



Implementation of Digital Culture in Improving the Quality and Competitiveness of Education at State Senior High School 1 Lhokseumawe

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ABSTRACT

The implementation of digital culture in educational institutions is becoming increasingly important amidst the rapid development of information and communication technology. This study aims to examine how digital culture is implemented to improve the quality and competitiveness of education at SMA Negeri 1 Lhokseumawe. A descriptive qualitative approach was used through field observations, in-depth interviews with school stakeholders, and analysis of institutional documents. The results show that digital culture at SMA Negeri 1 Lhokseumawe is systematically implemented through four main programs: digital technology training, school website management, Canva-based graphic design training, and Microsoft Excel spreadsheet training. These programs are designed for teachers, administrative staff, and students to strengthen their digital competencies and support more effective educational practices. The principal's visionary leadership plays a central role as the main driver behind the school's digital transformation. However, the implementation process still faces several challenges, including differences in digital literacy levels among school members, limited network infrastructure, and the potential risk of moral degradation due to uncontrolled technology use. To overcome these obstacles, the school implemented several strategic efforts, such as holding biweekly Focus Group Discussions (FGDs), providing intensive mentoring, and actively involving parents in supervising students' technology use. The study concluded that the implementation of digital culture has made a significant contribution in improving the quality of teaching and learning, increasing teacher job satisfaction, improving administrative efficiency, and strengthening the school's reputation and overall competitiveness in the education sector.

ARTICLE INFO

Article history:

Received

05 May 2026

Revised

25 June 2026

Accepted

26 July 2026

Key Word

Digital Culture, Educational Competitiveness, School Quality, Digital Literacy, SMA Negeri 1 Lhokseumawe.

How to cite

<https://pusdikra-publishing.com/index.php/josr>



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INTRODUCTION

The increasingly rapid development of information and communication technology has fundamentally transformed nearly every dimension of contemporary life. According to the International Telecommunication Union

(ITU, 2023), more than 5.4 billion people worldwide are now connected to the internet, a figure that underscores the pervasiveness of digital technology across social, economic, and educational sectors. In Indonesia, the Ministry of Communication and Information Technology reports that internet penetration will reach 78.19 percent of the total population by 2023, with education as a key driver of digital adoption. These statistics highlight an undeniable reality: digital transformation is no longer a future aspiration but a present imperative that educational institutions must actively embrace.

Educational institutions play a crucial role in this transformation. Schools are tasked not only with imparting established knowledge but also with preparing students to adapt and contribute to a world where digital competency is a fundamental expectation. The World Economic Forum (2023) identified digital literacy, critical thinking, creativity, and adaptability as some of the key skills employers will need in the coming decade. Consequently, schools that fail to embed digital culture into their institutional DNA risk producing graduates who are ill-prepared for the demands of higher education and the job market. This urgency is particularly acute in the Indonesian context, where the national education policy, through the Merdeka Belajar framework, explicitly calls for the integration of technology at all levels of schooling. (Ministry of Education, Culture, Research and Technology, 2023).

Despite these policy initiatives, the implementation of digital culture in Indonesian schools remains uneven. Research conducted in various provinces reveals significant gaps between urban and rural schools in terms of infrastructure readiness, teacher digital competency, and institutional commitment to technology integration. (Pamuji & Aditya, 2026). Even in urban schools, transformation often remains superficial, characterized by the provision of devices and connectivity without the deeper cultural shift necessary to embed technology as a genuine pedagogical and organizational practice. This gap between policy aspirations and institutional realities is the central issue motivating this research.

Conceptually, digital culture must be distinguished from the mere adoption of digital tools. Scholars define digital culture as a complex system of values, norms, habits, mindsets, and social practices that emerge within communities actively engaged with digital technologies (Susanto & Hermina, 2024). This definition encompasses three interrelated dimensions. The cognitive dimension refers to digital knowledge and literacy that enable the effective and critical use of technology. The affective dimension encompasses the attitudes, values, and ethical sensitivities that govern the responsible use of technology. The psychomotor dimension relates to the technical skills required to

competently operate digital devices and applications. Sustainable digital transformation demands that all three dimensions be developed simultaneously and in balance; technical skills without ethical foundations, or enthusiasm without competence, result in a fragile and potentially dangerous digital culture. (Widiastuti et al., 2025).

