, by comprehending the circumstances surrounding these individuals and the obstacles they encountered, we can identify parallels to our own experiences and derive motivation from their exemplars of resilience and commitment to their principles. Examining prominent Islamic figures enables us to engage with history, value the current state, and aspire for an improved future for ourselves and our communities.

Studying the life of Malala Yousafzai, a young Pakistani activist who advocated for girls' education against Taliban oppression, illustrates the strength of advocating for justice despite significant obstacles. Her narrative motivates us to exhibit bravery and champion transformation within our communities, regardless of the formidable challenges we may encounter. Examining the lives of figures such as Malala illustrates that transformation is attainable with steadfast commitment and resolute adherence to our convictions. Her bravery

and resolve act as a symbol of hope for individuals confronting challenges, motivating us to transcend our fears and effect change in our surroundings. Her example inspires us to strive for a future characterized by equality and fairness for everyone. Although Malala's narrative is undeniably motivating, it is crucial to acknowledge that not all individuals possess the same degree of privilege or opportunity to champion change within their communities. It is essential to acknowledge the structural obstacles that may hinder individuals from achieving a substantial influence, regardless of their efforts and commitment. By recognizing these differences, we may strive to establish a more inclusive and equitable society in which all individuals have the opportunity to effect change. Assisting and elevating individuals who lack equal resources or visibility is crucial to acknowledge their views and appreciate their efforts. By working together, we can strive to establish a society that values and nurtures each person's potential, regardless of their circumstances.

We propose to develop an interactive learning application to achieve this goal. Interactive classes, virtual experiences, and real-world challenges will prompt users to utilize their knowledge and talents to tackle urgent concerns in their communities. This program will act as a catalyst for social change, promoting a sense of agency and empowerment among its users as they strive for a brighter future for all. Users may engage in virtual reality simulations that enable them to directly encounter the issues confronted by marginalized communities, motivating them to fight for change in their own neighborhoods. This program will offer users a dynamic and engaging platform to enhance their comprehension of societal issues and devise practical solutions through the integration of interactive learning modules, virtual experiences, and real-world challenges. Immersive experiences, such as virtual reality simulations, will enable people to sympathize with neglected communities and cultivate a profound understanding of the significance of social change. Consequently, it is essential to create an interactive educational application: Investigating Global Islamic Figures Through Multimedia.

RESEARCH METHODS

Islamic history can be effectively taught through interactive learning applications by developing interactive multimedia based on PowerPoint macros, which have been proven to improve student learning outcomes in various subjects [1]. Research has shown that interactive multimedia can enhance student engagement and interest in studying history, including Islamic history, by creating a fun and interactive learning environment [1]. Teachers can use interactive multimedia tools to help students actively participate in learning about the history of Islamic culture, making the subject more engaging and relevant to students' lives [1]. However, it is important for educators to continuously innovate and adjust their teaching methods so that students remain interested in learning about Islamic history [2]. (Hilda et al., 2022) (Azidah & Muhammad, 2013)

Application-based learning media such as Kinemaster and m-learning applications can assist in the teaching and learning process by utilizing ICT technology. They can increase students' learning motivation and facilitate distance learning. However, Context: "

Text to translate: "r, there are still obstacles in the development of learning media in Indonesia, such as the lack of expertise in ICT media development among educators. (Khaira, n.d.) (Andini & Adi, 2020) In addition, this research will also involve the use of quantitative and qualitative methods to collect data from students and teachers who use application-based interactive learning media. Thus, it is expected to provide a deeper understanding of the effectiveness of the learning media in enhancing students' understanding of Islamic history and figures. In addition, this research will also explore ways to overcome the constraints of developing learning media in Indonesia, such as through training and mentoring for teachers. Islamic figures in the field of education include Ibn Sina, Ibn Khaldun, Al-Kindi, Al-Khawarizmi, and Al-Ghazali, who are very important and influential in the field of education¹. Reform in Islam in Egypt was triggered by Napoleon Bonaparte's occupation of Egypt in the 19th century, which introduced Western

