

IMPLICATIONS OF INFORMATION TECHNOLOGY ADVANCES ON THE DEVELOPMENT OF STUDENTS' ISLAMIC BOARDING SCHOOL LEARNING PROCESS

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ABSTRACT

The goal of this study is to examine how the advancement of information technology has influenced the development of the students learning process in Islamic boarding schools. This type of research employs a descriptive qualitative approach, with a focus on education. The population consists of 189 students who are the subjects of this research. The sample for this study consisted of two students from the supervisor or lecturer at Ma'had 'Aly As'adiyah Sengkang, one of the 11 students. The sampling process used a purposive sample technique. The instruments used to obtain data include observation sheets, interview guidelines, and questionnaires. The data analysis employed a descriptive qualitative approach, incorporating inductive, deductive, and comparative methods. The findings of the study indicated that the implications of advances in information technology on the learning process at Ma'had Aly As'adiyah Sengkang have positive and negative impacts. The positive impact obtained from advances in information technology is the ease of obtaining information and communicating, all of which are very helpful for the development of the learning process both for students and for lecturers as educators. The negative impacts that will arise from information technology depend on the user of the information technology itself; some students also know the limitations of the use of information technology.

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1. INTRODUCTION

The development of science and technology is increasingly rapid following the development of an ever more modern era (Rahmatullah et al., 2022). Science and technology also support the development of information and communication technology, which makes it easy for everyone to get information and communicate in a short time, anytime, and anywhere. Science and technology are one of the supporting factors for the progress of human resources because, with them, a country can compete and be equal to other countries (Widarni & Bawono, 2021; Mohamed et al., 2022). God

bestows knowledge on every human being, enabling them to become dignified individuals. The Qur'an sees science and technology as inviting us to study its many verses about the universe (Hasibuan et al., 2024).

From an external perspective, the connection between Islamic boarding schools and the term "modern" appears ambiguous (Mujahid, 2021). How could it not be, in the minds of the community, to define the term "Islamic boarding school" is identical to the oldest educational institution in Indonesia? The community consistently associates the term "Islamic boarding school" with the concept of tradition. This cautious behavior by educators and students reflects their hesitance to embrace new cultural influences. Then this reality is applied to the smallest behavior, such as not being allowed to listen to the radio or television and the rarity of general books and magazines, let alone comics, available at the pondok, as if further strengthening the opposition between the world of Islamic boarding schools and modernity.

The important role of Islamic boarding schools as a base for education and preaching really needs supporting devices to actualize their role in the midst of modern civilization (Ilaina & Humaidi, 2022). One of the primary objectives is to enhance the utilization of information technology within Islamic boarding schools. Fundamentally, education and preaching are forms of communication activities, encompassing personal, group, and mass communication (Saleh et al., 2022). Understanding information technology thoroughly relates to communication tools like telephones, radios, and televisions. The same is true for information processing tools like computers. Information technology is commonly called IT or infotech. Various definitions of information are given with the intention of providing a further picture of information technology.

Information technology is a set of tools that helps you work with information and perform tasks related to information processing (Banabilah et al., 2022). Information technology is not only limited to computer technology (hardware and software) used to process and store information but also includes communication technology to transmit data. In addition, information technology is a technology that combines computing with high-speed communication lines that carry data, voice, and video (Øverby et al., 2021).

Information technology, both implicitly and explicitly, is not just computer technology but also includes telecommunications technology (Zheng et al., 2018; Nordin et al., 2021). In other words, what is called information technology is a combination of computer technology and telecommunications technology. Advances in science and technology have great potential to impact the field of education, especially on learning media (Sahin & Yilmaz, 2020). The impact of learning media extends to the learning process itself. The learning process is an activity to implement the curriculum of an educational institution to influence students to achieve the educational goals that have been set (Sá & Serpa, 2018; Dejene, 2019). The purpose of education is basically to lead students to changes in behavior, both intellectual, moral, and social, so that they can live independently as individuals and social beings. In achieving these goals, students interact with the learning environment regulated by educators through the learning process.

