

## Management of Educational Technology in the World of Education

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### Abstract:

In the current era, technology is frequently utilized for facilitating learning, both by educators and students. However, the advancements in modern technology not only bring positive impacts to the realm of education but may also lead to negative consequences, affecting changes in student behavior and posing a threat to educational norms and regulations. The objective of this research is to delve into the management of educational technology. The chosen research method is literature review, specifically gathering information from journals, books, and other sources. The findings underscore the significance of maintaining professionalism as users when harnessing technology effectively, ensuring the smooth progression of technological developments. Technology holds the potential to streamline tasks; therefore, let's optimize its utilization.

**Keywords:** Management; Education technology; Education World.

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**Abstrak:** Dalam era seperti sekarang, teknologi kerap dimanfaatkan untuk pelaksanaan pembelajaran, baik oleh pendidik yang mengajar maupun oleh siswa dan mahasiswa dalam proses pembelajaran. Namun, perkembangan teknologi modern tidak hanya memberikan dampak positif pada dunia pendidikan, tetapi juga mungkin menimbulkan dampak negatif terhadap perubahan perilaku siswa dan dapat mengancam norma serta kaidah pendidikan. Tujuan dari penelitian ini adalah untuk membahas manajemen teknologi pendidikan. Metode penelitian yang digunakan adalah penelitian kepustakaan, khususnya dalam mengumpulkan literatur dari jurnal, buku, dan sumber-sumber lainnya. Hasil dari penelitian ini menekankan pentingnya keprofesionalan kita sebagai pengguna dalam memanfaatkan teknologi secara efektif, sehingga perkembangan teknologi dapat berjalan dengan baik. Teknologi memiliki potensi untuk mempermudah pekerjaan, oleh karena itu, mari manfaatkan teknologi sebaik mungkin.

**Kata Kunci:** Manajemen; Teknologi Pendidikan; Dunia Pendidikan.

## 1. INTRODUCTION

Advancements in information technology are rapidly progressing, leading to more affordable data storage and improved quality of transmission. Beyond individual users, various initiatives are being undertaken by institutions, educational bodies, and the government to leverage these technological developments. In agreement with Asrial et al (2022), the world, especially in the field of education, is constantly evolving due to technological advancements. It is imperative for the realm of Islamic education to harness this technological wave. Technology contributes significant value to the learning process, particularly as there is an increasing demand for science and technology education that is often inadequately addressed in schools.

The exchange of data and information, whether between schools, schools and communities, or schools and local/national governments, becomes more effective and efficient when technology is

integrated into the educational landscape, especially within the Islamic education sector. While the positive impacts of technology in education are noteworthy, such as facilitating easier teaching for educators, providing a more specific depiction through documentation, and simplifying information processing through the use of the Internet (Zulkhi & Jannah, 2021), there are also negative impacts to be acknowledged.

Presently, the drawbacks of employing technology in education include technical issues that can disrupt the learning process. Technical malfunctions, like sudden power outages during lessons conducted on LCD screens, can impede the teaching process. Additionally, technological advancements can lead to increased individualism and decreased social interaction, with some individuals misusing technology for unproductive activities (Nurdyansyah, 2017). The effective management of gadgets becomes a crucial factor in mitigating the negative impacts on learning.

The impact of technological progress extends beyond education, affecting various aspects of life, including economics, politics, culture, arts, and education. As technology evolves, it is inexorably linked with scientific progress, becoming an unavoidable aspect of our world. Innovations in information technology have provided numerous benefits over the last decade. However, it is essential to acknowledge that while technology is created with the intention of bringing positive benefits, it can also be misused for negative purposes. The role of educational technology in learning is undeniably crucial, yet it demands a thorough understanding to prevent potential misuse (Agustian & Salsabila, 2021).

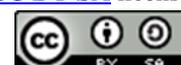
## 2. THEORETICAL STUDIES

Management is a multifaceted process encompassing planning, organizing, directing, and controlling resources to achieve predefined objectives (Suprihanto, 2018; Imron, 2023; Catio, 2020; Arraniri et al., 2021). It involves the oversight of all facets within an organization or business, including individuals, finances, technology, and operational procedures. The core focus of management lies in optimizing the efficiency and effectiveness of resource utilization to attain desired outcomes. Furthermore, management incorporates decision-making, strategic planning, and coordination to attain organizational objectives in an organized and directed manner.

Conversely, educational technology represents the integration of technology into an educational context to enhance the learning, teaching, and educational management processes (Permana et al., 2024). This integration encompasses various hardware, software, as well as methodologies supported by technology to enhance the efficiency, effectiveness, and quality of learning. Educational Technology encompasses diverse technological tools used in teaching and learning, such as computers, mobile devices, learning applications, online platforms, and other digital resources.

The implementation of educational technology aims to enhance accessibility, facilitate interactive learning, motivate students, personalize the learning experience, and enable educators to carry out educational management more effectively (Mesra et al., 2023). As technology continues to advance, Educational Technology remains an integral component of educational innovation, presenting new opportunities and reshaping the landscape of learning and teaching.