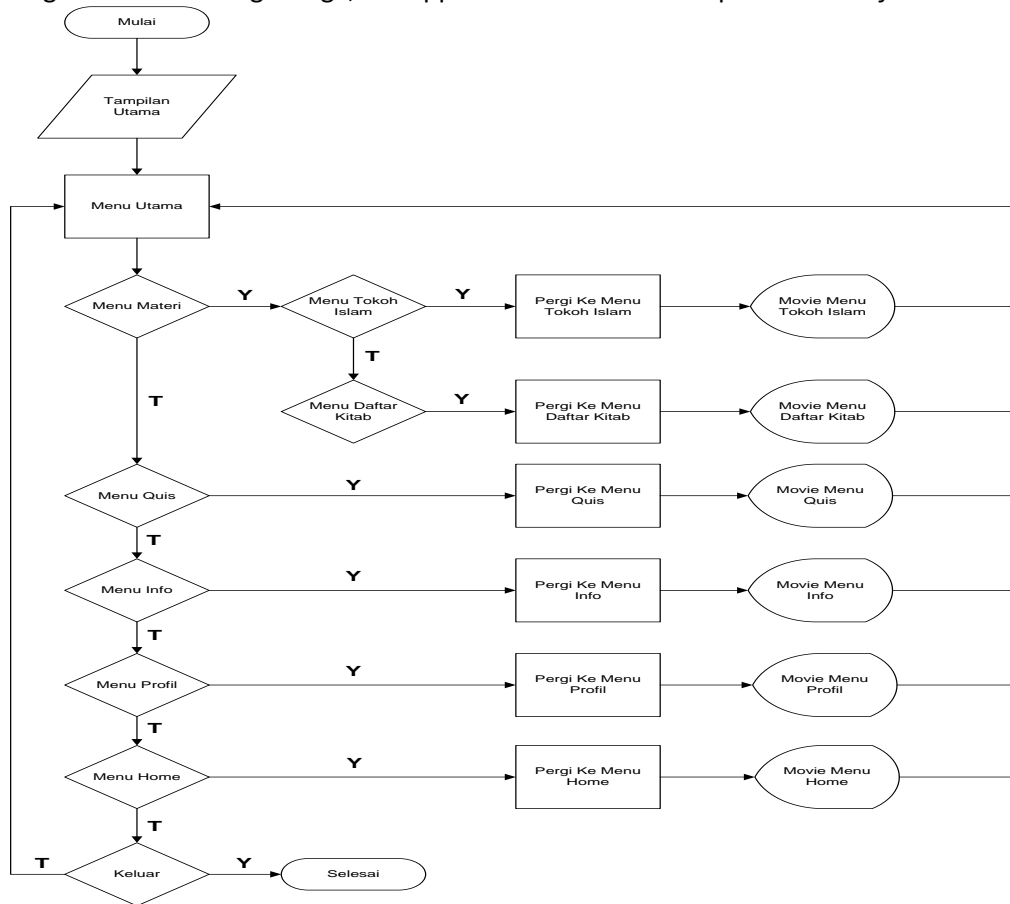
civilization and technology, producing reformist intellectual figures, including Muhammad Ali Pasha ². (Basyar, 2020) (Fauzi, 2017) They have made significant contributions to the development of educational science and Islamic pedagogical thought. With the inspiration from these figures, educators in Indonesia are expected to continuously improve the quality of learning media to overcome existing challenges and provide maximum benefits to students. The training and mentoring provided for the teachers are also expected to offer a deeper understanding of the Islamic education concepts introduced by those figures.

Development method Interactive and enjoyable learning applications are one of the keys to success in improving students' understanding, and the method used is the R&D method. Metode R&D yang merupakan singkatan dari Research and Development, "Metode R&D adalah metode penelitian dan pengembangan yang digunakan untuk menghasilkan produk tertentu dan menguji keefektifan produk tersebut ³." (Muhammad, 2022)(.Muhammad, 2022) (Sugiyono, 2010) (Dicky, 2018) terus diperkenalkan oleh tokoh-tokoh tersebut. The stages in R&D consist of planning, implementation, monitoring, and management. The implementation takes longer than the previous stages, and the network technician will execute the plan that has been made earlier ¹. Tahapan penelitian pengembangan juga meliputi langkah-langkah seperti research and information collecting, planning, developing preliminary form of product, preliminary field testing, dan main product revision ⁴." (Rio, 2022) (.Muhammad, 2022) (Hari, 2022) (Ahmad et al., n.d.) . "The ADDIE model R&D method is a Research and Development method conducted using a descriptive qualitative approach. The ADDIE development model has five stages: analysis, design, development, implementation, and evaluation ¹." (Dea et al., 2022) (Ipta Eliva Sukma and Effie Efrida Muchlis, n.d.) After the research and information collecting stage, the next step is planning, where network technicians will plan how to implement the development ideas that have been gathered. After that, they will start developing the preliminary form of the product based on the plan that has been made previously. This stage requires solid teamwork and effective communication to complete it successfully. After the preliminary field testing is conducted, the results will be evaluated and then a main product revision will be carried out to ensure that the developed product meets the established needs and standards. Black box testing is a method used for system testing without looking at the internal structure of the system. This method focuses on system functionality and aims to find interface errors, data structure errors, performance errors, initialization errors, and termination errors. Black box testing is conducted withan mengamati hasil eksekusi melalui data uji tanpa mengetahui detail implementasi internal sistem ²(Mahmudin, 2018) (Ronggo & Sugiarto, 2016) (Setiyani, 2019) Pengujian black box testing dapat dilakukan oleh tim pengembang produk untuk memastikan bahwa setiap fitur yang diimplementasikan berjalan dengan baik tanpa masalah. By using this method, the team can identify and fix errors that may occur in the system's functionality before the product is launched to the market. This process also helps in improving product quality and end-user satisfaction.

