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Technology-Based Learning Policy Transformation: Evaluation of the Impact of Digital Platforms on Learning Effectiveness

Muh. Darwis[1], Aris Baharuddin[2], Oky Nur Pratiwi Johansyah[3]
[1,2,3]Universitas Negeri Makassar, Indonesia
Corresponding author's email: muh.darwis@unm.ac.id

ABSTRACT

This research seeks to examine how the use of digital platforms influences the quality and effectiveness of learning, especially within the broader shift toward technology driven education policies. The study is grounded in a qualitative phenomenological design that prioritizes lived experiences and perceptions of participants. Through this approach, the research explores how digital platforms are incorporated into instructional practices and how they shape learning outcomes, including academic performance, levels of student participation, and the overall learning experience. Data were gathered by focusing on the perspectives of educators and learners who are directly involved in digital learning environments. Attention was given to daily teaching practices, patterns of interaction, and the ways digital tools support or hinder the achievement of learning objectives. The analysis reveals that digital platforms offer significant advantages, particularly in terms of learning flexibility, expanded access to educational resources, and opportunities for self-paced study. Learners can access materials beyond the constraints of time and place, while educators can diversify instructional strategies through multimedia and interactive features. The findings also highlight that these potential benefits do not automatically translate into effective learning. The success of digital platform implementation is strongly influenced by the availability and reliability of supporting infrastructure, such as internet connectivity, devices, and technical support. Equally important is the capacity of educators to redesign learning activities in ways that are pedagogically meaningful, rather than merely transferring conventional teaching methods into digital formats. Student readiness also plays a crucial role, including digital literacy skills, self-regulation, and motivation to engage in online learning. Overall, the study concludes that digital platforms can contribute positively to learning effectiveness when they are supported by adequate infrastructure and accompanied by thoughtful adaptation from both teachers and students. Without these conditions, the use of digital platforms risks becoming superficial and less impactful, limiting their contribution to meaningful learning improvement.

Keywords: Transformation, Policy, Learning, Technology, Digital

INTRODUCTION

Rapid technological advancements in the era of globalization have transformed the educational landscape. The shift toward technology-based learning is transforming the way lecturers and students interact with teaching materials. This transformation, driven by digital platforms, is particularly pronounced in higher education institutions like Makassar State University. The introduction of platforms like Learning Management Systems (LMS), video conferencing tools, and AI-based applications like ChatGPT have increased the flexibility, accessibility, and interactivity of learning. However, challenges related to data privacy, inequitable access, and the need for training for effective lecturers remain significant issues.

In the context of this essay, entitled "Technology-Based Learning Policy: Assessing the Impact of Digital Platforms on Learning Effectiveness," the purpose and scope of this essay are determined to examine how technology-based learning policy can adapt to current educational changes. This essay will analyze the impact of digital platforms on learning effectiveness, covering key issues such as collaboration, co-creation, and changes in educational institutions' business models, which are crucial given today's technological advancements. (Darwis et al., 2021; Saggaf et al., 2017; Sitorus et al., 2025). Therefore, the scope of the research is not only about the use of technology, but also about how this technology

creates new opportunities in teaching and learning and improves students' writing skills. (Keengwe et al., 2009; Koller et al., 2006; Noor et al., 2022b) In this way, it is hoped that this essay will provide a clear understanding of the influence and potential of digital transformation in supporting more effective and innovative education.

This research aims to examine the transformation of technology-based learning policies, specifically regarding the impact of digital platforms on learning effectiveness at state universities (universities) in Makassar, specifically at Makassar State University.

METHODS

This research adopts a qualitative phenomenological design to explore the lived experiences of lecturers and students in relation to the transformation of technology-based learning policies. Data were gathered through in-depth interviews, systematic observations, and document analysis, emphasizing the integration of digital platforms at Makassar State University. The participants included lecturers, students, and faculty leaders, enabling a holistic understanding of how digital platforms reshape teaching practices, learning interactions, academic engagement, and institutional dynamics across different levels. This approach allows deeper interpretation of meanings attributed by participants to policy changes rather than merely documenting observable outcomes. The phenomenological lens captures contextual nuances shaped by institutional culture, digital readiness, and individual adaptability, offering a richer reading of change processes in higher education.

