

## **The Effectiveness of Information and Communication Technology as a Learning Medium for Islamic Education and Character Building (A Study at a State Senior High School in Poso)**

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### ABSTRACT

This study examines the integration of Information and Communication Technology (ICT) as a learning medium for Islamic Education and Character Building at Poso 1 Public Senior High School. In the digital era, ICT has become an essential tool for creating innovative and interactive learning environments. This research employs a qualitative descriptive approach, with data collected through interviews, observations, and documentation. Data analysis follows the Miles and Huberman model, involving data reduction, display, and conclusion drawing. The findings indicate that ICT significantly enhances student engagement and understanding through digital platforms and multimedia presentations. While challenges such as limited hardware and unstable internet connectivity persist, the overall implementation has proven effective. Beyond cognitive gains, the integration of ICT fosters positive character development and critical thinking aligned with Islamic values. This study concludes that technology integration is a strategic necessity to address modern educational challenges while maintaining the core principles of religious education.

### ARTICLE INFORMATION

#### Keywords:

ICT, Islamic Education, Learning Media, Character Building, Digital Era

### 1. Introduction

The importance of information and communication technology is currently undeniable. As times change, humans are becoming increasingly accustomed to sophisticated technology. This also applies to the field of education. Teachers must be capable of utilizing innovative and creative technology based learning materials and

information in line with advancements in communication, information, and technology. Discoveries in the field of microelectronics material engineering have driven the rapid development of information and communication technology. Many aspects of life are significantly affected by these

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developments; human behavior and activities now rely heavily on information and communication technology (Daryanto, 2016).

From a didactic psychological perspective, learning media plays a crucial role in supporting the psychological development of children during the learning process. Psychologically, these media facilitate student learning by transforming abstract concepts into more concrete representations (Darmawan, 2012).

As an integral component of the educational system, media serves as a vehicle for non verbal communication. Being a systemic element, the presence and utilization of media are essential in every instructional activity. The absence of this component would inevitably lead to suboptimal learning outcomes (Magdalena et al., 2021).

Based on field pre observations, teachers at Poso 1 Public Senior High School have implemented Information and Communication Technology based learning in the instructional process. Furthermore, the infrastructure and facilities related to Information and Communication Technology media at Poso 1 Public Senior High School are equipped with supportive features, such as internet networks that are directly accessible at the school. The learning system for Islamic Education and Character Building has been implemented by adapting to modern developments, resulting in teachers predominantly utilizing ICT based learning media in Islamic Education and Character Building subjects.

Based on this background, the researcher is interested in examining the title: The Effectiveness of Information and Communication Technology as a Learning Medium for Islamic Education and

Character Building (A Study at Poso 1 Public Senior High School).

## **2. Literature Review**

### **2.1 Information and Communication Technology in Learning**

Technology originates from the Greek word *technologia* which according to Webster Dictionary means systematic treatment, while *techne* as the root word of technology means skill, science, or expertise. Literally, the word technology comes from the Latin word *texere* which means to compose or build, so the term technology should not be limited to the use of machines, although in a narrow sense it is often used that way in daily life (Rusman et al., 2013).

Based on the various meanings of the word communicate, which is the origin of the word communication, it literally means notification, conversation, discussion, exchange of ideas, or connection.

There are seven fundamental elements in communication: (1) the party initiating the communication; (2) the message being communicated; (3) the channels used for communication and the interferences that occur during the communication process; (4) the situation in which the communication takes place; (5) the party receiving the message; (6) feedback; and (7) impact (Harjana & Shakuntala, 2003).

Meanwhile, Communication Technology refers to technological devices consisting of hardware, software, processes, and systems used to support the communication process with the aim of ensuring successful and communicative interaction. Information Technology is a technology used to manage data, including

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processing, obtaining, organizing, storing, and manipulating data in various ways to produce high quality information, which is information that is relevant, accurate, and timely (Rusman et al., 2013).

## **2.2 Learning Media**

The Latin word "media" is the plural form of "medium," which literally means "intermediary or messenger" (RI, 2022). Consequently, media can be used to disseminate messages or teach knowledge. Every tangible instrument that can convey messages and encourage learning is considered media. People utilize media in various ways to spread information and messages. One type of element in the student environment that can foster learning is media. Media is anything that channels messages from the sender to the receiver and has the power to arouse the interest of the audience (students) and stimulate their thoughts, feelings, and attention to support the expected teaching and learning process. Students who use media creatively will be able to learn more effectively and achieve better performance in accordance with their desired outcomes (Sadiman et al., 2018).

In principle, learning is a process of developing a comprehensive personality, specifically regarding student activities through diverse interactions and educational experiences. E. Mulyasa defines learning as an essential interaction between students and their environment that fosters positive behavioral changes (Mulyasa, 2002). Furthermore, S. Nasution describes learning as an interactive process between teachers and students, or among peers, aimed at acquiring knowledge, skills, or attitudes,

and internalizing the subject matter (Nasution, 1989).

