



Research Article

Development of Technology-Based Islamic Religious Education Media and Learning Resources

Nur Aeni Angger Rifqi Azieda^{a*}, Yanti^a, Aida Hayani^a, Farida Musyrifah^a, Abdul Hadi^a

^a Postgraduate Program of Islamic Education, Faculty of Tarbiyah and Teacher Training, Alma Ata University, D.I. Yogyakarta 55183, Indonesia

Article Info

Article history:

Received 30 May 2024

Revised 11 June 2024

Accepted 25 July 2025

Available online 30 July 2025

Keywords:

Professional Competences,
Elementary School Teachers,
Islamic Religious Education,
Technology-Based Learning Media

Abstract

This study aims to analyze the professional competency needs of elementary school teachers in Yogyakarta. Using the Literature Study method, this study collects data from various literatures related to the development of teacher professional competencies, as well as an analysis of the priority competency needs index among elementary school teachers. The results of the study indicate that the development of information technology can be utilized to support more interactive and dynamic teaching in Islamic religious education, which has been proven to increase student engagement and understanding. Application-based learning technology, online platforms, and other digital media enable more equitable and relevant access to religious education for the younger generation. With the integration of technology, Islamic religious education is expected to be more interesting and effective in achieving learning objectives in the digital era.

© 2025 IJCAR. All rights reserved

Introduction

The development of information and communication technology has changed the way humans obtain and process information, including in religious learning. Along with that, the conventional approach in teaching Islamic Religious Education which only relies on printed books and classical lectures is considered increasingly less relevant and less interesting for the younger generation who are accustomed to technology. In general, the main challenge faced in teaching Islamic Religious Education is the lack of student interest and involvement in learning religious material. Meanwhile, the potential of technology to increase student interactivity, involvement, and understanding of religious teachings is becoming increasingly clear.

Various digital media, educational applications, online learning platforms, and multimedia content can be utilized to present Islamic Religious Education material more dynamically and interactively.

In addition, the development of technology-based Islamic religious education media and learning resources can also help overcome geographical and logistical constraints in providing equal access to religious education throughout the region. With technology, students in remote areas or those with limited access can still access Islamic religious education materials easily through their digital devices' materials more dynamically and interactively, improving students' understanding of complex concepts.

Technology-based learning resources such as online courses, video lessons, and mobile applications allow access to flexible and personalized education, integrating learning into students' daily lives. This not only increases students' motivation and interest in learning, but also prepares them to face the demands of an increasingly connected and changing global society.

* Corresponding author.

E-mail address: anngerzida@gmail.com (Azieda).

Overall, the use of technology in education not only increases the effectiveness of learning, but also creates an inclusive and innovative learning environment. By continuing to develop and integrate this technology into the curriculum, education can continue to adapt to the times and prepare future generations with relevant and competitive skills in the digital era.

Therefore, research and development in this field is very important to explore the potential of technology in improving the effectiveness and efficiency of Islamic Religious Education learning. By utilizing technology optimally, it is hoped that Islamic Religious Education teaching will not only be more interesting, but also easier to understand and relevant for the younger generation living in this digital era.

Methodology

This design uses a type/approach to research in the form of Library Research. Library research is a study used in collecting information and data with the help of various materials available in the library such as documents, books, magazines, historical stories, etc. (Mardalis, 1999 in Mirzaqon, 2017).

This approach aims to explore information from various scientific literatures that are relevant to the research topic, namely the use of media and technology-based learning resources in Islamic religious education learning. Through library research, researchers can access various concepts, theories, and previous research results that support the understanding of the phenomenon being studied without going directly into the field.

The data in this study are sourced from published literature or secondary data, including academic books, scientific journal articles, conference proceedings, research reports, and other documents that discuss the application of technology in religious education, especially Islamic Religious Education. These sources are taken from trusted academic databases such as Google Scholar, JSTOR, and university digital library portals, which provide access to high-quality scientific research and literature. Other sources include e-books, dissertation results, reports from educational institutions, and digital documents relevant to the topic of this research.

