SOUTHEAST ASIAN JOURNAL OF SCIENCE AND TECHNOLOGY

Volume 9, Issue 2, 2025
P-ISSN: 2672-2984
E-ISSN: 2672-2992
www.sajst.org

The Quality Management in Education Amidst Digital Disruption: Strategies for Policy, Human Resource, and Technology Integration

A Syarah[1], Inti Hujah[2], Minhatul Ma'arif[3], Furtasan Ali Yusuf[4], Dewi Surani[5]
[1,2]Students of Master of Educational Management, Universitas Bina Bangsa, Indonesia
[3,4, 5] Lecturer of Master of Educational Management, Universitas Bina Bangsa, Indonesia

Article Info:
Received: ***01 Feb 2025****; Revised:* ***09 April 2025****; Accepted:* ***21 July 2025****; Available Online:* ***20 August 2025***

Abstract – *This study explores quality management in education amidst digital disruption, focusing on the harmonization of policies, human resource development (HR), and technology integration. The main objectives of this study are to assess the effectiveness of current educational policies in supporting digital transformation, evaluate the role of human resource development in integrating technology, and explore the impact of technology tools such as Learning Management Systems (LMS) on teaching quality. A mixed-method approach was used, combining qualitative and quantitative research methods. Qualitative data were collected through in-depth interviews with 48 educators and education administrators to understand the challenges they face in adapting to digital disruption and how policies and HR development can support technology implementation in education. Quantitative data were gathered through a survey, which assessed the perceptions of respondents regarding the effectiveness of education policies, HR development, and the use of technology in education. The survey results were analyzed using descriptive statistics, with the findings presented in percentage distributions. The results indicate that while a majority of respondents agree that policies are starting to align with technological needs, there are significant gaps in policy implementation, especially in terms of infrastructure and regional coordination. Additionally, despite the recognition of the importance of human resource development, only a limited number of educators feel adequately trained to integrate technology into their teaching practices. The study highlights the need for more focused training programs, equitable access to technology, and stronger policy implementation to effectively address the challenges of digital disruption in education.*

Keywords – *Quality management, Educational Technology, Learning Management Systems (LMS)*

INTRODUCTION

Education is one of the main pillars of national development, which not only influences the quality of human resources (HR) but also determines the progress of a country on the global stage. As time progresses, education must adapt to various changes, especially those occurring in the context of globalization and digitalization (Teridentifikasi], 2025). Therefore, educational quality or quality of education becomes a crucial factor to ensure that every individual has access to relevant and high-quality education. The quality of education is not only measured by the curriculum and facilities (Aida, 2025), but also by the management system that supports the entire learning process, including how educators manage and develop learning efficiently.

In the face of these rapid developments, technology plays an increasingly dominant role in education. Educational technology, or EdTech, opens up new possibilities in teaching and learning processes (Pranckūnienė & Girdzijauskienė, 2023). The use of learning management systems (LMS), online learning platforms, and other digital tools enables learning to become more flexible, interactive, and accessible anytime and anywhere (Nugroho, 2023a). On the other hand, technology also allows for more objective and

SOUTHEAST ASIAN JOURNAL OF SCIENCE AND TECHNOLOGY

Volume 9, Issue 2, 2025
P-ISSN: 2672-2984
E-ISSN: 2672-2992
www.sajst.org

measurable evaluation and assessment of learning outcomes, both for students and for the quality of teaching provided by educators.

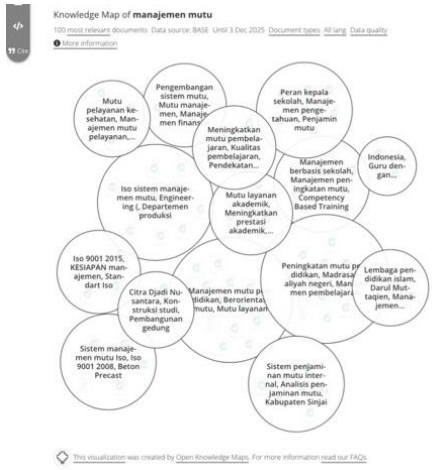

Figure 1: *Bibliometric Analysis of Quality Management*

Based on the bibliometric analysis conducted, several key topics dominate the literature related to quality management in education. These include academic service quality, improving the quality of learning, and the application of quality management systems often associated with international standards such as ISO 9001. This analysis shows that many studies link the implementation of educational technology with efforts to improve the quality of education(Aida, 2025). Terms such as competency-based training, enhancing academic performance, and digital-based management systems are frequently found. It is also evident that many studies highlight the importance of HR development and utilizing technology in supporting the achievement of quality education goals.