There are several characteristics of media types commonly used in teaching and learning activities, namely graphic media, audio media, and still projected medium. Graphic media is categorized as visual media; like other media, its function is to convey messages from the source to the receiver. The channel utilized involves the sense of sight. Meanwhile, audio media differs from graphic media as it relates specifically to the sense of hearing compared to other media. The messages conveyed are formulated into audative symbols, both verbal (language) and non verbal (spoken). Still projected medium is a type of media that shares similarities with graphic media in terms of presenting visual stimuli.

## **2.3 Islamic Education in Senior High School (SMA)**

Islamic Education represents a maximum effort to shape the personality of students based on the provisions found in the Al Quran and Hadith. Islamic Education is known by several terms, including al tarbiyah, al ta'lim, at ta'dib, and ar riyadah. This effort must be carried out through guidance, education, and the development of student potential to improve the quality of Human Resources, both intellectually and morally, based on Islamic teachings (Ulum & Supriyatno, 2006).

Yusuf Qardhawi states that Islamic Education is the education of the whole human being, including the mind and heart, spirit and body, as well as morals and skills. Therefore, Islamic Education prepares individuals for life, both in times of peace

and war, and prepares them to face society with all its goodness and evil, its sweetness and bitterness (Al-Qardhawi, 2000).

On the other hand, Islamic education integrates theory and practice. Islamic teachings do not distinguish between righteous deeds and faith. Therefore, Islamic education combines religious teachings with the practice of righteous deeds. Furthermore, Islamic education serves as both individual and social education because it integrates teachings on social behavior and personal attitudes toward the welfare of individuals and society. The Prophets and Messengers were initially responsible for education, and their responsibilities were subsequently assumed by scholars and enlightened individuals (Darajat, 1992).

Noeng Muhadjir understands that education can be formulated as a programmed effort by educators to anticipate social change and assist students and social units in developing toward a better level through equally good methods. Noeng Muhadjir emphasizes the aspect of social change which is actually considered an educational activity that should be used as a foundation to face social changes that will certainly occur from time to time (Muhajir, 2000).

Islamic Education is an education that is primarily directed toward the improvement of mental attitudes which will be manifested in deeds, both for personal needs and for others. Islamic Education is a process of individual formation based on Islamic teachings. Through this educational process, individuals are shaped to reach the perfect degree as "insan al kamil" (Azra et al., 2016)(Nasr, 2003) in order to be able to

fulfill their function as "abdullah". The other function of human beings is as "khalifatullah." Practically, "khalifatullah" is interpreted as the representative (leadership) of Allah SWT on earth.

Fazlur Rahman explains that the Al Quran actually possesses a comprehensive set of teachings and perspectives regarding life in this world and the hereafter, including concepts of Divinity and cosmology. The Al Quran so perfectly explains all human moral issues to the central point of divine interest in a complete portrayal of a cosmic order that not only contains high religious sensitivity but also demonstrates an astonishing level of consistency and coherence (Rahman, 2000).

Islamic Education in Senior High School (SMA) serves as a critical foundation for internalizing spiritual values and ethical conduct during a pivotal stage of adolescent development. In the senior high school environment, this subject transcends mere theoretical knowledge by integrating religious principles with the students social interactions and academic responsibilities. The implementation of Islamic Education in this formal setting is designed to cultivate a balanced personality that harmonizes intellectual achievement with moral integrity, ensuring that students can navigate modern challenges while remaining steadfast to their faith. Consequently, the school environment becomes a vital space for students to practice these values, transforming religious concepts into daily behaviors that reflect the essence of Islamic character building.

### **3. Methodology**

This research employs a qualitative approach with a descriptive method to provide a comprehensive understanding of the effectiveness of Information and Communication Technology as a learning medium (Creswell & Poth, 2018). The study was conducted at Poso 1 Public Senior High School, focusing on the actual conditions of the instructional process. By utilizing a qualitative design, the researcher aimed to capture the depth and complexity of the phenomena related to Islamic Education and Character Building in a digital context. This approach allows for a detailed exploration of how technological integration influences the learning environment and student engagement within the specific setting of the school.

Data collection was carried out through several techniques, including in depth interviews, field observations, and documentation studies. The informants involved in this study consisted of the school principal, teachers of Islamic Education and Character Building, and students of Poso 1 Public Senior High School. These various data sources were triangulated to ensure the validity and reliability of the findings. The collected data were then analyzed using qualitative analysis techniques, involving data reduction, data display, and conclusion drawing to provide a clear picture of the effectiveness of ICT implementation in the religious education curriculum (Miles et al., 2014).