Result and Discussion

Technology-Based Media and Learning Resources

Physical and non-physical aids are important means in the learning process that aim to facilitate effective interaction between educators and students. The use of physical aids such as whiteboards, models, and props allow for the visualization of complex concepts, thus helping students understand the material better and faster. In addition, non-physical aids such as computers, projectors, and the internet allow access to a variety of resources and present information in various multimedia formats. This not only makes learning more interesting but also facilitates a deeper understanding of the material being taught. Thus, the use of these aids is not only aimed at time efficiency in the teaching and learning process, but also to increase the motivation and interest of students in exploring and deepening their knowledge further in the field of study they are studying (Musfiquon, 2012:28). According to Ahmad Suryadi (2020:19), Learning media includes various tools that are specifically used to deliver learning content. This is part of the learning resources that contain instructional materials in the student environment, which aims to motivate students in their learning process.

Meanwhile, technology-based learning media refers more to the use of digital tools and platforms specifically designed to support the learning process. This includes various information and communication technologies (ICT) such as computers, the internet, application software, and mobile devices that are used to deliver learning materials interactively and dynamically. With technology-based learning media, educators can present information in various formats such as text, images, audio, and video, which allows students to learn in a more interesting and relevant way to their daily lives. In addition, this technology also facilitates collaboration between students and teachers, and allows for independent learning that can be accessed from anywhere and anytime through online learning platforms. Thus, technology-based learning media not only increases the effectiveness and efficiency of the teaching and learning process, but also supports the creation of an inclusive and innovative learning environment in today's digital era.

Technology-Based Islamic Religious Education Learning Resources

According to the Director General of Higher Education, learning resources are everything with which someone learns something. Meanwhile, Sudjana and Rivai (2007:77) argue that learning resources are all resources that can be utilized to facilitate someone in their learning. Then, Anitah (2008:5) said that learning resources are everything that can be used to facilitate learning activities. In addition, Yusuf (2010:250) argues that learning resources are all types of media, objects, data, facts, ideas, people and so on that can facilitate the learning process for students, which are called learning resources. When associated with technology, technology-based learning resources include various platforms and applications such as online learning platforms such as Coursera and edX, mobile applications such as Duolingo, physics and chemistry simulations, learning videos on YouTube, e-books and digital books, webinars, and online forums. Technology allows learning to be more interactive, easily accessible, and can be tailored to individual needs, allowing students to learn independently and gain access to educational resources from anywhere and at any time.

Thus, it can be concluded that learning resources are basically a system consisting of a collection of materials/situations that are collected intentionally and created to enable students to learn individually.

Types of Media and Resources for Technology-Based Islamic Religious Education Learning

Learning media is a tool used to send messages and information between teachers and students. The use of this media can be done both in individual and group activities. Each type of media has specific capabilities, characteristics, and features that can be adjusted for different needs (Rima Wati, 2016:5), Seels and Glasgow in Arsyad (2006:33-36) divide learning media into two categories, as follows:

a. Traditional Media

- 1) Projected still visuals
 - a) Opaque projection (not transparent)
 - b) Overhead projection
 - c) Slides d) Filstrips
- 2) Unprojected visuals
 - a) Pictures, posters

- b) Photo
 - c) Chats, graphs, diagrams
 - d) Exhibitions, information boards
- 3) Audio
 - a) Disc recording
 - b) Cassette tape, reel, cartridge
 - 4) Multimedia Presentation
 - a) Slides plus sound (tape)
 - b) Multi-image
 - 5) Dynamic projected visuals
 - a) Film
 - b) Television
 - c) Video

b. Technology Media

1) Visual Media Media that relies on the sense of sight. This type of visual learning media displays its material using a projection tool or projector, for example Power Point Slides. 2) Audio Media Media transmits audio messages from the message source to the message recipient. Audio media is closely related to the sense of hearing. Judging from the nature of the message received, audio media can convey verbal messages (spoken language or words) or nonverbal (sounds and vocalizations), for example Radio, Tape Recorder. 3) Audio Visual Media: This is a type of media that combines visual and audio media, displaying sound and images, for example learning media. However, with the development of technology, learning media has experienced significant innovation and development, such as the use of 1) Interactive Multimedia, 2) Digital Video, 3) Animation, Podcast, 4) Augmented Reality (AR), 5) Virtual Reality (VR).

Types of technology-based Islamic Religious Education learning resources

Learning resources are essentially, according to Mudhofir in Munadi (2008:37), part of a learning system that includes the process, the people involved, learning materials, tools used, teaching techniques, and learning environments. These components have the potential to influence student learning outcomes, as explained by Edger Dale in Munadi, who states that learning resources are a variety of very broad experiences, covering everything that can be experienced and triggers learning events.

