

The Innovation of Information and Communication Technologies in Contextual Teaching and Learning Models Based PAI Learning


Luqman Hakim^{a,1*}; Anfasa Naufal Reza Irsali^{b,2}; Tsamarah Nabilatul Watsiqoh^{c,3}

^{a,b} State Islamic University of Sunan Ampel Surabaya, Indonesia

^c State Islamic University of Maulana Malik Ibrahim Malang, Indonesia

¹02040822030@student.uinsby.ac.id; ²anfasanaufal79@gmail.com; ³tsamarahnabilaa28@gmail.com

*Corresponding Author

Article Info	Abstract
<p>Article History</p> <p>Received: August 9, 2023</p> <p>Revised: November 10, 2023</p> <p>Accepted: November 17, 2023</p> <p>Published: December 27, 2023</p> <p>Keyword: Contextual Learning and Teaching, Information and Communication Technology, PAI Learning</p> <p>Copyright (c) 2023 Luqman Hakim, Anfasa Naufal Reza Irsali; Tsamarah Nabilatul Watsiqoh</p> 	<p>The integration of technology in the era of the Fourth Industrial Revolution has become essential in various aspects of human life, including education. This study aims to explore the implementation of technology-based Islamic Religious Education learning at MAN 1 Lamongan in response to the challenges and demands of the digital era. The method used in this study involves analyzing teaching materials, interviewing Quran and Hadith teachers, and students from Madrasah Aliyah Negeri 1 Lamongan, as well as observing classroom learning. The implementation of ICT-based learning in the Contextual Learning and Teaching model consists of two stages: the design stage and the implementation stage conducted by the teachers. The implementation stage is further divided into three phases: (a) opening, which involves delivering and teaching Islamic Education knowledge materials; (b) implementation, where students engage in group projects to connect the material with real-world events and their own experiences; and (c) closing, which includes reflection and evaluation of the learning process related to the studied material. Throughout the learning process, students are given the freedom and support to utilize technology, including laptops/smartphones and software applications such as Google Chrome, Microsoft Office, YouTube, WhatsApp, and free Wi-Fi access, to facilitate their learning. The study results indicate that using ICT-based learning media for Al-qur'an Hadith in this model has successfully increased students' interest in learning, enhanced their critical thinking skills, and fostered their creative competence in understanding and processing information and knowledge collaboratively.</p>
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Introduction

Education is important role in preparing the nation's younger generation to face the era of globalization. The statement can be seen through the continuous effort to develop the potential and personality of students to their fullest, encompassing intellectual, emotional, and spiritual aspects (Romlah, 2011). Education is understood as a process of teaching and learning, involving interaction between educators and learners to achieve predetermined learning objectives (Hidayat & Syahidin, 2019). Education can also be defined as a conscious effort carried out by educational institutions, both formal and informal, through guidance and continuous learning activities that are carried out on an ongoing basis to prepare the nation's generation to be able to compete and be competitive in various scientific disciplines in the modern era (Rosdiana, 2018).

As a complex system, education has a core component known as the learning process. Why is that so? Because it happens through the learning process that the transfer of knowledge occurs via interactions between educators and learners (Hidayat & Syahidin, 2019). In learning activities, the development of students' critical thinking skills is crucial to be considered. With this competency, students can absorb and understand knowledge information reflectively, enabling them to evaluate and make decisions in solving various problems around them (Rahmadani, 2019). The competence of critical thinking needs to be trained through a dialectical learning process, which provides space for thinking and dialogue between educators and learners or among peers. In this case, educators are expected to build an interactive pattern and provide positive feedback in the teaching and learning process, enabling the learning experience to activate students' critical thinking skills optimally (Darmawan, 2010).

However, in the Government Regulation of the Republic of Indonesia Number 55 concerning Religious Education and Religious Education, it is stated; *"Religious education is an education that provides knowledge and shapes the attitudes, personality, and skills of students in practicing their religious teachings. This objective is achieved by implementing, at the very least, subject/lecture on all pathways, levels, and types of education"* (Republik Indonesia, 2007). Based on the regulation above, the ideal of Islamic Learning Education (PAI) is not only about the transfer of knowledge regarding Islamic teachings but also about the process of shaping the character, self-identity, attitudes, and skills of students in consciously practicing Islamic values.

However, in the modern era, the conducting of Islamic Education Learning (PAI) in school has not fully succeeded in achieving the expected goals and faces several obstacles. The fact remains that students continue to exhibit limited interest in engaging with and learning about Islamic Learning Education (PAI) classes, and many students face difficulties in applying the knowledge practically outside the classroom environment (Romlah, 2011). Among the factors that contribute to the low interest in learning among students is the use of conventional teaching methods and media, where the learning process is primarily teacher-centered and the knowledge taught by the teacher is often not relevant to the students' everyday life issues. (Marti'in, 2019). This situation hampers the effectiveness of Islamic Education (PAI) learning and limits the opportunity for students to develop their critical thinking skills.