The competitiveness of educational institutions in the digital era is increasingly determined by their capacity to build and sustain this multidimensional digital culture. From a Resource-Based View (RBV) perspective, schools that successfully develop unique digital capabilities embedded in their human resources, organizational culture, and institutional practices gain a competitive advantage that is difficult for competitors to replicate (Suherman et al., 2026). Visionary leadership emerges from the literature as the single most influential variable in this process. Principals who articulate a compelling digital vision, allocate resources strategically, empower teachers through professional development, and foster collaborative learning communities are consistently associated with more successful digital transformation outcomes (Agustina et al., 2026; Ardianto & Setiyatna, 2026).

SMA Negeri 1 Lhokseumawe is an instructive case study in this context. As one of the leading public senior high schools in Aceh Province, the school has made deliberate and systematic efforts to embed a digital culture throughout its institutional operations. The school's approach includes a structured training program for teachers and administrative staff, the development of professional digital identities through active website management, and the development of students' creative and analytical digital competencies. These efforts, undertaken over several years and supported by consistent leadership commitment, offer valuable insights into the conditions under which a digital culture can be effectively institutionalized.

Therefore, this study aims to examine in depth how SMA Negeri 1 Lhokseumawe implements digital culture, identify factors that support and challenge this implementation, and assess its impact on the quality of education and the school's institutional competitiveness. These findings are intended to provide theoretical and practical contributions: theoretically, by enriching the conceptual understanding of digital culture as a multidimensional institutional phenomenon; and practically, by providing an empirically based model that can be adapted by other schools in designing their own digital transformation strategies.

RESEARCH METHOD

This study employs a qualitative approach with a descriptive method to examine the implementation of a digital culture aimed at enhancing the quality and competitiveness of education at SMA Negeri 1 Lhokseumawe. A qualitative approach was selected because the study focuses on gaining an in-depth understanding of phenomena within the school environment specifically regarding the use of digital technology in learning activities, school administration, and human resource development. This approach enables the researcher to gather detailed information on the processes, experiences, and strategies implemented by the school to foster a digital culture. The research was conducted at SMA Negeri 1 Lhokseumawe, a school that has implemented various digital-based programs to support the educational process. The site was chosen based on the school's efforts to integrate digital technology into learning activities, administrative management, and the development of teacher and student competencies. Furthermore, the school conducts various programs to strengthen its digital culture as part of a broader strategy to improve educational quality and competitiveness (Ardianto & Setiyatna, 2026).

The research subjects comprise the principal, teachers, administrative staff, and students who are directly involved in the implementation of the digital culture at the school. Informants were selected using purposive sampling a technique based on the criterion that the individuals possess experience, knowledge, and involvement relevant to the research focus. This selection process is intended to ensure the collection of accurate information regarding the implementation of the digital culture at SMA Negeri 1 Lhokseumawe. Data collection was conducted through in-depth interviews. These interviews served to gather information regarding the informants' understanding of digital culture, the implementation of digital technology in the school, strategies for improving educational quality, and the school's efforts to enhance its educational competitiveness. Through these interviews, the researcher was able to gain deeper insights into the informants' experiences and perspectives concerning the implementation of digital culture within the school environment.

In addition to interviews, this study utilized documentation techniques to gather supporting data. This involved collecting various documents related to school digitalization programs, technology training activities, the development of teacher and student competencies, and other data supporting the implementation of digital culture. The documentary data served to corroborate the interview findings, ensuring the information obtained was comprehensive and reliable. The collected data underwent a staged analysis process comprising

data reduction, data presentation, and conclusion drawing. During the data reduction phase, the researcher selected and categorized data based on the study's focus. Subsequently, the data was presented in a descriptive format, facilitating the researcher's understanding of the relationships between the findings obtained throughout the study (Suherman et al., 2026).