Meanwhile, the world of education is a domain that involves learning and teaching processes, where knowledge, skills, values and attitudes are given, received and exchanged. This includes various institutions and environments where learning occurs, such as schools, colleges, training centers, and online learning environments (Samarenna, 2020).



In the world of education, there are various parties involved, such as students, teachers, administrative staff, parents and the community (Indrawan et al., 2020). The main goal of education is to provide knowledge and skills to individuals, shape character, and prepare them to face the challenges of everyday life and contribute to the development of society and the nation.

Education can involve various levels, from early childhood education to higher education and professional training. In addition, technological developments also play an important role in the transformation of the world of education, by providing greater accessibility, innovative learning methods, and the possibility of global collaboration.

Thus, the management of educational technology in the world of education referred to in this research is a systematic approach in managing and integrating technology into the educational process. The goal of educational technology management is to ensure that the use of technology supports efficiency, effectiveness and quality of learning. This includes planning, implementation, evaluation and development of educational technology to suit educational goals and student needs (Darifah & Erihadiana, 2022).

Educational Technology Management involves overseeing technological resources, providing training to educational staff on technology, formulating policies, and assessing the impact of technology on learning. Moreover, this management encompasses the selection, procurement, and maintenance of educational hardware and software, along with the implementation of technology integration strategies into the curriculum.

In the contemporary digital era, the significance of Educational Technology Management has heightened, ensuring the optimal use of technology to enhance students' learning experiences, foster increased engagement, and equip them to meet the challenges of a constantly evolving world. Educational Technology Management also plays a crucial role in ensuring the sustainable integration of innovation and technological developments into the education system.

### 3. METHOD

This research section utilizes library research, specifically collecting literature from journals, books and other sources to find research sources for further research regarding the impact of technology in the world of education. Research Data collection uses digital and manual search techniques for materials relevant to the discussion of this article. After making references, the collected data is analyzed by displaying, reducing and compiling it into new concepts using content analysis that prioritizes intertextuality.

### 4. RESULTS AND DISCUSSION

#### 4.1 The understanding of Educational Technology Management

The development of education aligns with the growing demands of society to enhance the quality of education. To meet the requirements of the times, superior educational technology management, or educational technology management, is necessary. Before delving deeper into educational technology management, we must first grasp the meaning of management and then draw comparisons with the definition of educational technology for a comprehensive understanding.

Management involves managing, controlling, and directing. This process is regulated through organized procedures based on the sequence of management functions. Several expert opinions exist regarding the definition of management, as outlined below. Management is the art and science of planning, organizing, directing, motivating, and controlling people and work mechanisms to achieve goals (Siswanto, 2021). It can be defined as the art and science of managing educational resources to



create a learning atmosphere and process. This enables students to actively enhance their potential, fostering religious spiritual strength, self-control, personality, intelligence, noble character, and the skills required for the betterment of society, the nation, and the state (Mulyasa, 2022).

Hasibuan (2007) offers an understanding that management is the science and art of effectively and efficiently managing the process of utilizing human resources and other resources to achieve a specific goal. According to Fattah (2009) management involves the process of planning, organizing, leading, and controlling organizational efforts comprehensively, ensuring the effective and efficient attainment of organizational goals.

In the Big Indonesian Dictionary, technology is defined as the entire means of providing goods necessary for the continuity and comfort of human life (Pananrangi & SH, 2017). On the other hand, education is a guide for applying the principles of science and technology for the holistic development of individuals. Therefore, educational technology management is the systematic creation, utilization, or exploitation of appropriate technological processes and resources according to a specific system. It involves managing educational resources to achieve educational goals effectively and efficiently. It can be understood as a means of learning and an effort to improve performance.

#### 4.2 Definition of Education

Etymologically, the word education in English is called *edication*, which means the process of developing one's own abilities and individual strengths. Education is something that will never be discussed, because basically education is one of the human efforts to grow and develop potentials, both physical and spiritual, in accordance with the values that exist in society and culture. As stated by Roqib (2009) education is a process of transforming knowledge to enhance, strengthen, and perfect all human potential.

According to Triyanto (2014), education is an endeavor to draw out the innate potential within humans, providing structured learning experiences through formal, non-formal, and informal education both within and outside schools. This lifelong process aims to optimize individual abilities, enabling individuals to fulfill appropriate roles in life. In conclusion, education is fundamentally a conscious and deliberate process of imparting knowledge to intentionally change human behavior and facilitate personal growth through formal, non-formal, and informal educational processes.

#### 4.3 The Role of Educational Technology in Learning

Educational technology is the ethical study and practice aimed at facilitating learning and improving performance through the appropriate creation, use, and management of technological resources. It is a field concerned with efforts to enhance the learning process and improve performance through the effective design and management of technological resources. Educational technology represents a field of applied science that synergistically combines several scientific disciplines with the goal of facilitating the learning process, enhancing the quality of learning, and improving performance (Surani, 2019).

