Analysis Of The Effectiveness Of Digital Technologytransformation In Office Administration Learningatstate University Of Jakarta

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Abstract

This study aims to analyze the effectiveness of digital technology transformation in Office Administration learning at Universitas Negeri Jakarta. The research method used is qualitative, with interviews, observations, and documentation as data collection instruments. A total of 4 participants from the State University of Jakarta, specifically students from the Office Administration Education Program, lecturers, and teaching assistants were selectedas the sample. The data analysis techniques used are data reduction, data presentation, and conclusion drawing or verification. Although technological facilities, such as technology labs, have great potential, many lecturers have not utilized them optimally and still use traditional teaching methods. Technical issues such as unstable internet connections and application incompatibility hinder the use of technology. The readiness of lecturers and students to adopt technology and limited infrastructure are still significant obstacles. The impacts of digital transformation include increased access to materials, assessment efficiency, flexibility of distance learning, and better communication. However, major challenges include adaptation to new technologies and the gap in technology access, especially for those with limited devices and internet connections.

Keywords : Effectiveness; Digital Technology Transformation; Office Administration

1. Introduction

The learning process in office administration has undergone significant transformation in the digital era, driven by technological advancements and the demands of globalization and the Industrial Revolution 4.0. Educational institutions are required to integrate digital technology into teaching to enhance the quality and relevance of education. Digital technology in office administration learning extends beyond software introduction to include facilitating communication, collaboration, and data management. The shift from manual records to management information systems enables institutions to improve service quality, streamline operations, and provide better experiences for students, educators, and administrative staff. This transformation enhances efficiency and contributes to sustainable practices by reducing paper use.

Despite its potential to improve interactivity, flexibility, and accessibility in learning, several challenges hinder the adoption of digital technology in office administration education. These include limited infrastructure, insufficient digital competencies among educators, and resistance to change from students and lecturers. Addressing these issues requires strategic efforts to optimize technology use in achieving educational goals. This research aims to analyze the effectiveness of digital technology in office administration learning at Universitas Negeri Jakarta, highlighting current conditions, challenges, and the impact of its implementation. A preliminary study conducted at Universitas Negeri Jakarta involving 25 students in office administration found that most respondents believe digital transformation simplifies learning, with 48% strongly agreeing and 40% agreeing. Additionally, 72% of students perceive the strategies for digital transformation as effective, reflecting positive outcomes. These findings underscore the need for continuous improvement to ensure digital tools effectively support learning outcomes in office administration education.

2. Literature Review

2.1 Effectiveness

Effectiveness can be defined as a measure of success in achieving specific objectives. It also refers to achieving the right goals or selecting the most appropriate methods and determining the best option among various alternatives.

According to Ravianto (2014), effectiveness is the extent to which tasks are successfully executed and the degree to which individuals produce the expected outcomes. In other words, a task can be considered effective if it is completed as planned in terms of time, cost, and quality.

2.2 Digital technology

Digital technology refers to information technology that prioritizes digital operations and computer-based processes over manual labor. It focuses on sophisticated, automated systems capable of interpreting data in computer-readable formats. Fundamentally, digital technology operates as a highly advanced calculation system that processes all data as numerical values. With advancements in this technology, the quality and efficiency of data transmission have improved significantly, offering clearer visuals due to better quality, enhanced capacity, and faster transmission speeds.

On the other hand, digital transformation signifies the shift from traditional to digital technology, reflecting preferences among producers and consumers for simpler, more efficient solutions. In the context of network convergence, this transition also mirrors societal trends

emphasizing quality time at home with family and a balance between work and entertainment. Digital product manufacturers are responding to these trends by aligning their business strategies to meet such demands. Consequently, it is essential for digital product developers to offer comprehensive solutions tailored to the era of network convergence (Muhammad, 2019).