Although many studies address the role of technology in improving educational quality, there is a significant gap in the existing literature, particularly in the context of developing countries like Indonesia. Much of the literature focuses on educational policy and technology but does not explore how these policies can be effectively integrated with HR development (Adah, 2025; Sallis, 2025), especially for educators, and how technology can be applied in ways that align with local conditions. This gap indicates the need for further research into harmonizing educational policies, developing HR, and implementing technology in more effective and inclusive ways.

The urgency of this research lies in addressing this gap by exploring how adaptable educational policies, sustainable educator competency development, and appropriate technology applications can work together to improve the quality of education. Thus, this study aims to provide deeper insights into how quality management in education can be optimized through technology in the face of the growing complexities of digital disruption.

OBJECTIVES OF THE STUDY

The objectives of this study are to explore the impact of digital disruption on the quality of education, particularly in how technological advancements such as learning management systems and digital platforms have influenced the effectiveness of learning. The study also aims to analyse the role of educational policies in managing the integration of technology, examining whether existing policies adequately support educators and institutions in adapting to digital transformation. Furthermore, this research will evaluate the relationship between human resource development and technology adoption, focusing on how educators' skills and competencies align with digital advancements in education. It will also identify gaps in harmonizing educational policies, human resource development, and technology adoption, especially in developing countries. Lastly, the study aims to propose strategies to improve the integration of quality management practices in education amidst the challenges of digital disruption.

MATERIALS AND METHODS

This study uses a mixed-method approach, combining both qualitative and quantitative methods to examine quality management in education amidst

Volume 9, Issue 2, 2025
P-ISSN: 2672-2984
E-ISSN: 2672-2992
www.sajst.org

digital disruption (J. W. Creswell & Plano Clark, 2018), focusing on policy harmonization, human resource development (HR), and technology integration. For the qualitative aspect, data were collected through in-depth interviews with educators and education administrators to gain insights into the challenges and opportunities they face in dealing with digital disruption, as well as how policies and HR development can support the implementation of technology in education. These interviews provided valuable perspectives on how education policies are implemented and the extent to which technology is integrated into teaching.

For the quantitative aspect, a survey was conducted with 48 educators and education administrators to assess their perceptions of the effectiveness of education policies, human resource development, and the use of technology in education. The survey included questions about the use of Learning Management Systems (LMS), online learning platforms, and the challenges faced in implementing these technologies. The data collected from the survey were analyzed using descriptive statistical techniques, with the results presented in percentage distributions to illustrate the trends and general perceptions of respondents regarding digital disruption in education (W. J. Creswell & Creswell, 2018).

RESULTS AND DISCUSSION

Based on the survey conducted with 48 educators and education administrators, the main findings regarding quality management in education during the era of digital disruption highlight several critical aspects. The results are presented in the following percentage table.

Table 1: Educators' and Education Administrators' Perceptions of Quality Management Aspects in Education

Aspect Assessed	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Harmonization of Education Policy with Technology	42	38	10	5	5
Human Resource Development in Technology Use	35	40	15	7	3
Implementation of Technology in Learning (LMS, e-Learning)	50	30	10	5	5
Effectiveness of Policies in Supporting Digitalization	45	35	12	5	3

Volume 9, Issue 2, 2025
P-ISSN: 2672-2984
E-ISSN: 2672-2992
www.sajst.org

This table indicates that a majority of respondents feel that education policies are increasingly aligning with technological advancements. 42% of respondents strongly agree that education policies are in line with the growing demand for digitalization. In terms of human resource development, 35% of respondents strongly agree that training and professional development are sufficiently supporting the integration of technology in education, although there remains a noticeable gap. As for the implementation of technology, 50% of respondents strongly agree that the use of tools like Learning Management Systems (LMS) and online platforms has effectively improved educational quality.