Based on the aforementioned assumptions, innovative models of Islamic

Education learning Islamic Education Learning (PAI) become crucial for teachers or educators in every educational institution to implement. The innovation can encompass various aspects, including relevant learning resources, media, and methods that align with the modern reality, prioritizing the use of advanced technology. This way, the quality of Islamic Education learning (PAI) can be enhanced, and optimal learning objectives can be achieved. Rosdiana states that information and communication technology-based learning media play a significant role in the teaching and learning process (Rosdiana, 2018). By utilizing technological media, learning can be designed to be more interactive and engaging, thereby motivating students and accelerating their understanding of the subject matter while supporting the achievement of learning goals (Wangge, 2020).

Research on the utilization of Information and Communication Technologies in the education system has been conducted by several academics. A study conducted by the Information Systems program at Putera Batam University showed that by implementing digital information technology-based learning media, students from Class X at SMA Ananda Batam achieved a 76.94% improvement in learning outcomes compared to the expected scores (Adam & Syastra, 2015). Similarly, Hidayat and Syahidin stated that innovation in Islamic Religious Education (PAI) learning using the Contextual Teaching and Learning model can enhance students' cognitive and psychomotor abilities. A learning system integrated with digital technology can serve as an alternative model for PAI learning in schools, keeping up with the current era's developments (Hidayat & Syahidin, 2019).

In line with that, Lafendry emphasized that in the digital age, the use of technology in education has become a necessity that should be accompanied by educators' competency in digital technology (Lafendry, 2022). Previous studies have shown the importance of utilizing digital technology in the modern era, which should be implemented by educators in schools. However, there is still a lack of research providing a clear concept of a relevant model to be used for PAI learning integrated with Information and Communication Technology (ICT). Therefore, researchers aim to conduct more in-depth research on how learning can be enhanced by utilizing technology-based media in the teaching of Al-qur'an Hadith, which are part of the PAI curriculum implemented in schools.

Advances in Information and Communication Technology (ICT) has a beneficial impact the world of education (Ningsih et al., 2023). Islamic Senior High School (MAN) 1 Lamongan is an educational institution that implements digital-based learning in response to the advancements of Information and Communication Technology in the era of Industry 4.0. Their overarching vision is to establish an outstanding, character-based, skilled, and environmentally conscious Digital School. Muyassaroh, a Quran and Hadith teacher at MAN 1 Lamongan, stated that the use of digital technology is crucial in supporting the teaching and learning process. However, the implementation of an appropriate learning model is equally important to effectively manage technology-integrated learning (Toha, 2023). Based on the assumptions above, this study aims to examine more deeply and describe how information and communication technology can be used in the implementation of PAI learning, especially in the Al-Qur'an Hadith subject in class XI MAN 1 Lamongan using the Contextual Teaching and Learning model.

Research Method

This study is a descriptive qualitative research. Qualitative research aims to describe phenomena or conditions as they are based on empirical data or direct field observations by the researcher, using a field research design (Moleong, 2018a). ICT-based Islamic Religious Education learning is the main focus of this field study research, which seeks to understand the underlying meaning of participants' behavioral changes, explore information, and identify the complex backgrounds and interactions among individuals, in order to describe field phenomena in a concrete and comprehensive manner (Faisal, 1990).

The research approach used by the researcher to uncover the innovation of Islamic Religious Education learning at MAN 1 Lamongan is a phenomenological approach. This approach aims to uncover the meanings behind concrete, fresh, complex, and detailed experiences (Creswell & Poth, 2018). Phenomenology is an approach in research that emphasizes subjective human experiences or the subjective aspects of human behavior and interpretations of the world. In the phenomenological perspective, the researcher seeks to understand the meaning of phenomena and their connections to individuals in specific situations (Moleong, 2018b).

This study will produce descriptive data in the form of written expressions sourced from the informants and observable behaviors noted by the researcher during observations. The data sources for this research consist of primary and secondary sources. Primary data is obtained by the researcher from policy makers, Al-qur'an Hadith subject teachers, and students of MAN 1 Lamongan. Secondary data is obtained from various research journals, handbooks, textbooks, school documents, official school websites, and relevant research articles. Data collection is carried out through direct interviews, documentation, and observations, as these techniques enable the researcher to obtain credible data related to the research study on the innovation of Islamic Religious Education learning at MAN 1 Lamongan.

In data analysis, the researcher employs several techniques to uncover detailed information and draw a final conclusion. Firstly, the researcher condenses the data by selecting, simplifying, abstracting, and transforming data that represent the entirety of written field notes, interview transcripts, documents, or other empirical materials. Secondly, the data is reduced by noting and examining it clearly and comprehensively. Thirdly, the data is presented by providing textual information or descriptions, deciding which data is relevant and which is not to the research study. Subsequently, the researcher draws a final conclusion that will be presented to obtain valid research results aligned with the research objectives. Lastly, the researcher ensures the data's validity through prolonged engagement, persistent observation, peer checking, and triangulation (Sugiyono, 2014).

The first author of this article played a role in recruiting participants as informants since they were in close proximity to the research site, MAN 1 Lamongan. This facilitated data collection access. However, the authors made efforts to avoid subjectivity throughout the research to maintain objectivity. The second and third authors were also involved in overseeing the research process from beginning to end. This included observation, preparing interview questionnaires, transcribing, and analyzing research findings. The

researcher conducted in-depth interviews to collect data. Additionally, data validity was tested through member-checking, where the researchers reconfirmed the interview results with each participant to review and rectify any errors. The participants then returned the corrected transcripts to the authors for data analysis, resulting in relevant research conclusions (Jackson, C., Vaughan, D. R., & Brown, 2018).