2.3 Impact of Digital Technology

Technology often appears impersonal and transforms various aspects of human life into technical processes, including education (Safitri, A. O., et al., 2023). The use of digital technology in education brings both positive and negative impacts. Below are some of its effects:

Positive Impacts:

1. Enhanced Learning:
   Digital technology improves learning by integrating digital tools and applications into the educational process, thereby enhancing the quality and effectiveness of education.
2. Easier Access to Information:
   Digital technology facilitates easier access to educational resources and information needed for learning objectives.
3. Advancing Educational Innovation:
   Digital technology drives further innovation in education. Schools and universities now offer more accessible online services, simplifying educational processes.
4. Improved Administrative Systems:
   Digital technology streamlines administrative processes in education. Tasks like enrollment or other academic requirements can now be managed online, reducing complexity for both students and parents.
5. Convenience in Accessing Information:
   Digital technology offers significant ease in accessing information to support learning activities effectively.

Negative Impacts:

1. Dependency on Technology:
   Students may become overly reliant on technology for learning and information retrieval, potentially losing the ability to learn independently. Addiction to technology can also lead to laziness and financial waste (Fitri, 2017).
2. Increased Risk of Academic Dishonesty:
   Digital technology makes it easier for students to engage in dishonest practices, such as copying assignments from the internet or using plagiarism software to submit unoriginal work.
3. Reduced Social Interaction:
   Reliance on digital tools and applications can diminish students' interpersonal skills and social interactions, negatively affecting their personal development.
4. Characterless Education:
   Excessive use of digital technology may result in education that overlooks character-building values. Students may focus more on technology and neglect moral teachings that schools aim to impart.
5. Digital Divide:
   Limited internet access exacerbates inequalities in obtaining educational resources, particularly among students in Indonesia (Hakim & Yulia, 2024).

2.4 Digital Transformation

Digital transformation refers to the shift in how tasks are managed through the use of information technology to achieve greater efficiency and effectiveness. This transformation has impacted various sectors, including education with e-learning, business with e-business, banking with e-banking, and government with e-government, among others. By leveraging databases, these sectors enhance productivity and streamline processes. The primary goal of digital transformation is to move toward a paperless system, where transaction records are replaced by databases, making operations simpler, more flexible, and accessible at any time.

In recent decades, the field of education has experienced rapid advancements driven by technological progress through digital transformation. E-learning, or online learning, is a prominent example of digital transformation within education. In this context, digital transformation presents both opportunities and challenges, depending on how educational institutions adapt and respond to these changes (Muhammad, 2019).

3. Material and Method

The analysis method used in this study uses a qualitative method by conducting interviews and observations by taking primary and secondary data. This study aims to further analyze the effectiveness of digital technology transformation in office administration learning at the state university of Jakarta.

3.1 Design Study

According to Sugiyono (2013), qualitative research is an approach used to study objects in their natural settings. In this method, the researcher acts as the primary instrument, and data is collected using triangulation techniques, which combine various methods. Data analysis is conducted inductively, with research results focusing more on meaning than on generalizations.

Creswell (1998) defines qualitative research as a methodological process for investigating social phenomena and human issues. This approach involves the researcher in creating complex descriptions, recording detailed accounts of respondents' perspectives, and reporting findings comprehensively. It also emphasizes studying phenomena in their natural context. Similarly, Bogdan and Taylor, as cited by Moleong (2007), describe qualitative research as a procedure that produces descriptive data in the form of written or spoken words and observed behaviors.