Data analysis employed triangulation to strengthen credibility, transferability, dependability, and confirmability of the findings. The analytical process followed sequential stages consisting of data collection, data condensation, organized data display, and careful interpretation to generate well-grounded conclusions that reflect participants' authentic perspectives. The results are expected to contribute practical insights for policy refinement and more responsive implementation of technology-based learning initiatives.

RESULT AND DISCUSSION

The findings of this study show that the shift toward technology-based learning policies has generally been welcomed by lecturers. Most participants indicated a strong level of readiness to incorporate digital platforms into their teaching practices. The platforms commonly used include learning management systems such as Syam-OK and Moodle, along with video conferencing applications like Zoom and Google Meet. According to the respondents, the use of these tools helps streamline classroom organization and supports more effective delivery of course content. The study also reveals that lecturers demonstrate a clear understanding of the objectives and implications of digital learning transformation. Their responses suggest a positive attitude toward the integration of technology in higher education teaching. Many lecturers possess postgraduate qualifications at the master's and doctoral levels, combined with professional experience that enables them to adjust effectively to technological changes in the learning environment.

This level of academic background and professional exposure contributes to lecturers' confidence in using digital tools. Respondents stated that they are accustomed to working with various digital platforms and feel sufficiently skilled in applying them during the teaching process. These perceptions are reflected in the data presented in the accompanying figure, which illustrates the extent of lecturers' familiarity and competence in utilizing digital learning technologies.

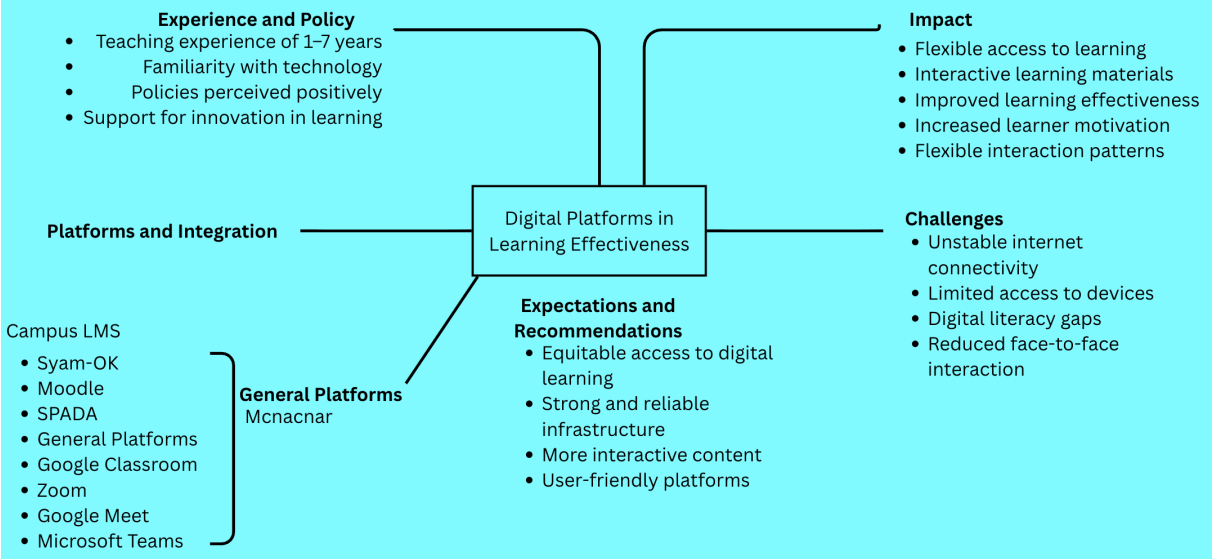

Figure 1: Evaluation of the Impact of Digital Platforms on Learning Effectiveness

This study shows that digital platforms have a positive influence on student engagement in the learning process, particularly through the use of interactive tools such as online quizzes and game-based learning applications like Quizizz and Kahoot, which are effective in increasing motivation and encouraging active participation. These platforms create a more engaging learning environment that supports collaboration, reduces passive learning, and helps sustain students' interest. At the same time, digital learning tools promote learner independence, as students become more capable of managing their own learning activities, accessing materials flexibly, and monitoring their academic progress, which contributes to improved learning outcomes. Nevertheless, the study also points out important challenges, especially related to unequal access to technology and internet connectivity. This digital divide limits the ability of some students to fully benefit from digital learning initiatives and may lead to disparities in learning experiences and achievement if not addressed through inclusive institutional support and appropriate educational policies.