Result and Discussion

This research aims to examine the implementation of information and communication technology in PAI learning, specifically in the subject of Al-qur'an Hadith, for 11th-grade students at MAN 1 Lamongan. Islamic Religious Education (PAI) is often understood as a subject within the national curriculum structure, which is a mandatory subject in schools or schools at all levels of education. (Sofwan & Supriadi, 2014). Islamic religious education is also seen as a continuous process of nurturing individuals to understand Islamic teachings, practice them with deep appreciation, and make them a guiding principle in life (Aziz & Hidayatullah, 2020, p. 132). The statement above emphasizes the importance of teaching Islamic religious education in schools to develop students' character holistically, fostering faith in Allah SWT, and enabling them to apply the acquired religious knowledge for the well-being of humanity.

Based on previous observations and documentation, the learning curriculum at MAN 1 Lamongan is divided into two parts: the 2013 Curriculum and the Merdeka Belajar (Independent Learning) Curriculum. The 2013 Curriculum is implemented for 11th and 12th-grade students, while the Merdeka Belajar Curriculum is applied for 10th-grade students as an implementation of the Merdeka Belajar policy initiated by the Ministry of Education, Culture, Research, and Technology in 2022. The learning system in this school has been designed to integrate information and communication technology (ICT) into the classroom teaching and learning process.

As mentioned by the Quran and Hadith teacher, the information and communication technology used as a PAI learning media at MAN 1 Lamongan consists of hardware and software components. The hardware includes computers/laptops, smartphones, sound players, and LCD projectors. On the other hand, software refers to application programs such as Microsoft Office, Power Point, Whatsapp groups, Macromedia Flash, YouTube, and others. Additionally, the school also provides free Wi-Fi access for all students to utilize applications or programs within the internet network, such as E-Learning, Google Classroom, and the MANELA CBT (Computer Based Test) application. MANELA which stands for MAN 1 Lamongan is a specialized software application owned by the school used for Mid-Semester Assessments, End-of-Semester Assessments, and other evaluations (Toha, 2023).

Based on the explanation above, it can be inferred that the ICT-based learning media used by educators in Quran and Hadith lessons, comprising hardware and software components, have fulfilled the ICT components. This aligns with Widiyanto's statement that ICT-based media comprises two components: software and hardware. The hardware refers to physical touchable devices, while the software refers to applications designed from specific programs (Widiyanto et al., 2021). Thus this information and communication technology has two parts, namely hardware and software, along with

the application programs in it.

It's important to note that Islamic Religious Education (PAI) in islamic schools differs from the PAI lesson public schools. PAI in islamic schools covers a broader range of subjects, including a) Al-qur'an Hadith (Al-Qur'an Hadith), b) *Fiqh* (Islamic Jurisprudence), c) *Aqidah* (Creed) and *Akhlaq* (Morality), and d) *Islamic Cultural History*. In this research, the focus is on the teaching and learning of Al-qur'an Hadith. Al-qur'an Hadith are part of the PAI curriculum taught to help students understand and practice the teachings of the Al-qur'an Hadith. This includes the ability to read fluently, translate, summarize the content, copy and memorize selected verses, as well as understand and apply selected Hadiths as guidance and knowledge in schools at specific educational levels (Ar Rasikh, 2019).

The ICT-based learning media used by educators in PAI teaching at MAN 1 Lamongan are highly diverse. The school provides the freedom for educators and students to utilize various media, according to the learning situation and characteristics of the students. Educators can choose relevant learning media and models to achieve optimal learning objectives. The adaptation of teaching materials and the selection of technology to be used by teachers are done when developing self-learning modules known as *Unit Kegiatan Belajar Mandiri* (UKBM), which is part of the Textbook component in the main structure of the 2013 Curriculum. In these UKBMs, the subject matter is organized by incorporating audio-visual media and integrating them with links to instructional videos available on YouTube to make the learning activities more engaging.

To support technology-based learning, the school has provided three computer laboratories equipped with 75 computer units and their peripherals, which can be utilized for learning access. Through ICT-based learning, especially in the subject of Islamic Religious Education (PAI), it is expected to facilitate interactive learning processes and enhance students' response and engagement in learning. Digital technology can serve as a means or medium and a source of learning for students to explore up-to-date knowledge information.

The phenomenon of Islamic Religious Education learning in MAN 1 Lamongan indicates efforts to reform digital learning in response to the demands of the 21st-century education system, which requires significant changes in the field of education. An ideal 21st-century education system necessitates ideal conditions in educational institutions, both in physical and non-physical aspects. Therefore, the competence and capabilities of educators become crucial and need continuous improvement to effectively manage and develop technology-integrated learning (Lafendry, 2022). The readiness of educators to master the use of digital learning media in schools is vital and will determine the quality of the learning process. Additionally, educators need to consider the learning characteristics of students in order to select and implement relevant learning models that can enhance students' interest in learning with the assistance of digital technology (Hidayati & Musnandar, 2022).