The learning environment regulated by educators includes learning objectives, learning materials, learning methodologies, and learning assessments (Cheung et al., 2021). These elements are commonly known as learning components. Learning objectives are a formulation of the abilities that students are expected to have after they have gone through various learning experiences (at the end of learning).

Learning materials are a set of scientific materials consisting of facts, concepts, principles, and generalizations of a science that originates from the curriculum and can support the achievement of learning objectives (Choppin et al., 2022; Zhao et al., 2023). Learning methodology is the method and technique used by educators in interacting with students to ensure learning materials reach students and help them master learning objectives. In learning methodology, there are two most prominent aspects: learning methods and learning media as learning aids (Viberg & Grönlund, 2017). Assessment serves as a tool to gauge or ascertain the extent to which learning objectives have been met. The description above can be concluded that the position of learning media as a teaching aid is in the methodology component as one of the learning environments regulated by educators.

The development of information and communication technology provides the greatest opportunity for anyone who wants to get information or other new things (Hanaysha et al., 2023). With the development of information technology, people from all walks of life can enjoy various conveniences in their daily activities. Even now, almost everyone cannot be separated from technology; everyone uses long-distance direct communication tools such as cell phones to connect with other people who are far away. However, this certainly has an impact or influence on the lives of society in general and on the younger generation in particular.

The impact or influence is either positive or negative, depending on how each person responds to the development of information and communication technology (Zhang et al., 2022). If its existence is utilized as well as possible, of course it will provide good benefits; conversely, if information and communication technology is misused, it will certainly have a bad impact. Most of the young generation today sometimes misuse existing technology for things that tend to be negative and just for fun (Rasa & Laherto, 2022). They do not understand the nature of technology or how great its benefits are if used properly. Human science and technology will be more beneficial, both for themselves and for society. However, all of that depends on the abilities that arise from the person himself.

A preliminary study by the author shows the fact that in Ma'had 'Aly As'adiyah Sengkang, the implications of advances in information technology on the learning process are still lacking, and the use of information technology as a means of learning media is still not used optimally, considering that now the development of information technology has developed quite rapidly.

It is hoped that information technology in the environment of Ma'had 'Aly As'adiyah Sengkang students will improve learning and make good use of it. Based on several assumptions above, the author is motivated to study more deeply how the development

of the learning process of Ma'had 'Aly As'adiyah Sengkang students is affected by the advancement of information technology.

2. METHOD

This type of research is descriptive qualitative, namely a problem-solving procedure by describing research based on existing facts. The first method used is the educational or educative approach, which aims to find out more about the issue of how to effectively teach science and technology. In this case, the impact of information technology on the learning process of Ma'had 'Aly As'adiyah Sengkang, an student. Second, the scientific approach is a science that investigates and discusses open and closed behavior in humans both as individuals and groups, their feelings and thoughts in student Ma'had 'Aly As'adiyah Sengkang, and its relationship to knowledge of information technology. Data collection in this study uses several methods, such as: Library research involves reading books, magazines, and other sources related to the problem being discussed. Field research is a method used to collect data by directly visiting and exploring the target object of study.

The author conducted research at the Ma'had 'Aly As'adiyah Sengkang Islamic Boarding School. The population consists of 189 students who are the subjects of the research. The author took a sample of 2 from the supervisor or lecturer at the 11 students Ma'had 'Aly As'adiyah Sengkang. The sampling process uses a purposive sample technique, namely selecting or taking samples by means of subjects.

The instruments used to obtain data in this method include observation sheets, interview guidelines, and questionnaires. In this study, the author used a qualitative method, which involves processing and analyzing data related to the discussion, specifically focusing on ideas or opinions about the research object. In this study, the author used a qualitative method to reveal data in the form of descriptions, meaning that the data is presented in detail about the phenomena that occur in the field. Quantitative data will be processed using data interpretation techniques. Qualitative data is analyzed by:

- 1) Inductive, which is a method used to gain knowledge by starting with observations of specific things and then drawing conclusions that apply generally.
- 2) Deductive, which is a method used to gain knowledge by analyzing existing problems by starting with general facts and then drawing conclusions that apply specifically.
- 3) Comparative, in which the author solves existing problems by discussing this thesis based on comparison.