3.2 Data Analysis

Data analysis involves organizing, sorting, grouping, coding, and categorizing information to identify relevant findings aligned with the research focus or problem being addressed (Saleh, 2021). The goal is to extract meaningful insights that serve as a foundation for decision-making in solving specific issues. Miles and Huberman outline the following techniques for data analysis:

a. Data Reduction

Once data is collected, the next step is to analyze it through data reduction. This involves summarizing, selecting, and filtering key elements while focusing on essential aspects to identify patterns and themes.

b. Data Display

After data has been reduced, the next step is presenting it. In qualitative research, data can be displayed using concise descriptions, diagrams, category relationships, flowcharts, or similar formats. According to Miles and Huberman, the most common method for presenting data in

qualitative studies is narrative text. In addition to narrative descriptions, researchers are encouraged to use visual representations like graphs, matrices, networks, and diagrams for clarity.

c. Conclusion Drawing and Verification

The final stage of qualitative data analysis is drawing conclusions and verifying findings. Initial conclusions are provisional and subject to revision if subsequent data collection does not provide substantial evidence. However, if the preliminary conclusions are supported by valid and consistent evidence, they are considered credible. Findings in qualitative research often reveal new insights, providing clarity to previously ambiguous or unclear phenomena. These findings can include causal or interactive relationships, hypotheses, or theoretical propositions.

4. Result

The transformation of digital technology in education refers to the application of digital tools to revolutionize teaching and learning processes, both in traditional classrooms and online. Digital technology enables broader access to educational resources, such as learning materials, instructional videos, and online courses offered by prestigious institutions worldwide. Teachers and students can leverage educational software to visualize complex concepts and utilize data for in-depth analysis of student progress. However, the digital divide between students with and without access to technology remains a significant issue, especially in remote areas. Additionally, over-reliance on technology may reduce direct social interactions, which are vital for developing interpersonal skills.

1. Effectiveness of Digital Technology Transformation

The effectiveness of digital technology transformation lies in its ability to drive significant changes in how activities are conducted, enhancing efficiency, productivity, and service quality. In business, digital technology facilitates workflow automation, enables accurate data-driven analysis, and supports new business models like e-commerce and app-based services. These advancements enhance competitiveness and foster innovation, ultimately boosting economic growth.

In education, digital technology transformation proves effective in broadening learning access, providing more interactive experiences, and enabling personalized education tailored to individual student needs. Online learning platforms allow learners to study anytime and anywhere, making education more inclusive. In public services, digitalization streamlines bureaucratic processes, improves transparency, and simplifies public access to various services.

Based on interviews with participants, the adoption of digital technology in learning within the Office Administration Program (OAP) has yielded significant benefits while facing various challenges. Digital tools have accelerated material access, supported documentation processes, and enhanced learning flexibility. However, the utilization of technological facilities, such as technology labs, remains suboptimal due to some educators' reliance on traditional teaching methods. Despite the benefits, readiness among both educators and students remains a challenge, including the need for a sustainable digital archiving system. Additionally, students often focus excessively on technology without a solid understanding of foundational theories.

The findings align with prior research by Siregar and Purba (2021) in their article "Readiness for Digital Technology in Higher Education in Indonesia," which revealed that although many institutions possess adequate technological facilities, the preparedness of educators and students remains a primary challenge. This supports Participant B's view regarding the need for training to improve educators' technological proficiency. Furthermore, Setiawan and Kartika

(2019), in their study "Optimizing Technology Labs for Digital Learning," highlighted that technology labs are often underutilized due to dependence on traditional lecture methods, corroborating Participant A's statement about the underuse of technology labs in OAP.

2. Challenges in Implementing Digital Technology

While the implementation of digital technology brings numerous benefits, it also presents various challenges. One significant challenge is the digital divide, where individuals or regions lack equal access to technology, particularly in remote areas with limited infrastructure and internet connectivity. Low digital literacy is another major barrier, as many individuals, particularly older generations or those in underdeveloped regions, struggle to adopt and utilize technology effectively. Resistance to change also hinders progress, with many organizations and individuals preferring traditional methods due to fear of change or a lack of understanding of digital technology's benefits.

According to interviews, the main challenges in implementing digital technology in learning include technical issues related to infrastructure and devices. Participants highlighted unstable internet connectivity that frequently disrupts online classes and limited availability of devices among both educators and students. Technical issues such as incompatible applications or insufficient laptop specifications further impede optimal technology use.