The results of this study suggest that while technology has a significant positive impact on educational quality, challenges remain in fully realizing its potential. A key issue identified is the harmonization of education policy with technology. Although a substantial portion of respondents agrees that education policies have started to reflect the needs of a digital era, the full implementation of these policies at the institutional level is still lagging (Adah, 2025; Khosravi et al., 2019). This is often due to inconsistent execution across various regions and a lack of coordination between national policy frameworks and local level practices. The challenge lies in ensuring that policies are not just theoretical but are effectively implemented (Pranckūnienė & Girdzijauskienė, 2023), supported by the necessary resources and infrastructure at the ground level.

One critical area that continues to be a challenge is human resource development. Despite the recognition of the importance of upskilling educators, the survey results indicate a significant gap in how training programs are designed and executed (Khamis, 2024). With only 35% of respondents strongly agreeing that current training adequately supports educators in utilizing technology, it is clear that professional development efforts are not keeping pace with technological advances (Mihaescu & Gheta, 2024). This gap highlights a need for more tailored, continuous, and accessible training programs that equip educators with the necessary skills to integrate technology into their teaching practices effectively. Without adequate training, the full potential of digital tools cannot be realized, limiting the effectiveness of technology in enhancing education (Ma'arif, 2024).

In terms of technology implementation, the findings are somewhat more positive, with a majority of respondents agreeing that digital tools, particularly Learning Management Systems (LMS) (Nugroho, 2023), have made a positive impact on the quality of education. However, this enthusiasm is tempered by the recognition that access to technology remains unequal, especially in regions with limited infrastructure. Despite policies aimed at increasing digital access, the gap in technological infrastructure between urban and rural areas remains a significant barrier (Teridentifikasi], 2024). This digital divide hinders the ability of many educators and students to fully participate in digital learning environments, limiting the overall impact of digitalization efforts.

Moreover, the effectiveness of policies in supporting digitalization reveals a mixed picture. While there is general agreement that policies are supportive, only 45% of respondents strongly agree that these policies are sufficiently impactful. This indicates that there is a need for stronger, more focused policies that not only promote technology use but also address the underlying infrastructure and training challenges (Adah, 2025). Policies must evolve to not only support the adoption of new technologies but also create a more equitable distribution of resources, ensuring that every educator and student has access to the tools and training needed for success.

In conclusion, the study highlights the critical role of policy harmonization, human resource development, and technology implementation in ensuring that digital disruption leads to improved educational quality. The findings suggest that while progress is being made, significant work remains in aligning policy, enhancing educator competencies, and addressing the digital divide. Moving forward, it will be

Volume 9, Issue 2, 2025
P-ISSN: 2672-2984
E-ISSN: 2672-2992
www.sajst.org

crucial for governments and educational institutions to strengthen policies that support comprehensive teacher training, equitable access to digital resources, and the seamless integration of technology into all aspects of education.

CONCLUSION AND RECOMMENDATION

This study highlights the importance of harmonizing education policies, human resource development, and technology integration to improve the quality of education in the era of digital disruption. The findings show that while technology has a positive impact on education, challenges remain in the effective implementation of policies and ensuring educators are adequately trained to utilize these technologies. The survey results indicate that education policies are starting to align with digital needs, but their execution at the institutional level is inconsistent, particularly regarding infrastructure and regional coordination. Moreover, the development of human resources, particularly educator training, is an area requiring significant improvement. The gap in professional development programs emphasizes the need for more targeted, continuous training for educators. Despite the positive perceptions of technology use, the digital divide remains a critical issue, particularly in underserved areas with limited access to digital tools, hindering the full potential of digital education.