RESULTS AND DISCUSSION

The ADDIE model can be used to develop interactive learning applications to study Islamic figures by following the stages of Analysis, Design, Development, Implementation, and Evaluation of the model ². (Syahraini et al., 2022) During the Implementation phase, the team will work to realize an interactive learning app based on a design and development plan. It involves coding, testing, and refining the app to ensure that it works smoothly. By following the ADDIE model, the team can ensure that each feature is implemented effectively and without any issues. This method allows for the identification and correction of errors in the functionality of the system before the product is launched to the market. Ultimately, this process helps to improve product quality and end-user satisfaction. For example, if a team is developing a language learning app, they need to code features such as interactive quizzes, audio exercises, and progress-tracking tools.

At the analysis stage, they also need to examine these features carefully to ensure that they work well on various networks and operating systems before using them based on user feedback to improve the user experience in all respects. This design stage is a stage in making a structure design of the multimedia-based learning media application for the introduction of world Islamic figures. In this design stage, the application structure is depicted with a *flowchart*:



Grafik1. Main Menu Application

After the analysis and design stages, it is the stage of development and implementation an application, the following is a picture gallery of the results of the interactive learning application to get to know Islamic figures.

Tabel 1 Black Box Testing

| No | Items tested | Results to be achieved | Number of tests | Test results |
|----|------------------------|---|-----------------|--------------|
| 1 | Start Button | Successfully enter the main menu/home | 5x | Succeed |
| 2 | Material Button | Successfully enter the learning materials menu | 4x | Succeed |
| 3 | Islamic Figures Button | Successfully entered the material menu of Islamic figures | 4x | Succeed |
| 4 | Book List Button | Successfully entered the Book List Material menu | 4x | Succeed |
| 5 | Quis Button | Successfully enter the Quis practice question menu | 3x | Succeed |
| 6 | Info Button | Successfully enter the info options menu | 3x | Succeed |
| 7 | Profile Button | Successfully enter the profile selection menu | 3x | Succeed |

| | | | | |
|----|----------------------|--|----|---------|
| 8 | Next button | Successfully proceed to the next page | 4x | Succeed |
| 9 | Back button | Successfully return to the previous page | 4x | Succeed |
| 10 | Biography Button | Successfully enter the biography menu | 4x | Succeed |
| 11 | Material Back button | Successfully return to the selected material | 5x | Succeed |
| 12 | Home Button | Successfully return to the main menu | 5x | Succeed |



Figure 1. Home View

The next stage is system testing. Testing will be carried out to find out whether each function in the software meets the requirements that will be created for a program. Here is the blackbox test table

CONCLUSIONS AND SUGGESTIONS

The conclusions of this study are:

This research successfully answered the formulation of the problem regarding the creation of an interactive learning application that is effective in introducing Islamic figures to users. The application developed is able to provide an interactive learning experience with features that support the understanding of history and the contributions of Islamic figures in a more interesting and informative way. Through a user-friendly design approach and well-structured content, this application is expected to increase users' interest in learning Islamic history, especially among students and the general public who need easily accessible learning resources.

Testing of the app shows that features such as quizzes, event timelines, and visual materials are able to facilitate users in understanding the material effectively. In addition, the simple yet attractive interface manages to provide a positive user experience. Therefore, this application is considered to have fulfilled the main goal of the research, which is to provide an

interactive learning platform that is not only informative but also encourages user engagement in the learning process.

Suggestions for Further research can also conduct a more in-depth study of the effectiveness of these apps in improving user understanding. Testing with quantitative and qualitative methods on user learning outcomes will provide better insight into the impact of the application on the understanding of Islamic historical materials.

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