The data analysis focused on several key themes: the implementation of digital culture, the improvement of educational quality, and the enhancement of educational competitiveness. The researcher identified various digital programs implemented by the school such as training on technology usage, school website management, Canva, and Microsoft Excel aimed at boosting the digital competencies of teachers, administrative staff, and students. These programs were analyzed to assess their contribution to improving the quality of learning and the school's competitiveness. To ensure data validity, the researcher employed source triangulation by comparing interview results from various informants with documentation obtained during the study. This step was taken to verify that the data accurately reflected conditions in the field. The research findings are presented descriptively, providing a clear picture of the implementation of digital culture in enhancing the quality and competitiveness of education at SMA Negeri 1 Lhokseumawe, as well as the associated challenges and development efforts (Agustina et al., 2026; Ardianto & Setiyatna, 2026).

RESULTS AND DISCUSSION

Digital Culture Implementation Program at SMAN 1 Lhokseumawe

Field observations and interviews revealed that SMA Negeri 1 Lhokseumawe has designed and operationalized four core programs as the structural backbone of its digital culture implementation. These programs are systematically structured to gradually build digital capacity across various institutional levels.

Table 1.
Digital Culture Implementation Program at SMAN 1 Lhokseumawe

No	Program	Target Participants	Competency Objectives
1	Digital Technology Training	Teachers and Administrative Staff	Proficiency in the use of digital devices, platforms and applications for learning and administration.
2	School Website Management Training	Teacher	Ability to manage, update and maintain the school's digital information channels.

3	Graphic Design Training (Canva)	Student	Ability to design creative digital content for school learning and promotion.
4	Spreadsheet Application Training (Microsoft Excel)	Student	Skills in digital data processing and analysis to support academic tasks.

The first program, digital technology training, targets teachers and administrative staff and serves as the foundation for the school's digital transformation. The training content covers computer and laptop operation, presentation software, utilizing online learning platforms, digital document management, email communication, and basic school administration applications. For administrative staff, the program has enabled the transition of previously manual tasks, including student data management, correspondence processing, and document archiving, into digital workflows.

The second program focuses on school website management. Teachers are trained in content management, news writing, updating academic information, uploading activity documentation, and website maintenance. The school website serves as the institution's primary digital public interface, providing stakeholders with easily accessible information about academic programs, student achievements, and school activities.

The third program introduces students to graphic design through Canva, an easily accessible cloud-based design platform. Students learn to create posters, infographics, presentations, social media content, and promotional materials. The resulting work is used not only in academic contexts but also for school promotions and documentation of extracurricular activities.

The fourth program equips students with Microsoft Excel competencies, including spreadsheet fundamentals, formula application, table creation, data processing, graphing, and basic analytical functions. This training addresses the data literacy dimension of 21st-century competencies, preparing students for academic and professional contexts.

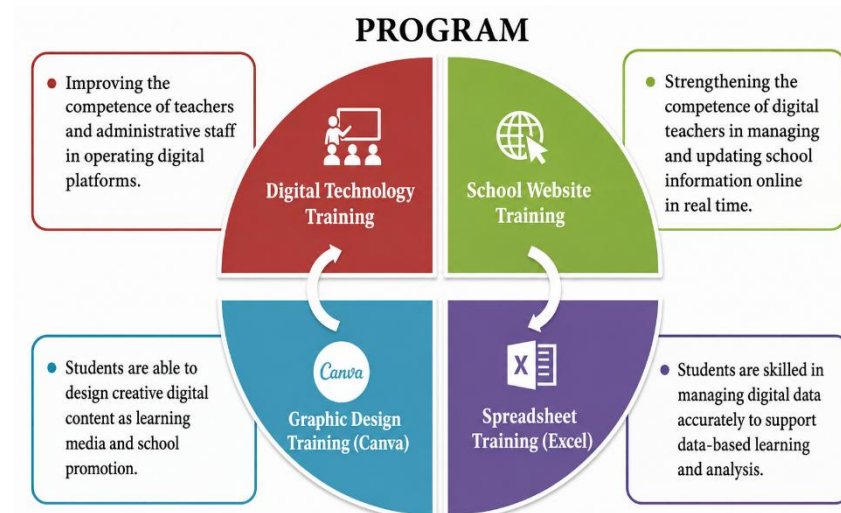


Figure 1.