Teaching Islamic Religious Education through information and communication technology media aligns with the demands of modern society and the challenges of advancing knowledge and technology in the digital era (Dwi & Estetika, 2019). According to the American Association College of Teacher Education (AACTE), the global vision of

education in the 21st century is focused on technological competence for learning. In this context, educators are expected to possess competencies that ensure positive learning outcomes for students, which include:

1. Integrating education with technology to create learning experiences that foster creative mastery of technology competencies in order to achieve learning objectives.
2. Aligning instruction with standards, particularly those that embody 21st-century knowledge and skills.
3. Balancing direct instruction strategies with project-oriented learning methods.
4. Innovating in teaching to develop students' potential and knowledge, preparing them to be quality graduates.
5. Using appropriate assessment strategies to evaluate students' performance and differentiating instruction (including, but not limited to, formative, portfolio, curriculum, and summative assessments).
6. Actively participating in various learning groups and training within the school or through team discussions.
7. Acting as mentors and collaborators with fellow educators.
8. Pursuing lifelong learning opportunities. (*long life education*) (AACTE & P21, 2013).

Those competencies are crucial and need to be possessed and developed by educators in every educational institution to prepare them for implementing the latest teaching models utilizing technological advancements. The rapid development of science and technology poses complex challenges to Islamic education (Suarni, 2019). When examining the current state of Islamic education, the challenges it faces originate from both internal and external factors within the education field (Wahid & Hamami, 2021). In addition, there are several issues that pose challenges to Islamic educational institutions, particularly in achieving the eight national standards set within the scope of education. These standards include content standards, process standards, graduate competencies, teacher and staff standards, infrastructure standards, management standards, funding standards, and assessment standards. Meeting these national standards presents challenges to the overall success of Islamic education (Wahid & Hamami, 2021).

In this regard, various educational efforts have been made by the government to embrace the digital era, including revising the 2013 curriculum by formulating a learner-oriented curriculum that includes Strengthening Character Education (Penguatan Pendidikan Karakter or PPK), literacy competencies, and the 4C competencies (*Critical Thinking, Creativity, Communication, & Collaboration*). Additionally, the curriculum is oriented towards Higher Order Thinking Skills (HOTS) competencies. The establishment of these curriculum competencies is based on the assumption that they provide graduates with the necessary skills to face the demands and challenges that arise in the digital era (Wahid & Hamami, 2021).

The implementation of ICT-Based Media

Learning is a process of developing individual potential based on certain characteristics through the situation at hand. Hilgard and Ernest Ropiequet defined: *“Learning is the process by which an activity originates or is changed through reacting to an encountered situation, provided that the characteristics of the change in activity cannot be explained on the basis of native response tendencies, maturation, or temporary states of the organism”* (Hilgard & Bower, 1966). Technological developments in the digital era have brought changes in the pattern of human life in various fields of life, with all the challenges. In this case, education plays a strategic role in improving the quality of resources that are able to utilize technology properly.

In implementing ICT-based media in PAI learning, particularly in the subject of Al-qur'an Hadith, teachers utilize the Contextual Teaching and Learning (CTL) model. ICT tools and techniques are used to enhance teaching and learning opportunities more specifically (Sabiri, 2020). Muyassaroh, in her interview, expressed that with this model, students are able to understand the learning material more easily and the learning process becomes more meaningful. This is because the knowledge taught by the teacher is connected to the things or phenomena that occur in the students' daily lives, enabling contextual learning to take place beyond time and space with the use of information and communication technology (Toha, 2023).

Based on the assumptions above, educators implementing ICT-based learning utilize the contextual approach model that is considered relevant to the learning characteristics of students in the digital era. As we know, the CTL model was developed by John Dewey (1918) and involves the formulation of curriculum content, media, and learning methodologies aimed at enhancing students' interest and learning experiences. In this process, children are encouraged to learn critically by contextualizing knowledge, information and actual phenomena in their surroundings and drawing from their own experiences (Hidayat & Syahidin, 2019).

In the learning process, students are guided by educators to develop their critical thinking skills in understanding the learning material by reading and comprehending verses from the Qur'an, Hadith texts, and stories presented in well-structured Al-qur'an Hadith teaching modules. These modules are accompanied by pictures, website links, and instructional videos containing knowledge information accessed through integrated barcode technology. With the help of digital media such as Microsoft Teams, interactive PowerPoint presentations, YouTube videos, and blog websites that feature unique news or phenomena, the learning process becomes more engaging and increases students' interest in learning. All students are also given the freedom to bring laptops and smartphones for learning purposes, and the school provides free Wi-Fi access (Muhaimin, 2023).

Based on the researcher's observations, the contextual teaching and learning model implemented by educators in the Al-qur'an Hadith learning process is suitable for students who, being millennials, are highly familiar with digital technology. With guidance from educators, students can effectively utilize digital technology as a learning tool to support their learning process. In this regard, Hilman also states that the use of digital-based learning media can be implemented through computer devices, laptops,

or smartphones, stimulating critical thinking skills, fostering students' interest, and nurturing their creativity (Dewi & Hilman, 2019).

To achieve optimal learning outcomes in Al-qur'an Hadith, the implementation of the learning process must be well-prepared. In the implementation of Al-qur'an Hadith learning utilizing ICT-based media (*Information and Communication Technologies*), educators play a crucial role in designing, implementing, monitoring, and continuously evaluating the learning process (Anwar et al., 2020). Educators need to prepare a well-structured lesson plan to ensure an effective and efficient learning process. Muyassaroh expressed that the necessary steps in implementing ICT-based Qurdis (Al-qur'an Hadith) learning with the contextual teaching and learning model are carried out through the stages of planning and implementation. (Toha, 2023). The process can be described in several ways that will be discussed in the following paragraph.