Adaptation to technology also poses challenges, even though students are generally more adaptive to digital advancements than educators. While students are often expected to perform tasks using technology, many still lack fundamental skills, such as software proficiency, which hampers learning progress.

Overall, technical difficulties and the need to enhance students' foundational digital skills are the primary obstacles to implementing digital technology in education. These findings are supported by Prasetyo and Santosa (2020) in their article "Challenges and Solutions for Implementing Digital Technology in Education in Indonesia," which identifies unstable internet connections and hardware limitations as the main barriers in educational institutions. Similarly, Hadi and Fitria (2019), in their study "The Impact of Device Limitations on Online Learning in Higher Education," conclude that inadequate devices among educators and students are a major hindrance, echoing Participant B's concerns about insufficient laptop specifications.

3. Impact of Digital Technology Transformation

Digital technology transformation has significantly impacted various aspects of life, bringing both positive and negative effects. On the positive side, digital technology enhances accessibility and affordability of services. In education, it facilitates access to online learning materials and remote classes. It also boosts efficiency and productivity by automating tasks, saving time, and encouraging innovation in product and service development.

However, the transformation also introduces negative consequences. Automation and digitalization may lead to job displacement, particularly for individuals lacking digital skills. Over-reliance on technology can result in social isolation due to reduced face-to-face interactions, especially among younger generations who often communicate through social media or apps. Finally, data security and privacy concerns are significant challenges, as increased reliance on digital tools exposes vulnerabilities to cyber threats and misuse of personal information.

Based on participant interviews, digital technology transformation in education has had a profound impact on both educators and students. For educators, it provides access to diverse and interactive learning resources such as videos, simulations, and digital quizzes, which can enhance

student engagement. Assessment and evaluation processes have become more efficient, and classroom management is simplified through tools for scheduling and task organization. Distance learning has also become more flexible, especially during the pandemic. However, challenges include adapting to new technologies and addressing the digital access gap among students, particularly those with limited internet or device access.

For students, digital technology simplifies access to learning materials through e-learning platforms, online journals, and instructional videos, allowing them to study anytime and anywhere. Assignments are easier to complete and submit online, with prompt feedback from educators. Moreover, discussions with educators and peers are more efficient through video conferencing and group chat applications. Despite these advantages, challenges such as limited technology access and insufficient adaptation skills remain significant.

These insights are supported by Nugroho and Wulandari (2020) in their study "The Impact of Digital Technology on Student Learning Activities," which found that digital technology facilitates access to learning materials, enabling students to study anytime and anywhere. This aligns with statements from Participants C and D, who noted the convenience of accessing materials and managing their study schedules. Furthermore, Haryanto and Santoso (2018), in their article "Challenges and Barriers to Digital Technology in Education in Indonesia," emphasized that the digital access gap, especially among students with limited devices or internet access, remains a key challenge, corroborating complaints from Participants A and B about unequal access to technology among students.

5. Discussion

Based on the analysis that has been carried out from the data obtained, the following conclusions are drawn:

1. Effectiveness of Digital Technology Transformation

Digital technology transformation at Jakarta State University in the Office Administration Program (PAP) has provided significant benefits, its implementation is still not optimal. Although facilities such as technology labs are available, many lecturers have not utilized them optimally and still rely on traditional learning methods. Although digital technology helps in the learning process, the readiness of both lecturers and students is still a challenge, including the need for a sustainable digital archive system. In addition, although the use of digital technology facilitates access to materials and speeds up the administrative process, technical constraints and lack of integration between applications often make the use of technology complicated and hinder its effectiveness. Overall, despite progress, further efforts are needed to optimize the use of digital technology, improve user readiness, and address technical issues and system integration.