We analyze quantitative data by interpreting it as development graphs.

3. RESULTS AND DISCUSSION

The advancement of information technology in various aspects of life has helped humans a lot, including in the aspect of education (Haleem et al., 2022). Occasionally, students encounter material that is not feasible to implement in real-world scenarios. For example, an experiment takes a long time, while learning time is limited, or the actual object is difficult for students to show and explore. In situations such as these, students require learning aids, and one such tool is information technology-based. Information technology-based learning is a learning activity in which teachers utilize information technology in delivering learning materials presented to students (Taherdoost & Madanchian, 2022).

The flow of globalization and modernization has attacked all lines of human life. In the world of knowledge, the biggest impact is the emergence of guardians of the authority of truth called "scientific." This means that nothing is recognized as true until it receives the legitimacy of the "scientific" stamp. The modern era is characterized by rapid acceleration. This era is characterized by a shrinking world and rapid technological advancements. Everything produced by technological advances such as machines, telephones, television, the internet, and computers has really changed the way humans view the world (Tripathi & Bajpai, 2021).

In this regard, it is critical for educators to understand the basic concepts of information technology that can be used to improve the learning process that is effective, constructive, and interesting (Wu et al., 2022). Teachers are also required to be good at concocting various learning strategies that utilize information technology, such as when to use chat, e-mail, blogs, presentations with PowerPoint slides, simulations, and others. The advancement of information technology has an impact on the lives of individuals and groups, leading to both positive and negative effects (Fu & Chen, 2015). These arise from the conveniences provided by information technology, which facilitate information exchange and reduce the time, energy, and costs involved. In the learning process, the implications of the advancement of information technology on the learning process include (Timotheou et al., 2023; Abu Huson et al., 2024).

1. Advantages of information technology-based learning

- a. Information technology makes it easier to use images in the learning process and improves students' memory.
- b. Educators can easily explain complicated instructions and ensure students' understanding.
- c. Students can create interactive classes and make the learning process fun, which can improve students' concentration levels.
- d. Able to combine text, images, audio, music, animated images, or videos in one unit that supports each other so that learning objectives are achieved.
- e. Bringing objects that are difficult to obtain or dangerous into the learning environment.
- f. Displaying objects that cannot be seen directly

2. Disadvantages of information technology-based learning

- a. There are issues with setting up and operating the device.
- b. Too expensive to own.
- c. Difficulty for educators or students with minimal experience using information technology devices.
- d. Misuse of technology often occurs.

The users of information technology at Ma'had Aly As'adiyah Sengkang are integral to efforts to improve the learning process. The impact or implications of the progress of information technology, whether positive or negative, depends on its users at Ma'had Aly As'adiyah Sengkang, especially the students. Before discussing the implications of the progress of information technology at Ma'had Aly As'adiyah Sengkang, the author will first examine the use of the internet at Ma'had Aly As'adiyah Sengkang to find out the activities in using information technology, whether they are consumers of information technology or as people who work. Based on the use of the internet in general, it is divided into four.

1. Information explorers or information browsers are the type of people who surf the internet by exploring and searching for information in this world. In this type, it is marked by the large number of tabs generated in the browser application along with their curiosity about information all over the world.
2. Chatting, internet users do not pay attention to anything apart from struggling with a particular application to just chat through typing generated by various friends. Most users who like to chat do not pay attention to time, be it mealtime, sleep time, or even work time or activities.
3. Downloaders are a popular category of internet users. Where users prefer to download as much data as possible and are also marked as consumers of information technology—not much different from information explorers—these users tend to download the data for various reasons, including so that the data can be used many times without having to always use the internet. Users for this type are characterized by the many special applications to support the smooth download process, such as download accelerators, IP address switchers, network cutters, and so on.
4. Uploaders, for this use, need a fairly fast internet connection and have a relatively large bandwidth. They upload their work for the enjoyment of other internet users or to showcase their skills.

From the four internet usages, according to the questionnaire given to all students of Ma'had Aly As'adiyah Sengkang, internet users can be identified. The following is the internet usage of students (Table 1).