Designing Learning Models of Al-Qur'an Hadith

This stage is the initial phase carried out by educators. They design the instructional design for Al-qur'an Hadith learning by selecting and determining relevant and effective models, methods, and instructional media to be used in the learning process, based on the intended learning objectives. In this case, educators utilize the contextual teaching and learning model to be implemented in the learning process, utilizing ICT-based instructional media.

The Implementation of Learning Al-Qur'an Hadith based ICT

After designing the ICT-based Al-qur'an Hadith learning with the CTL model, the next stage is the implementation phase. The implementation stage of ICT-based Al-qur'an Hadith learning with the CTL model involves several steps, namely the opening, implementation, and closure.

In the opening the educators prepare Self-Learning Units or instructional modules that have been arranged according to the learning objectives. They present the Al-qur'an Hadith materials that will be discussed in the classroom and provide stimuli using digital instructional media in the form of images and interactive videos that contain phenomena and knowledge information to stimulate students' learning interest. Next, students are encouraged to develop their critical thinking skills by providing comments or opinions based on the acquired knowledge information and their life experiences.

The process of implementing ICT-based Al-qur'an Hadith learning with the contextual teaching and learning model is carried out through collaborative learning methods. Students are divided into several study groups, and educators present a problem or actual phenomenon that each group needs to critically analyze through study and discussion, gathering information or materials from digital media such as website blogs, chat platforms, Instagram, and YouTube that are relevant to the subject matter being studied. Each group is then asked to present the results of their discussion in front of the class, guided by the educator in a rotating manner. Other groups are allowed to provide responses to the presenting group with different opinions based on their understanding.

The teaching method utilized by educators in the Al-qur'an Hadith learning

mentioned above falls under Problem-Based Learning and Inquiry Learning, which are learning methods that utilize problems and require students to engage in information gathering (inquiry) to solve a problem. (Romlah, 2011). With these teaching methods, the implemented Al-qur'an Hadith learning is well-suited for utilizing technology, enabling the learning process to provide comprehensive knowledge and meaningful experiences.

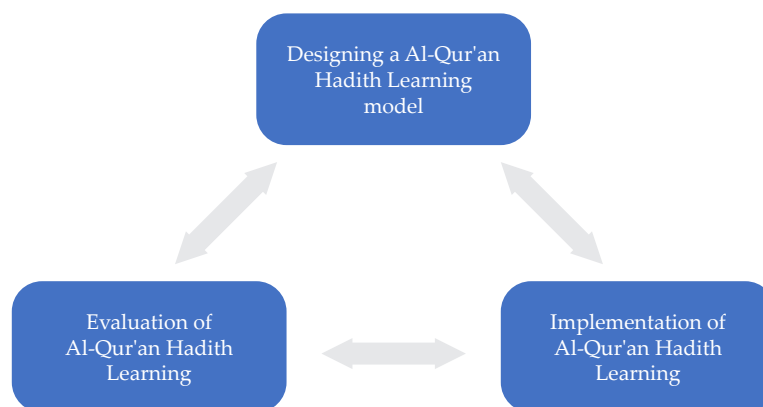
The closing phase is the final stage in the Al-qur'an Hadith learning process with the CTL model. This stage involves reflection and evaluation of students' learning experiences related to the learned materials that have been studied, analyzed, and discussed in the classroom. During this stage, educators provide feedback to reflect on the materials and evaluate students' learning activities. Educators give students time to deepen their understanding and recall the knowledge they have acquired through their experiences, whether directly in the real world or through online digital media.

The Learning Evaluation of Al-Qur'an Hadith

In the evaluation phase, educators provide statements and questions to encourage students to reflect on the materials learned during the learning process and contextualize their knowledge and experiences with actual phenomena in their daily lives. The importance of evaluation is not only focused on the final results but also on the learning process. Evaluation is not only conducted on students but also on the teaching methods used by educators, including assessments of the media, time management, and the policies implemented by the school (Hidayat & Syahidin, 2019).

Thus, the steps that can be taken in ICT-based Al-Qur'an Hadith learning innovations are developed through the stages of design, implementation, and evaluation. The steps in implementing Al-Qur'an Hadith learning based on information and communication technology media with the Contextual Teaching and Learning model at MAN 1 Lamongan can be described as follows:

Table 1. The learning process of Al-Qur'an Hadith is based on the ICT CTL model



Based on the observations and documentation regarding the use of ICT-based media in teaching Al-qur'an Hadith, it can be said that the teaching process implemented by the educators has been effective. Educators utilize ICT-based instructional media by applying the Contextual Teaching and Learning model, allowing students to not only

understand the Al-qur'an Hadith textually but also comprehend the materials through contextualizing the knowledge acquired with real-life phenomena.

The implementation of PAI (Islamic Education) learning with technology-based media using the contextual approach model, as applied by the Al-qur'an Hadith teacher at MAN 1 Lamongan, has been a concrete innovation in preparing students to have the global competencies required in the 21st century. In its implementation, the teacher has shown great attention in managing and effectively utilizing digital technology as both a medium and a source of learning. The developed instructional media has been tailored to the characteristics of the students and aligned with their everyday life context, making the learning process enjoyable and truly meaningful.