Digital Culture Improvement Program at SMAN 1 Lhokseumawe Supporting Factors

Interviews consistently identified the principal's visionary and active leadership as the most significant supporting factor in implementing a digital culture. The principal has articulated a clear institutional direction toward digital transformation and has translated this vision into concrete resource commitments: budget allocations for training programs, equipment procurement, facilitation of teacher professional development opportunities, and regular program evaluations. Teachers consistently reported that leadership support maintains their motivation to engage in digital learning and experimentation.

The biweekly Focus Group Discussion (FGD) mechanism emerged as the second most important supporting factor. This structured forum provided a dedicated space for collective learning, allowing teachers to share experiences, disseminate effective practices, discuss implementation challenges, and collaboratively develop solutions. More experienced digital users supported colleagues facing greater adaptation challenges, creating a peer-to-peer mentoring dynamic that gradually narrowed the digital competency gap among teaching staff.

Active parental involvement is a third supporting factor, particularly in addressing the ethical and behavioral dimensions of student technology use. Schools have established communication channels that allow parents to receive guidance on monitoring students' digital activities at home, reinforcing the digital citizenship values instilled in schools.

Challenges in Implementation

Three main challenges were identified through observations and interviews. The first is the digital literacy gap among teachers. Teachers with longer tenure demonstrated greater difficulty adapting to new technologies, not due to a reluctance to learn, but as a consequence of ingrained conventional work habits. This variation in competency levels creates inequities in the quality of technology-integrated teaching across classrooms.

The second challenge relates to infrastructure limitations. Network connectivity is not always stable in all school facilities, and not all teachers and students have access to devices with adequate technical specifications. These constraints periodically disrupt training sessions and online learning activities, requiring teachers to develop contingency approaches.

The third challenge involves the risk of moral degradation associated with uncontrolled technology use. Students' increased access to the internet opens up opportunities for exposure to potentially harmful content, social media abuse, and the risk of cyberbullying. Schools recognize that digital competence without digital character development produces incomplete and potentially harmful outcomes.

Impact on Quality and Competitiveness

The implementation of digital culture has had a tangible impact in three areas. In terms of learning quality, observations indicate increased student engagement when teachers use interactive digital media, instructional videos, and app-based activities. Students demonstrate greater participation in class discussions and a stronger understanding of abstract concepts facilitated through digital visualization tools.

Regarding teacher professionalism, the digitization of administration has significantly reduced the time teachers spend on routine administrative tasks. Processing grades, recording attendance, storing documents, and managing assignments through digital platforms has freed up professional time that teachers can divert to lesson planning and reflective practice, contributing to reported increases in job satisfaction.

At the institutional level, an active school website and professionally managed social media presence have enhanced the school's public reputation by making its achievements and programs visible and accessible to the wider community. Student achievements in digital skills competitions, including graphic design and data processing, further strengthen the school's standing and serve as a tangible indicator of the effectiveness of its digital culture.

Discussion

Findings from SMA Negeri 1 Lhokseumawe reveal that effective digital culture implementation is fundamentally a process of organizational transformation, not simply the acquisition of technology. This insight aligns with and extends the conceptual framework proposed by Widiastuti et al. (2025), who argue that a sustainable digital culture requires the simultaneous development of cognitive, affective, and psychomotor dimensions. The school's four sequential program structures, from staff capacity building through website identity development to student creative and analytical skill development, aptly exemplify this multidimensional approach in practice, a design architecture not documented in detail by previous studies focusing on individual program interventions.

The importance of the principal's leadership role in driving this transformation strengthens the theoretical framework of digital transformational leadership put forward by Agustina et al. (2026) and Ardianto and Setiyatna (2026). However, the current findings add nuance to this framework by demonstrating that leadership effectiveness operates not only through formal policy directives, but critically through the principal's visible personal involvement, such as attending training sessions, conducting regular evaluations, and providing individual encouragement to hesitant teachers. This dimension of digital leadership behavior, which can be referred to as engaged modeling, has received less attention in the existing literature and represents a meaningful theoretical contribution.

The biweekly FGD mechanism is the most distinctive institutional innovation of this study. Previous research on professional learning communities in the context of digital transformation (Anwar, 2026) have documented their general benefits, but have not systematically examined the specific design features that make them effective. The findings here suggest that the effectiveness of FGDs stems from a combination of regularity, structured peer mentoring, psychological safety, and a focus on hands-on problem-solving a configuration that transforms what might otherwise be a ceremonial activity into an authentic organizational learning mechanism. These design principles offer actionable guidance for other schools seeking to institutionalize collaborative digital learning.