#### **4. Result and Discussion**

##### ***4.1 ICT Implementation in Islamic Education***

The use of Information and Communication Technology (ICT) at Poso 1 Public Senior High School has become an integral part of the teaching and learning

process for Islamic Education (PAI). Teachers actively utilize various digital devices such as laptops, projectors, and internet access to deliver material more effectively. This integration aims to transform abstract religious concepts into more concrete and visual forms that are easier for students to grasp.

Teachers employ a diverse range of digital platforms and applications, including Google Classroom, YouTube, and specialized religious apps like Muslim Pro and Umma. These tools are used not only for presenting lessons but also for organizing materials, giving assignments, and conducting systematic evaluations. The variety of media allows for a more flexible and personalized learning approach that caters to different student needs.

Observation results show that ICT usage significantly increases student enthusiasm and participation during PAI lessons. Instead of relying solely on conventional methods like lectures or textbooks, teachers incorporate interactive quizzes and animated presentations to create a more dynamic classroom atmosphere. This shift encourages students to become more active in discussions and collaborations.

Beyond standard classroom activities, teachers at Poso 1 Public Senior High School have developed innovative projects, such as guiding students to create short videos on Islamic moral values. These creative assignments help internalize religious teachings while simultaneously building the students' 21st-century digital skills. Such innovations ensure that religious education remains contextual and relevant to the students' digital lives.

##### ***4.2 Effectiveness of ICT as an Islamic Education Learning Medium***

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The effectiveness of ICT implementation at Poso 1 Public Senior High School is evident in the improved quality of the learning process and student outcomes. Digital media such as interactive videos and PowerPoint presentations make lessons more engaging compared to traditional methods. This increased engagement serves as a foundation for better understanding of complex religious topics.

One key indicator of effectiveness is the students' ability to grasp abstract spiritual concepts through visual aids, such as simulation videos of prayer movements or documentaries on Islamic history. Students report that visual media helps them memorize and understand the meaning of prayers and religious practices more deeply than just reading text. This proves that ICT can bridge the gap between theory and practical application in religious life.

Furthermore, ICT has significantly boosted student motivation and independent learning habits. Digital platforms like Rumah Belajar and YouTube allow students to access learning materials outside of school hours and review lessons at their own pace. This flexibility empowers students to take more responsibility for their own educational progress.

From a character-building perspective, the integrated use of ICT has successfully fostered positive Islamic values such as honesty, responsibility, and empathy among students. Students become more sensitive to social issues and more active in religious activities, showing that technology, when used correctly, supports holistic character development. Overall, the technology-based approach has modernized Islamic education while staying true to its spiritual goals.

### ***4.3 Challenges and Solutions in Utilizing ICT for Islamic Education***

Despite the positive impact, several obstacles hinder the optimal use of ICT in PAI lessons at Poso 1 Public Senior High School. The primary technical challenges include a limited number of projectors, unstable internet connections, and occasional power outages. Additionally, some students face economic constraints in purchasing data packages or accessing adequate personal devices at home.

Varied levels of digital literacy among both teachers and students also pose a significant challenge. Some teachers still find it difficult to integrate technology seamlessly into their pedagogical strategies, while some students struggle with navigating certain digital learning platforms. These differences in technical skills can sometimes slow down the instructional process.

To address these issues, the school and teachers have implemented several practical solutions. The school administration gradually increases ICT facilities by procuring more devices and improving Wi-Fi access through government aid and school committee funds. Teachers also adapt by using digital media in offline modes or providing printed materials as alternatives for students with limited internet access.

Furthermore, teachers actively participate in various workshops and digital literacy trainings to enhance their ICT competencies. Internal forums are also held within the school for teachers to share "best practices" and troubleshoot technical difficulties together. This collaborative and proactive spirit ensures that despite resource limitations, the integration of technology in Islamic Education continues to advance.

## 5. Conclusion

The integration of Information and Communication Technology (ICT) in Islamic Education at Poso 1 Public Senior High School has proven to be highly effective in enhancing student engagement and simplifying the delivery of complex religious concepts. By utilizing various digital tools such as interactive videos, presentation software, and educational platforms like Google Classroom and YouTube, teachers are able to create a more dynamic and interactive learning environment that shifts from traditional one way communication to a more student centered approach. This technological shift not only fosters better cognitive understanding of Islamic values but also significantly boosts student motivation and participation during lessons.

However, the full potential of ICT is still hindered by several practical challenges, including limited hardware availability, unstable internet connectivity, and varying levels of digital literacy among both teachers and students. To address these obstacles, the school has implemented strategic solutions such as the gradual procurement of devices, teacher competency workshops, and the use of offline digital resources. Ultimately, the study concludes that despite these technical limitations, the purposeful use of ICT successfully transforms religious education into a more relevant and meaningful experience, effectively bridging the gap between spiritual teachings and modern digital life.

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