The research observations indicate that the implementation of ICT-based Al-qur'an Hadith learning using a contextual model has generated enthusiasm among students. With the implementation of ICT, teachers can present learning materials in the form of instructional videos that depict real-world events or phenomena relevant to the lesson. Here, the teacher discusses Quranic verses and hadiths related to expressing gratitude for Allah's blessings, followed by providing examples in daily life through photos, videos, or animations. This approach will enhance students' learning interest and facilitate their understanding of Qur'an and Hadith materials.

The Contextual Teaching and Learning approach has made the learning process more engaging, facilitated interactive communication between educators and students, and provided extensive and diverse access to knowledge. In interviews with several students, they expressed that learning Al-Qur'an Hadith has become more enjoyable and has fostered their creativity. The integration of the contextual teaching model with digital technology is suitable for learning implementation as it enhances critical thinking skills and nurtures creativity in students. These competencies are crucial for the millennial generation to tackle the challenges of the Industry 4.0 era, encompassing problem-solving, adaptability, leadership, communication, collaboration, creativity, and innovation skills.

The results of the researcher's observation indicate that ICT-based Al-qur'an Hadith learning with a contextual model has made students enthusiastic in their learning. The application of the Contextual Teaching and Learning model has made the learning process more engaging, the communication between educators and students more interactive, and the access to knowledge more extensive and diverse. In interviews with several students, they expressed that Al-qur'an Hadith learning has become more enjoyable and has enhanced their creativity. The contextual teaching model integrated with digital technology is suitable for implementation in learning because it can enhance critical thinking skills and foster creativity among students, as these are the abilities needed by the millennial generation to face the challenges of the Industry 4.0 era, including problem-solving skills, adaptability, leadership, communication skills, collaboration skills, creativity, and innovation (Anwar et al., 2020).

Islamic Religious Education in this modern era must adapt to advanced information and communication technology to ensure that the learning process does not appear outdated, boring, and monotonous. The model used by educators in ICT-based Al-qur'an Hadith learning at MAN 1 Lamongan is Contextual Teaching and Learning,

which is considered relevant to the learning characteristics of the millennial generation. Contextual Teaching and Learning is a learning model aimed at supporting students in interpreting the knowledge they acquire by connecting the subject matter to the context of their everyday life, including social, personal, cultural, and religious aspects (Mailani, 2019). The use of digital technology in the contextual model makes the learning process innovative, and both teachers and students become more creative, thus enabling the achievement of the goals of Islamic Religious Education.

Advantages and Disadvantages

Based on the research study conducted by the researcher, it can be concluded that ICT-based Islamic Religious Education learning in the Contextual Teaching and Learning model at MAN 1 Lamongan has the advantages as describe in the following paragraphs.

First, increased student interest in learning. Millennial generation students are naturally inclined to use digital technology in their daily lives, including communication, information retrieval, learning, and entertainment. ICT-based PAI learning makes students more interested and enthusiastic in the learning process. The Contextual Teaching and Learning model encourages students to connect their learning materials with their real-life experiences, both directly and through social media access, utilizing the internet and various application programs.

Second is facilitates learning and provides extensive knowledge. The rapid advancement of technology and communication provides convenience for students. The existence of the internet has made it easier for them to access information, knowledge, or learning materials quickly and without difficulty. In the context of Quran and Hadith learning, teachers can provide opportunities for students to utilize the internet as a learning resource, as long as they access reliable sources. Additionally, teachers can implement a relevant contextual learning model that aligns with the ever-changing global society, enabling students to easily access the latest knowledge for learning and discussions with teachers and peers.

Students who use information and communication technology in Quran and Hadith learning will have broader knowledge of Islam because they can explore diverse information through internet access. They can also engage in online discussions through applications like WhatsApp Groups, Classroom, Computer-Based Tests, and others. However, teachers should continue to guide and correct students' understanding, as not all information or knowledge obtained from the internet is relevant and credible.

Third is enhance critical and creative thinking skills. The implementation of information and communication technology innovation in Quran and Hadith learning stimulates students to explore information through various media and technology-based learning platforms. This enhances students' critical thinking skills as they have a high curiosity for the new things they learn through technology. Additionally, teachers strive to deliver engaging learning materials by utilizing digital media such as PowerPoint, Classroom, YouTube, and other applications to enhance creativity. With the use of social media, the communication between teachers and students becomes more interactive. Teachers can provide real-life learning experiences related to the studied materials by presenting actual phenomena in their daily environment with the help of technology.

Thus, the learning process becomes more interactive and develops the creativity of both teachers and students.

The ICT-based Islamic Religious Education learning in the Contextual Teaching and Learning model at MAN 1 Lamongan also have the disadvantages on its implementation.

First is lack of teacher proficiency in managing technology for Islamic education learning (PAI). To effectively implement Information and Communication Technologies in Quran and Hadith learning, teachers need to have sufficient digital competence. Technology is constantly evolving, and teachers must be prepared to keep up with its advancements. Teachers should be able to analyze which applications are suitable for students to use in the learning process, both as media and learning resources, to support the desired learning objectives. Additionally, teachers are expected to be creative in designing learning content by utilizing various relevant application programs that align with the learning characteristics of modern-era students. Teachers' proficiency in utilizing digital media as learning sources and tools is crucial for effective PAI learning.