To address these issues, it is essential to strengthen the implementation of education policies that support not only technology adoption but also the necessary infrastructure at all levels of education. Teacher training programs should be enhanced with continuous, specialized development tailored to educators' needs, ensuring they are equipped to effectively use technology. Closing the digital divide by improving access to technological resources, especially in rural areas, is also critical. Collaboration between policymakers, educators, and technology providers should be promoted to create a unified approach to integrating technology in education. Finally, regular monitoring and evaluation mechanisms should be established to assess the effectiveness of policies, training, and technology integration, allowing for necessary adjustments to ensure continuous improvement in education quality.

REFERENCES

Adah, H. N. (2025). Educational Quality Management in Improving Human Capital in Education. *EJICCCM: Journal of Humanities, Social Sciences & Education*. https://ejicccm.com/index.php/icccmjssh/article/view/300

Aida, N. (2025). The Effectiveness of E-Leadership in Total Quality Management (TQM) Implementation for Educational Quality Enhancement. *[Nama Jurnal]*. https://journal.sinergi.or.id/index.php/Education/article/view/175

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and Conducting Mixed Methods Research*. Sage Publications.

Creswell, W. J., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative adn Mixed Methods Approaches. In *Journal of Chemical Information and Modeling* (Vol. 53, Issue 9).

Khamis, R. (2024). *AI-Powered Learning Experience Platforms: Investigating Implementation and Impact in a Multinational Corporation*. https://gupea.ub.gu.se/bitstream/handle/2077/83632/PDA699%20VT24%20Rasha%20Khamis.pdf?isAllowed=y

Khosravi, A., Kitto, K., & Williams, D. (2019). RiPPLE: A Crowdsourced Adaptive Platform for Recommendation of Learning Activities. *International Journal of Educational Technology*. https://arxiv.org/abs/1910.05522

Ma'arif, M. (2024). Exploration of the Use of Deep Learning in Early Childhood Art Learning: Study of PAUD Teachers in Kabupaten Pandeglang Minhatul. *Cakrawala Pedagogik*, *8*(2), 1–23.

Volume 9, Issue 2, 2025
P-ISSN: 2672-2984
E-ISSN: 2672-2992
www.sajst.org

Mihaescu, D., & Gheta, C. (2024). *Learning Platform for a Technical University: Implementation of an LXP*. https://www.researchgate.net/publication/349842195_Learning_Platform_for_a_Technical_University_Implementation_of_an_LXP

Nugroho, S. (2023a). From LMS to LXP: Extending Moodle with AI-based Learning Experience Platform Architecture. *URAI Journal*. https://journals.hs-offenburg.de/index.php/urai/article/view/77

Nugroho, S. (2023b). From LMS to LXP: Extending Moodle with AI-based Learning Experience Platform Architecture. *URAI Journal*. https://journals.hs-offenburg.de/index.php/urai/article/view/77

Pranckūnienė, R., & Girdzijauskienė, L. (2023). Personalized and Deeper Learning Opportunities Using Learning Experience Platforms. *Open Journal of Education*. https://www.scirp.org/journal/paperinformation.aspx?paperid=99845

Sallis, E. (2025). Implementing Total Quality Management (TQM) in Education: Enhancing Competitive Advantage and Sustainable Performance in Educational Institutions. *[Nama Jurnal]*. https://www.researchgate.net/publication/393257189_Implementing_Total_Quality_Management_TQM_in_Education_Enhancing_Competitive_Advantage_and_Sustainable_Performance_in_Educational_Institutions

Teridentifikasi], [Penulis Tak. (2024). Integrating Education Quality and Risk Management in Higher Education Institutions. *The TQM Journal*. https://www.emerald.com/tqm/article/doi/10.1108/TQM-08-2024-0291/1318246/Integrating-education-quality-and-risk-management

Teridentifikasi], [Penulis Tak. (2025). The Model of Management Quality for Islamic Higher Education: A Systematic Literature Review and Meta-Analysis. *MICJO: Journal of Islamic and Contemporary Studies*. https://e-jurnal.jurnalcenter.com/index.php/micjo/article/view/739

PLEASE INCLUDE CONTACT INFORMATION:
NAME: MINHATUL MA'ARIF
CONTACT NO: 087888928486
EMAIL ADDRESS: MAARIFMINHATUL@GMAIL.COM