Overall, the results of this study strengthen the argument that technology-based learning transformation is not simply a matter of technology adoption, but also involves pedagogical readiness, institutional support, and adaptive education policies. Therefore, effective implementation of digital learning requires synergy between lecturers, educational institutions, and policymakers to optimally achieve the goal of improving learning quality. A complete discussion of the research findings can be outlined as follows:

Digital Learning and Educational Transformation

The transformation of technology-based learning is part of the shifting educational paradigm in the era of the Industrial Revolution 4.0 and Society 5.0. "The use of digital technology in education aims to improve access, quality, and equity of learning. Digital learning emphasizes flexibility, open access to information, and collaboration that transcends the boundaries of space and time." (Afzal et al., 2023; Gottschalk & Weise, 2023; Tang et al., 2024)

The results of this study indicate that all respondents have used digital platforms in their learning, with varying levels of experience ranging from 1 to 7 years. This indicates that digital learning is no longer a novelty but has become an integral part of educational practice. This finding aligns with the view Lee et al., (2013); Sun, (2013); Xia & Lee, (2000) which states that

technology adoption will become common practice when users have passed the stages of innovation, persuasion, and confirmation.

Technology-Based Learning Policy in Theoretical Perspective

Technology-based learning policies aim to encourage innovation and increase learning effectiveness. According to (Demirel & Dağyar, 2016; Koller et al., 2006; Soboleva, 2022), Educational technology acts as a catalyst for pedagogical change, not simply as a tool for delivering material. In this context, technology drives a shift in learning methods from teacher-centered to learner-centered (Allayarova, 2025; Keengwe et al., 2009; Verma et al., n.d.)

The findings reveal that technology-based learning policies are viewed favorably and are considered to play an important role in driving learning transformation. Even so, respondents stressed that the effectiveness of these policies cannot be separated from the availability of adequate infrastructure and the preparedness of human resources involved in their implementation. Without sufficient technological support and capable educators and staff, policy objectives are difficult to achieve in practice. These results are consistent with the Edward III Policy Implementation Model, which explains that policy implementation is influenced by four key elements, namely effective communication, sufficient resources, the commitment and attitudes of implementers, and a supportive bureaucratic structure. Together, these factors determine whether a policy can be translated successfully from formulation into real outcomes.

Digital Platforms as Learning Media

Respondents used various digital platforms, including campus LMSs like Syam-OK, Moodle, and SPADA, video conferencing platforms like Zoom, Google Meet, and Microsoft Teams, and interactive media like Canva, Quizizz, Kahoot, Mentimeter, and AI. The Learning Management System serves as a learning ecosystem that supports integrated management of learning materials, interactions, and evaluation (Abdrahim, 2018; Dabbagh, 2005)

Digital platform integration is carried out gradually through training and adaptation. This process aligns with the Technological Pedagogical Content Knowledge (TPACK) concept, which emphasizes that the effectiveness of digital learning depends on educators' ability to integrate technology, pedagogy, and content in a balanced manner (Iasha & Hasanah, 2023; Lee et al., 2013)

The Impact of Digital Platforms on Learning Effectiveness

The effectiveness of digital learning can be seen in broader access to learning resources, greater flexibility in terms of time and location, and the availability of diverse methods for delivering instructional content. A learning process is regarded as effective when it is able to enhance learning outcomes, strengthen student motivation, and encourage active participation in learning activities. In this context, digital learning environments offer opportunities for students to engage more deeply with course materials and learning tasks. In line with this view, Puspitoningrum et al. argue that increased interaction between lecturers and students through digital platforms creates a learning atmosphere that is more dynamic and responsive, allowing communication, feedback, and collaboration to take place more intensively and meaningfully. Diversification of learning resources enriches students' learning experiences and improves understanding of lesson concepts. Meanwhile, the use of technology also increases student learning motivation through features that stimulate interest and provide rewards“ (Koller et al., 2006; Noor et al., 2022a; Sitorus et al., 2025)

The research results show that digital platforms have a positive impact on the effectiveness of material delivery and student learning independence. This finding aligns with

Zimmerman's Self-Regulated Learning theory, which states that digital learning environments encourage students to independently set goals, strategies, and evaluate their learning. (Afzal et al., 2023; Alshammary and Alhalafawy, 2023; Koller et al., 2006).