The digital literacy gap identified among senior teachers is an ongoing challenge that has also been documented by previous research. (Pamuji & Aditya, 2026; Nazariah, 2025). What distinguishes SMAN 1 Lhokseumawe's response is its explicit humanistic framework: the school treats adaptation difficulties not as obstacles to be overcome, but as developmental challenges to

be supported through gradual and differentiated mentoring. This reframing reduces the stigma associated with lower digital skills and maintains teacher engagement in the socially intelligent strategic transformation process, which has important implications for how school leaders manage inclusive digital transformation.

The risk of moral degradation associated with increased student internet access introduces a dimension that is systematically downplayed by purely technical explanations of digital transformation. The integration of digital ethics, parental collaboration, and digital citizenship education into the school implementation framework reflects an understanding consistent with Taryanto (2026) and Rahmawati et al. (2024) argue that digital culture must foster character as well as competence. This holistic orientation distinguishes the school approach from narrower, skills-focused digital programs and aligns with the growing scientific consensus that digital citizenship is an essential component of 21st-century education.

Documented improvements in institutional competitiveness, including improved reputation, increased management transparency, and student achievement in digital areas, are consistent with the RBV framework applied to educational institutions. (Suherman et al., 2026), which predicts that unique and institutionally embedded digital capabilities generate sustainable competitive advantage. These findings extend that framework by illustrating specific mechanisms through which digital culture translates into competitive differentiation: public visibility through professional digital communication, student learning outcomes demonstrated in measurable digital skills, and signals of teacher professionalism conveyed through efficient, technology-enabled teaching practices.

CONCLUSION

This study demonstrates that the implementation of digital culture at SMA Negeri 1 Lhokseumawe is a truly transformative institutional process, not simply an incremental technological upgrade. Three findings stand out as particularly significant. First, the school's structured, four-program architecture that sequences capacity building from staff to students across cognitive, affective, and psychomotor dimensions provides a replicable and more systematically designed implementation model than approaches documented in comparable prior research. Second, the biweekly Focus Group Discussion (FGD) mechanism serves as a high-impact organizational learning infrastructure that simultaneously narrows the digital competency gap, sustains teacher motivation, and institutionalizes collaborative problem-solving—a

combination of functions rarely achieved by a single institutional mechanism in the digital transformation literature. Third, the school's intentional integration of digital ethics and parent collaboration into its implementation framework reflects a holistic conception of digital culture that encompasses character development alongside technical competency, resulting in a more durable and socially responsible transformation than approaches focused solely on skills.

This study makes a theoretical contribution by refining the concept of digital transformational leadership through identifying engagement modeling principals' visible personal participation in digital programs as a distinct and important leadership behavior that deserves greater attention in the literature. It also makes a methodological contribution by demonstrating the value of a single-case study design in generating detailed, mechanism-level insights into digital transformation processes that survey-based approaches cannot capture. A major limitation of this study is its focus on a single institutional case, which, while allowing for depth of analysis, limits the applicability of the findings to schools operating under very different resource, cultural, or governance conditions. Future research should employ multi-case comparative designs across schools varying in geographic location, resource levels, and leadership contexts to establish the boundary conditions under which the mechanisms identified here operate most effectively. Longitudinal studies that track the long-term sustainability of digital cultures beyond the initial implementation phase would also substantially enhance understanding of how institutional digital transformation is sustained and deepened over time.

REFERENCES

- Agustina, S., Hadi, S., Diana, N., Komariah, A., Agustina, S., Hadi, S., Diana, N., & Komariah, A. (2026). Educational Strategy Management in Improving the Quality and Competitiveness of Educational Institutions. *PILLARS OF COMMUNITY EMPOWERMENT IN EDUCATION* , 3 (2), 259-276.
- Alfarabi, PAK (2025). Contribution of Information and Communication Technology in Increasing Competitiveness and Educational Services. *ULIL ALBAB: Multidisciplinary Scientific Journal* , 4 (7), 1679-1683.
- Anwar, K. (2026). Quality Assurance System Strategy at the Sultan Agung 4 Islamic Junior High School: Efforts to Realize Quality Education for All. *JIPSI: Interdisciplinary Journal of Islamic Education and Science* , 5 (1), 207-221.
- Ardianto, A., & Setiyatna, H. (2026). Personnel Development Management to Improve Human Resource Quality at the Harapan Insan Boyolali Foundation (YAHIB) Academic Year 2025/2026. *Indo Green Journal* , 4

(2025), 1014-1019.