Table 1. Use of the Internet at the Ma'had Aly As'adiyah Sengkang

Information Explorer	Chat	Downloaders	Uploader
66 (48.17%)	56 (40.87%)	13 (9.48%)	2 (1.45%)
Number of questionnaires		137	

Table 1 shows that internet usage at Ma'had Aly As'adiyah Sengkang identifies two dominant types of internet usage and two less common ones. Most internet users prefer small bandwidth as it doesn't require a fast connection. In contrast, fewer users opt for large bandwidth due to its need for a fast connection. Information technology's impact on its users inextricably links to internet use. Based on the results of a survey of students who responded regarding the impact of the advancement of information technology on the learning process, students were given three options to describe the impact: positive, negative, or both. They also provided reasons for their choices. Table 2 presents the following survey results.

Table 2. Implications of Information Technology Advances on Student Learning Processes

Positive Impact	Negative Impact	Positive and Negative Impacts
71 (51.82%)	0 (0.00%)	66 (48.17%)
Number of questionnaires		137

Table 2 above showed the impact of advances in information technology on the learning process at Ma'had Aly As'adiyah Sengkang, which only chose a positive impact of 51.82%, which only chose a negative impact of 0% and which chose a positive impact accompanied by a negative impact of around 48.17% of the total number of questionnaires returned, as many as 137 questionnaires. The student who only chose a positive impact explained that the most common reason was the ease of obtaining information to help in the learning process, such as translating, obtaining learning materials, and more. While the explanation of students who chose a positive impact and a negative impact for the positive impact has the same reason as those who only chose a positive impact, the reason for the negative impact is the frequent misuse of information technology, wasting time on things that are not useful, and making its users dependent on information technology.

The impact of information technology advances on the learning process at Ma'had Aly As'adiyah Sengkang is concluded to have both positive and negative effects. Looking at the use of the internet aimed at chatting has a percentage of 40.87% and Information Explorers 48.17%, and the reasons for each impact caused by information technology, all of which depend on the users of information technology themselves, namely students. Therefore moral guidance is needed, a deeper understanding of information technology (Zhao et al., 2023), and supervision so that student can control themselves in using information technology (Chugh et al., 2022), considering the dangers of misuse of information technology in the learning process (Baydar, 2022). In the end, the principle of producing cadres or students who are Tafaqquh fi al-Din wa al-

Dunya is the best choice to be used as a philosophical basis for the spirit of learning in Islamic boarding schools.

4. CONCLUSION

Based on the results of the study and discussion, it is concluded that students of Ma'had Aly As'adiyah Sengkang have implemented information technology in the environment and learning process. Although there are no written rules regarding the use of information technology, some students understand that the use of information technology must be limited to manage their time well as well as avoid misuse of information technology to reduce the potential negative impacts that can be caused by information technology. In addition, the learning methods used by lecturers at Ma'had Aly As'adiyah Sengkang generally use three methods: discussions, and paper presentations. In addition, Ma'had Aly, which is currently implementing information technology in its learning, will make the learning process more effective and efficient. By using information technology devices to search for additional information related to learning and saving time searching for it because, in information technology, information is arranged systematically, it will also make it easier to know, understand, and master if the information technology involves student hearing. As'adiyah Sengkang rarely uses these devices for daily learning, only for public lectures and events.

Advances in information technology have positive and negative implications for the learning process at Ma'had Aly As'adiyah Sengkang. The positive impact obtained from advances in information technology is the ease of obtaining information and communicating, all of which are very helpful for the development of the learning process for both students and lecturers as educators. The negative impacts that will arise from information technology depend on the users of information technology itself.

As a suggestion, the implications of advances in information technology for the development of the student learning process still require some input as improvements for a better learning process. In addition, even though an educational institution has implemented the use of information technology devices, students may not fully understand the limitations of their use. It would be better if written regulations were given regarding the use of information technology devices to ensure clarity and consistency in their usage, as well as to provide a framework for educators or instructors to effectively supervise student use of these devices. Furthermore, the learning process that integrates information technology should be optimized first, ensuring that users understand how to operate the device and anticipate potential problems. This approach aligns with one of the goals of information technology progress, which is to enhance time efficiency in the learning process.

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