The role of technology in learning is highly significant as it facilitates the formation of collaborative relationships and the construction of meaning in a learning context that is easier to understand. In detail, technology can be directed for several purposes. First, technology can be used to build collaborative communication networks between teachers, lecturers, students, and learning resources. Online applications such as Skype, Yahoo Messenger, Facebook, Zoom, Google Meet, and other networks can be used to facilitate effective interactions between all parties. Second, technology makes it possible to provide various complex, realistic, and safe problem-solving environments.



Hypermedia and software that can be used to create projects are examples of technology that support learning through a comfortable and innovative environment. Finally, technology assists in actively constructing and shaping meaning via the internet, allowing access to the latest research, photos, and videos. This not only enables students to explore information but also encourages a deeper understanding of the subject matter being studied (Yaumi, 2018).

Thus, it can be seen that technology has brought major changes in the way we learn and teach. The role of technology in learning is crucial for increasing the effectiveness of learning and opening up new opportunities for students to learn in a more interactive, creative, and efficient way. With the appropriate use of technology, we can enhance the quality of education and provide broader educational opportunities for students around the world. Therefore, it is essential for us to continue developing and expanding the use of technology in learning in this digital era.

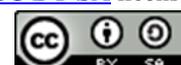
#### 4.4 Positive Impact of Technology in the World of Education

Technological developments over time have significantly impacted the world of education positively. Some of the positive impacts of technology in education include: First, the emergence of electronic mass media, such as the internet, has become a source of new knowledge that enriches learning. This impact provides an alternative for students to learn, not only by focusing on the material taught by the teacher but also by accessing learning information from the internet. The importance of supervision and guidance from teachers and parents at home in students' internet use remains a prerequisite. Second, technology has created new learning methods that make it easier for students and educators in the learning process. The existence of innovation in learning methods makes students more interested and capable of understanding the presented material. Third, the use of technology, such as Zoom Meetings, allows for distance learning without the need for face-to-face meetings in certain circumstances. Fourth, in the student assessment system, technology makes it possible to process assessment results efficiently without the need for manual recapitulation. This not only makes calculations easier but also reduces errors in data processing. Fifth, technology is an alternative choice as a facility in the teaching and learning process, providing facilities that support successful learning more dynamically and effectively (Jamun, 2018).

#### 4.5 Negative Impacts of Technology on the World of Education

Technology has both positive and negative impacts in the realm of education. One of the crucial skills is speaking and communication skills, but learning via the internet can diminish interpersonal interactions, leading students to interact more with technology. In the field of education, various problems can arise due to the use of technology, particularly the negative impacts on students and teachers (Jamun, 2018). Firstly, students' frequent access to the internet may result in the suboptimal use of technology, engaging in activities that are not constructive, such as accessing pornographic content or playing online games. This is a concern for teachers and parents because it can adversely affect students' minds and disrupt the educational process.

Secondly, students may experience "information overload" by accessing excessive information without being selective. This can lead to dependence on content that is not beneficial, such as pornography and online games. Additionally, other negative impacts include potential damage to eye health and disruptions to learning activities. Thirdly, many students become cyber or internet addicts, leading to apathetic behavior towards new things. Therefore, it is crucial to implement filters or supervision in internet use, along with the role of parents in providing attention and supervision to their children. Fourthly, in the field of education, technology also carries the risk of criminal activity



(Cyber Crime). For instance, students may engage in activities like stealing important confidential documents or assets, such as final exam documents, grades, and attendance records, which can be accessed via the internet.

In addressing these negative impacts, there needs to be awareness and preventive steps, including limiting access, parental monitoring, and strict supervision from educators to ensure that technology is used positively and supports the learning process. As teenagers grow up, their curiosity increases, and they seek to establish their identity. They tend to emulate the thought patterns and behaviors of adults. Teenagers may start imitating what adults do every day via the internet, exposing them to activities such as purchasing drugs or watching pornographic videos. Unfortunately, some teenagers may misuse technology by engaging in online conflicts, teasing peers from other schools, and more. Parents and teachers play a crucial role in preventing these negative influences by reducing the daily use of cellphones or other technology and discouraging children from going out late at night, as these situations can be sources of negative influences (Kurnia & Edwar, 2021).

## 5. CONCLUSION

The continuous development of science and technology has various impacts on the environment, affecting aspects such as the economy, social politics, and education. In the context of education, these impacts encompass both positive and negative effects. On the positive side, technology facilitates students in searching for information, acquiring knowledge, and broadening their horizons. However, there is also a negative side, as some children misuse technology, for instance, engaging excessively in gaming, which can lead to a lack of focus on learning and subsequently result in decreased academic achievement. To navigate these influences, users must approach technology use professionally, ensuring that technological developments are harnessed effectively. It's essential to recognize that technology can simplify tasks, emphasizing the importance of maximizing its potential.

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