- Argaricha, A.S., Khojir, K., & Bahrani, B. (2025). Implementation of Total Quality Management in Building a Culture of Educational Quality in the Era of the Industrial Revolution 4.0: A Case Study at SMP Islam Bunga Bangsa Samarinda. *ITQAN: Journal of Educational Sciences* , 16 (1), 1-14. <https://doi.org/10.47766/itqan.v16i1.2880>
- Dakun, D. (2022). The Influence of Digital Literacy Skills and Students' Religiosity Levels on Accounting Learning Outcomes at Sekolah Bintang Nusantara Vocational School. *Journal of Educational Innovation and Technology* , 1 (2), 214-223. <https://doi.org/10.46306/jurinotep.v1i2.25>
- Dalem, PAA (2026). Transformation of BOS Fund Governance Through Management Accounting. *Al-Zayn: Journal of Social Sciences & Law* , 4 (3), 8119-8129.
- Frans Cilia Mahdalena, Yudha Heryawan Asnawi, & Irman Hermadi. (2025). Digital Transformation Strategy for Improving Quality Management of Secondary School Education: A Case Study of PT Kunci Transformasi Digital. *Development Innovation: Research and Development Journal* , 13 (02), 215-234. <https://doi.org/10.35450/jip.v13i02.1057>
- Fuad, H., & Khaudli, MI (2025). Trends in Curriculum Management Education Strategies in Improving Quality and Global Competitiveness. *Journal of Language and Literature Education* , 2 (2), 45-53. <https://doi.org/10.70248/jolale.v2i2.2571>
- Handayani, T. (2025). Implementation of an Institution-Level Financial Application System in the Financial Management of Mtsn 7 Kediri. *Jurnal.Pustakagalerimandiri.Co.Id* , 5 (2), 17-28. <https://jurnal.pustakagalerimandiri.co.id/index.php/pustakaaktif/article/view/1435>
- Hendi Kurniyawan, & Achmad Fais Ghazali. (2025). Quality Management Innovation Strategy to Increase Higher Education Competitiveness in the Digital Era. *Paradigma: Journal of Educational Thought and Research* , 11 (2), 108-115. <https://doi.org/10.64540/6ja08n04>
- Hendro, G., Azhari, A., & Mustofa, K. (2025). The Role of Entrepreneurial Orientation and Ambidexterity in Improving Marketing Performance in Fish Processing MSMEs in Banten. *Marina Scientific Bulletin of Maritime Socio-Economics and Fisheries* , 11 (2), 143-155.
- Khaira AM, K. (2025). Management Strategy in Increasing the Competitiveness of Islamic Educational Institutions: A Solution for Strengthening Quality in the Era of Disruption. *Journal of Information Systems Development and Education* , 3 (2), 53-55. <https://doi.org/10.62386/jised.v3i2.142>