Learning Motivation in Digital Learning

Learning motivation is a crucial factor in successful learning. Motivation is one of the factors influencing student success. A person will achieve the desired learning outcomes if they have a strong desire to learn. Motivation can serve as a driving force for achieving good results. (Afzal et al., 2023; Hanesty et al., 2020; Suarsi & Wibawa, 2021). One of the efforts made to increase students' learning motivation is to apply game-based learning media such as Quizizz so that it can stimulate students to be more motivated in learning. (Lin et al., 2017; Noor et al., 2022a; Sung et al., 2012). Creative teachers will motivate students, as evidenced by their active participation and encouragement to take initiative. To support this increased motivation, the teacher's creativity as a conduit of knowledge plays a significant role. (Ahn et al., 2021; Lee et al., 2013; Noor et al., 2022a). Intrinsic motivation increases when students feel a sense of autonomy, competence, and connectedness. Digital platforms allow students to choose their own study time, access materials independently, and interact through various media, thus fulfilling these psychological needs (Fishbach and Woolley, 2022; Mohamad & Abd, 2023; Prendergast, 2008)

Social Interaction and Collaboration in Digital Learning

The current digital transformation has also impacted the world of education, which is now inextricably linked to the rapid changes. Technology has not only changed the way we interact with information but also significantly impacted teaching methods and strategies. Digitalization in education, which involves the shift from traditional learning methods to digital-based systems, has developed rapidly across various fields. This digitalization not only functions as a supporting tool but also encourages innovation in the learning process (Darwin & Burhan, 2021; Lin et al., 2017; Rafiq et al., 2024). From a Constructivism Theory perspective, effective learning occurs through social interaction and collaboration. Digital platforms provide spaces for interaction through discussion forums, video conferencing, and online collaboration features. .(Lin et al., 2017; Şahin, 2024; Setiana et al., 2022)

The research results show that interactions between lecturers and students and between students have become more flexible, but emotional face-to-face interactions tend to decrease. This suggests that digital learning needs to be combined with offline or hybrid learning. The combination of online and offline learning can optimize the advantages of each approach.(Ali et al., 2004; Herwin et al., 2022; Muhibbin et al., 2022)

The findings of this study align with the Technology Acceptance Model (TAM), which suggests that perceived usefulness and ease of use of technology play a significant role in technology adoption in education. Lecturers at Makassar State University demonstrated positive attitudes toward integrating digital tools, recognizing their potential to enhance teaching effectiveness and flexibility. This study also supports the TPACK (Technological Pedagogical Content Knowledge) framework, which emphasizes the importance of a balanced integration of technology, pedagogy, and content. Lecturers at Makassar State University have begun implementing technology in a contextual manner that aligns with learning objectives. In line with Blended Learning Theory, a hybrid learning approach that combines face-to-face and online learning is considered the most effective method. This hybrid model is expected to minimize the disadvantages of digital learning while maintaining the advantages of direct interaction in conventional learning.

CONCLUSION

Having examined the responses to the research questions this study discovered the issues that are problematic in the implementation of Land Use Act provisions on rural land, the following findings have been revealed.

Although the land use Act provides that "all lands in rural areas, be under the control and management of the Local Government, within the area of jurisdiction of which the land situated, which implies that there will be no more open market transaction, yet this is still in practice in the area.

The Land Use Act which was promulgated barely 30 years ago seems to be unknown to the rural people. Despite provisions in section I, people in the rural areas still have more power than government in matter concerning use and occupation of land as well as other transactions on land.

The Land Use Act is legislation enacted to control land administration within the urban and Rural Areas. But the study has shown that this has not been implemented in the area. The certificate of occupancy is. an instrument provided under section 9 of the Land Use Act, showing the type of interest which an individual has in land. But in the area, the certificate of occupancy is only a title document existing in the paper.

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