The second is lack of control over students in learning. PAI involves the understanding of religious teachings, values, and religious practices in daily life. It aims not only to provide religious knowledge but also to instill Islamic values and cultivate noble character. The information students access through social media can be abstract and often unreliable, and it may consist of hoaxes or false information. Teachers may face challenges in controlling students' access to social media, where information is globally diverse and not always aligned with religious values and moral principles. Teachers are required to exert intensive control over students to ensure they access religious knowledge through trusted and relevant digital sources. Moreover, it is essential to discuss the acquired knowledge with the guidance of the teacher and peers in the classroom, fostering a sound and comprehensive understanding of religion.

Overall, while ICT-based learning in the Contextual Teaching and Learning model offers numerous advantages, it is important to address these weaknesses by providing teachers with the necessary digital proficiency and implementing effective measures to guide students in accessing reliable and relevant information while upholding religious values and moral principles.

Conclusion

The rapid advancement of technology and science in the era of the 4.0. Revolution has brought various changes in all aspects of life, including education. Millennial students have distinct characteristics closely associated with digital technology and various application programs, which influence their thinking and learning styles. The challenge faced by Islamic education is to shape character while imparting Islamic knowledge, while remaining adaptable to the developments of the modern era.

To respond to the challenges in modern education, MAN 1 Lamongan has made efforts to digitize education through learning that incorporates sophisticated information and communication technologies. Through innovations in Islamic Religious Education, particularly in the subject of al-Qur'an and al-Hadith, as demonstrated by the research and discussions above, it is evident that ICT-based learning in Islamic Religious

Education effectively enhances students' interest in learning.

The implementation of ICT-based learning in the Contextual Learning and Teaching model involves three stages: design, implementation, and evaluation. The implementation stage is divided into three steps: (a) opening, which includes the delivery and teaching of Islamic Religious Education knowledge, (b) implementation, where students engage in group projects that connect the material with real-world events and their experiences, and (c) closure, which involves reflection and evaluation of the learning process related to the studied material. Throughout the learning process, students are granted freedom and supported in utilizing technology, such as laptops/smartphones and software applications like search engines, Microsoft Office Teams, chatgpt, YouTube, Twitter, Instagram, and free Wi-Fi access.

The implementation of ICT-based Islamic Religious Education learning at MAN 1 Lamongan also brings forth several advantages and disadvantages. The advantages include an increased interest in learning among millennial students, facilitated learning with extensive knowledge acquisition through easy access to information, and the enhancement of critical and creative thinking skills. The integration of technology in the learning process engages students, connects their studies to real-life experiences, and broadens their understanding of Islam through diverse online resources.

However, challenges arise in the form of teacher proficiency in managing technology for Islamic education and the potential lack of control over students' learning. Teachers need to continue to update their digital competencies so they can utilize technology effectively in the learning process. In addition, teachers need to ensure students access correct and appropriate information.

To address these challenges, it is crucial to invest in teacher training and development programs, focusing on enhancing their digital proficiency and knowledge of appropriate technology applications. Additionally, establishing effective measures to guide students in accessing reliable information and maintaining control over their online activities is essential. By doing so, the benefits of ICT-based learning can be maximized, contributing to the holistic development of students' knowledge, character, and critical thinking skills within the framework of Islamic education.