2. Challenges in Implementing Digital Technology

Digital technology transformation in Office Administration learning includes technical constraints, such as unstable internet connections, hardware limitations, and application incompatibility with existing devices. In addition, adaptation to technology is also an obstacle, where students are more adaptive to digital technology than lecturers, but many still do not have the basic skills needed to optimally utilize devices and software. Infrastructure limitations and unsupported device specifications can hinder the smooth learning process, especially when using heavy applications or accessing learning materials online. These challenges need to be overcome so that digital transformation can run more effectively and provide maximum benefits in the world

of education.

3. Impact of Digital Technology Transformation

The transformation of digital technology has had a significant impact on both lecturers and students in learning. For lecturers, easy access to wider learning resources allows for the provision of varied and interactive materials, as well as efficiency in the assessment and evaluation process. Class management becomes easier with the help of digital tools, and distance learning becomes more flexible. For students, technology allows easier access to learning materials through e-learning platforms, learning videos, and online journals, which support flexible learning times. Assignments become more practical because they can be done and submitted online, and provide ease in communicating with lecturers and friends via video conference applications and chat groups. However, the challenges faced include adapting to new technologies and the gap in access to technology, especially for those with limited devices and internet access.

6. Conclusion, Implication, and Recommendation

Conclusion

1) Effectiveness of Digital Technology Transformation

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Implication

1. Theoretical Implications

The theoretical implications of digital technology transformation in education involve fundamental changes in the way learning is conducted, requiring the development of educational theories that are more responsive to technological advancements. Constructivist learning theories, which emphasize active and collaborative learning, receive strong support through the use of digital technologies that enable more interactive and flexible learning experiences. Technologies such as e-learning platforms and other digital media allow for the implementation of personalized and student-centered learning approaches, focusing more on the individual needs of students.

Moreover, theories related to learning management and classroom management must evolve with the integration of technology. Digitalization enables instructors to manage teaching materials, assessments, and communication more efficiently. This also impacts educational evaluation theories, as digital tools can support faster, ongoing, and data-driven assessments, making them more responsive to students' developmental needs.

However, challenges related to accessibility and digital literacy highlight the need for improvements in the development of digital competencies among both students and educators. This leads to the importance of strengthening educational theories that support digital learning, particularly in terms of technological infrastructure readiness and deeper digital literacy training.

Overall, the digital transformation implies the need to update educational theories by incorporating more technological elements into all aspects of teaching, classroom management, and assessment, while ensuring that challenges related to accessibility and adaptation are addressed through inclusive and sustainable **approaches.**

2. Practical Implications

The practical implications of digital technology transformation in education involve several steps that can be implemented to maximize the benefits of technology while addressing existing challenges. First, educational institutions should invest in strong technological infrastructure, including stable internet networks and adequate hardware, to ensure equal access to technology and avoid technical obstacles that could disrupt the learning process. This would reduce the digital divide among students and instructors.

Second, instructors should be provided with continuous training and support to enhance their digital competencies, ensuring they are better equipped to implement technology in the teaching process. Additionally, offering accessible training materials that are relevant to the evolving technological landscape will significantly help educators in effectively utilizing digital tools.

Third, learning should be designed to be flexible and technology-based, utilizing e-learning platforms, communication apps, and other digital tools. This will provide a more interactive and in-depth learning experience for students, allowing them to learn anytime and anywhere while still receiving support from instructors and peers.

By implementing these practical steps, the digital technology transformation can be optimized, ensuring that both instructors and students can fully benefit from technological advancements in education.

Recommendation

Based on the discussion and conclusions outlined earlier, the researcher proposes several recommendations as follows:

1. Future research could involve a larger and more diverse sample, including educational institutions from various regions and educational levels, while also considering external factors that influence the implementation of digital technology, such as government policies or infrastructure support. This would ensure that the research results are more representative and produce findings that are more generalizable and applicable across different educational contexts.
2. Future studies could also explore the long-term impacts of digital technology transformation on learning, the quality of education, and the development of skills among students and faculty. This research could provide deeper insights into how digital technology affects changes in teaching and learning methods, as well as academic outcomes, over an extended period.

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