- Lesnawati. (2025). Quality-Based Educational Management Innovation: Efforts to Build Sustainable Higher Education Competitiveness. *JUPEIS: Journal of Education and Social Sciences* , 4 (3), 637-646. <https://doi.org/10.57218/jupeis.vol4.iss3.1864>
- Muliaman, A., Alvina, S., Rita, S., Husnul, Z., & Matondang, R. (2026). Strengthening Science Literacy Competence and Islamic Character Through Contextual Learning Based on Acehese Culture and Local Wisdom for the Young Generation of Aceh in Padang Sakti Village, Lhokseumawe City. *Vocational Journal* , 10 (2), 1-9.
- Nazariah. (2025). MADRASAH CURRICULUM MANAGEMENT IN IMPROVING GRADUATES' COMPETENCIES AT MAN 1 NORTH ACEH. *Didactics: Scientific Journal of PGSD STKIP Subang* , 11 (04), 251-263.
- Pamuji, S., & Aditya, N. (2026). Visionary Leadership Strategy in Educational Management: An Effort to Create a Superior Organizational Culture and Global Competitiveness. *JIMI: Indonesian Multidisciplinary Scientific Journal* , 1 (2), 10-20. <https://doi.org/10.64845/jimi.v1i2>
- Panjaitan, I. Juliana, & Humaira, I. (2025). Increasing School Competitiveness Based on Digital Culture. *AKSI: Journal of Islamic Education Management* , 3 (3), 224-238. <https://doi.org/10.37348/aksi.v3i3.478>
- Pranata, OD, Noperta, N., & Trisnawati, W. (2023). Mentoring the National Science Olympiad at Sungai Penuh City Level Through School-Campus Cooperation and Collaboration. *Dedication: Journal of Community Service* , 2 (2), 324-334. <https://doi.org/10.53276/dedikasi.v2i2.113>
- Qomariyah, & Arifin, M. (2025). Analyzing National and International Quality Education Standards: Challenges, Implementation, and Improvement Strategies in the Era of Globalization. *Journal of Islamic Education Management* , 1 (2), 210-216.
- Rahmawati, Gresinta, E., Suhendra, & Risdiana, A. (2024). Implementation of the ISO 21001:2018 Quality Management System as an Educational Strategy in the Digital Era. *Journal of Industrial Engineering & Management Research* , 5 (3), 16-22. <https://www.jiemar.org/index.php/jiemar/article/view/523>
- Rohmatillah, SA, Wahidah, LN, Bang, V., & Sholeh, M. (2026). Digital Leadership of School Principals in Innovation Management and Increasing the Competitiveness of Educational Institutions: SLR. *Educational Management Media* , 9 (1), 137-156.
- Setiono, P., & Kuswandi, D. (2023). H. Agus Salim's Educational Concept and Its Relevance in Literacy Education for Elementary School Students. *WASIS: Scientific Journal of Education* , 4 (2), 79-85.

<https://doi.org/10.24176/wasis.v4i2.11305>

- Suherman, E., Buana, U., & Karawang, P. (2026). DIGITAL CULTURE TRANSFORMATION STRATEGY IN BUANA PERJUANGAN KARAWANG UNIVERSITY SERVICES1. *PUBLIC: Journal of Human Resource Management, Administration and Public Services of Universities* , 13 (1), 231-246.
- Supitno, R., Widiyawati, Jamiyah, S., & Hadiyanto. (2025). IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT AND INFORMATION TECHNOLOGY-BASED QUALITY CONTROL SYSTEM IN IMPROVING INSTITUTIONAL COMPETITIVENESS AT ELEMENTARY SCHOOL BUDI MULIA 2 PEMATANG SIANTAR. *Darma Agung Journal* , 33 (1), 355-362.
- Susanto, NW, & Hermina, D. (2024). Improving School Competitiveness Through the Implementation of a Technology-Based National Education Platform in Indonesia. *Educational Management: Journal of Islamic Education Management* , 10 (2), 85-98. <https://doi.org/10.18592/moe.v10i2.13578>
- Syahputra, W. (2021). INFORMATION SYSTEM PLANNING STRATEGY IN THE FRAMEWORK OF IMPROVING DIGITAL-BASED LIBRARY SERVICES USING ANITA CASSIDY'S STAGES. *JITET (Journal of Informatics and Applied Electrical Engineering)* , 12 (3), 4641-4647.
- Taryanto. (2026). Improving the Quality of Education as a Main Pillar for Increasing Indonesia's National Competitiveness in the Era of Globalization. *Business and Investment Review (BIREV)* , 4 (1), 1-7.
- Widiastuti, W., Madhakomala, M., & Hulwan, NI (2025). Total Quality Management in Improving Quality Culture in Higher Education. *JAMP: Journal of Educational Administration and Management Volume* , 8 (1), 669-687.
- Yahya, F., & Herawati, NS (2025). Madrasah Principal Leadership Strategies in Improving Educational Quality. *Journal of Management and Culture* , 5 (2), 115-120. <https://doi.org/10.51700/manajemen.v5i2.695>