References

- AACTE & P21. (2013). Teachers for the 21st Century. *Education, September*, 22–29. http://www.oecd-ilibrary.org/education/teachers-for-the-21st-century_9789264193864-en
- Adam, S., & Syastra, M. T. (2015). Pemanfaatan Media Pembelajaran Berbasis Teknologi Informasi Bagi Siswa Kelas X Sma Ananda Batam | Computer Based Information System Journal. *CBIS Journal*, 3(2), 1–13.
- Anwar, M. S., Pramujiono, A., Astuti, S. B., & Ardianti. (2020). Pembelajaran Bahasa Indonesia untuk Generasi Milenial. *Jurnal Ilmiah FENOMENA*, 21(1), 56–67.
- Ar Rasikh, A. R. (2019). Pembelajaran Al-Qur'an Hadits di Madrasah Ibtidaiyah: Studi Multisitus pada Madrasah Ibtidaiyah Negeri Model Sesela dan Madrasah Ibtidaiyah At Tahzib Kekait Lombok Barat. *Jurnal Penelitian Keislaman*, 15(1), 14–28. <https://doi.org/10.20414/jpk.v15i1.1107>
- Aziz, A. A., & Hidayatullah, S. A. (2020). Pembelajaran Pendidikan Agama Islam di Sekolah Dasar. *Taklim : Jurnal Pendidikan Agama Islam*, 18(2), 131–146.
- Creswell, J., & Poth, C. (2018). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (4th ed.). Sage Publications.
- Dewi, S. Z., & Hilman, I. (2019). Penggunaan TIK sebagai Sumber dan Media Pembelajaran Inovatif di Sekolah Dasar. *Indonesian Journal of Primary Education*, 2(2), 48. <https://doi.org/10.17509/ijpe.v2i2.15100>
- Dwi, R. P., & Estetika, R. (2019). KECAKAPAN ABAD 21: Kompetensi Digital Pendidik di Masa Depan. *Jurnal Manajemen Pendidikan*, 14(2), 144–151. <https://doi.org/10.15330/jpnu.5.1.40-46>
- Faisal, S. (1990). *Penelitian Kualitatif : Dasar-Dasar dan Aplikasinya*. YA3.
- Hidayat, T., & Syahidin, S. (2019). Inovasi Pembelajaran Pendidikan Agama Islam Melalui Model Contextual Teaching and Learning Dalam Meningkatkan Taraf Berfikir Peserta Didik. *Jurnal Pendidikan Agama Islam*, 16(2), 115–136. <https://doi.org/10.14421/jpai.2019.162-01>
- Hidayati, & Musnandar, A. (2022). Implementasi Metode Pembelajaran Pendidikan Agama Islam dalam Perspektif Konsep Rahmatan Lil Alamin. *DIAJAR: Jurnal Pendidikan Dan Pembelajaran*, 1(3), 330–338. <https://doi.org/10.54259/diajar.v1i3.982>
- Hilgard, E. R. (Ernest R., & Bower, G. H. (1966). *Theories of learning*. New York, Appleton-Century-Crofts.
- Lafendry, F. (2022). Implementasi ICT dalam Proses Pembelajaran di Sekolah. *Tarbawi : Jurnal Pemikiran Dan Pendidikan Islam*, 5(1).
- Mailani, I. (2019). Implementasi Pendekatan Kontekstual Teaching and Learning dalam Pendidikan Agama Islam. *Al-Hikmah*, 1(1), 15–25.
- Marti'in. (2019). Analisis Tentang Rendahnya Minat Belajar Peserta Didik Kelas Xi Sma Negeri 5 Pontianak. *Universitas Tanjungpura*, 1–8.
- Moleong, L. J. (2018a). *Metodologi {Penelitian} kualitatif* (Revisi). PT Remaja Rosdakarya.
- Moleong, L. J. (2018b). *Metodologi Penelitian kualitatif* (Revisi). PT Remaja Rosdakarya.
- Muhaimin, M. (2023). *Wawancara dengan Peserta Didik Kelas XI MAN 1 Lamongan*.
- Ningsih, K., Yuniarti, A., & T, A. Y. (2023). *META-ANALYSIS OF THE EFFECT OF ICT-BASED LEARNING MEDIA ON STUDENTS' BIOLOGY LEARNING OUTCOMES*. 8(1), 98–102.

- Rahmadani. (2019). *Lantanida Journal*, *Lantanida Journal*, 7(1), 1–15.
- Republik Indonesia, P. (2007). *Peraturan Pemerintah Republik Indonesia Nomor 55 Tentang Pendidikan Agama Dan Pendidikan Keagamaan*. Republik Indonesia.
- Romlah. (2011). Implementasi Model Pembelajaran Pendidikan Agama Islam Dengan Pendekatan Kontekstual Sebagai Upaya Meningkatkan Kualitas Pembelajaran di SMPN 13 Kota Malang. *Jurnal PROGRESIVA*, 5(1), 13–28.
- Rosdiana. (2018). Penggunaan Media Pembelajaran Berbasis ICT dan Pengaruhnya Terhadap Tingkat Kelulusan Ujian Nasional Siswa Pada Sekolah Menengah Di Kota Palopo (Studi Kasus Di 5 Sekolah Menengah Di Kota Palopo). *Al-Khwarizmi: Jurnal Pendidikan Matematika Dan Ilmu Pengetahuan Alam*, 4(1), 73–82. <https://doi.org/10.24256/jpmipa.v4i1.253>
- Sabiri, K. A. (2020). ICT in EFL teaching and learning: A systematic literature review. *Contemporary Educational Technology*, 11(2), 177–195. <https://doi.org/10.30935/cet.665350>
- Sofwan, N. M., & Supriadi, U. (2014). Pembelajaran PAI Berbasis Media Digital (Studi Deskriptip terhadap Pembelajaran PAI di SMA Alfa Centauri Bandung). *TA'LIM : Jurnal Pendidikan Agama Islam*, 12(1), 55–67.
- Toha, M. (2023). *Wawancara Guru Al-qur'an Hadith MAN 1 Lamongan*.
- Wahid, L. A., & Hamami, T. (2021). Tantangan Pengembangan Kurikulum Pendidikan Islam dan Strategi Pengembangannya dalam Menghadapi Tuntutan Kompetensi Masa Depan. *J-PAI: Jurnal Pendidikan Agama Islam*, 8(1), 23–36. <https://doi.org/10.18860/jpai.v8i1.15222>
- Wangge, M. (2020). Implementasi Media Pembelajaran Berbasis ICT dalam Proses Pembelajaran Matematika di Sekolah Menengah. *Fraktal: Jurnal Matematika Dan Pendidikan Matematika*, 1(1), 31–38. <https://doi.org/10.35508/fractal.v1i1.2793>
- Widianto, E., Anisnai'1 Husna, A., & Nur Sasami, A. (2021). Pemanfaatan Media Pembelajaran Berbasis Teknologi Informasi. *Journal of Education and Teaching*, 2(2), 213–224. <https://doi.org/10.24014/jete.v2i2.11707>