In general, according to Warsita, learning resources can be divided into 2 types, namely:

a. Learning Resources by Design (designed learning resources) Planned learning resources are learning resources that are intentionally designed to achieve certain learning objectives. Examples of these learning resources include textbooks, Student Worksheets (LKS), modules, lab instructions, transparencies, films, encyclopedias, brochures, comic strips, slides, and videos.

b. Learning Resources by Utilization (learning resources utilized) Learning resources utilized include everything around us that can be used for learning purposes. Examples include newspapers, television programs, markets, museums, zoos, mosques, and religious leaders.

Meanwhile, according to Donald P. Elly, learning resources are divided into four types, namely:

a. Man as the party that channels or transmits the message.

b. Materials and Devices as materials (software) and equipment (hardware)

c. Methods as a way or method used in presenting information. d. Setting as an environment where teaching and learning interactions occur.

There are many learning resources nowadays that are supported by technological developments, depending on the topic you want to learn, as stated by Jalmur (2016):

a. Online Courses

There are many online learning platforms that provide courses in various fields, such as Coursera, Udemy, edX, and Khan Academy. Anyone can register and take these online courses according to their interests and needs.

b. Online Learning Videos

Platforms like YouTube, TED-Ed, and Khan Academy offer educational and informative learning videos. Users can search for videos on specific topics or follow channels specific to their learning interests.

c. Online Forums and Communities Participating in online discussion forums or learning communities provides an opportunity to interact with other individuals who share similar interests. There, we can ask questions, share information, and learn from their experiences.

d. Podcasts If you tend to listen more than you read, podcasts can be a great learning resource. There are many educational and informative podcasts that you

can listen to while commuting or taking a break.

e. Mobile Apps There are many apps designed specifically for learning, such as Duolingo which is useful for learning foreign languages, memoriZAP which helps you understand important facts, and Quizlet which is used to create and study flashcards.

Thus, the use of technology-based learning resources can change the paradigm of education in a revolutionary way. Technology enables access to a variety of learning content in a flexible and affordable way, allowing individuals to learn at their own pace and style. With online learning platforms, students can access learning materials from anywhere and at any time, facilitating distance learning and collaboration between students from different parts of the world. In addition, technology-based learning resources also enhance interactive learning experiences through simulations, educational games, and visualization tools that strengthen the understanding of abstract concepts. In this way, technology not only increases the accessibility of education but also improves the quality of learning by enriching the overall learning experience of students

Conclusion

The conclusion of the use of media and technology-based learning resources shows a significant positive impact on modern education. The use of physical and non-physical aids, such as interactive whiteboards, 3D models, and online learning applications, has changed the traditional paradigm of learning. With a variety of visual and audio media available, teachers can deliver.

References

- Anitah, Sri, *Learning Media*, (Surakarta: UNS Press, 2008).
- Arsyad, Azhar, *Learning Media*, (Jakarta: Grafindo Persada, 2006).
- Jalmur, N, *Media and Learning Resources*, (Jakarta: Kencana, 2016).
- Munadi, YuHdi, *Learning Media: A New Approach*, (Jakarta: Gaung Persada Press, 2008).
- Musfiquon, *Development of Media and Learning Resources*, (Jakarta: PT. Pustakaraya, 2012).
- Sudjana, Nana & Ahmad Rivai, *Teaching Technology*, (Bandung: Sinar Baru Algesindo, 2007).

- Yusuf, Pawit M, Instructional Communication (Jakarta: Bumi Aksara, 2010).
- Yanti, et al. Implementation of the Concept of Ta'dib Naquib Al-Attas in Family Education in the Era of Society 5.0, Jurnal Tarbiyah Al Musim, 2023.
- Yanti, et al. Early Childhood Moral Education Through the Story of Yusuf in Surah Al-Anbiyai and Its Correlation with Lawrence Kohlberg's Theory. I'tibar: Journal of Early Childhood Islamic Education 7 (02), 2023.
- Yanti, et al. Literature Review: Religious Moderation in the Context of Islamic Education in the Digital Era, Journal of Islamic Knowledge 3 (2), 2023.
- Yanti, et al. Bowed Generation and Digital Ethics Challenges in Islamic Education. West Science Islamic Studies 1 (01), 2023.