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Developing a Multidimensional Framework of Learning Technology Adoption in Higher Education: Perspectives from Lecturers and Students

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Abstract. This study aims to examine the factors influencing the adoption of learning technologies in higher education and to develop a comprehensive understanding of how individual, institutional, and technological factors interact in supporting successful technology integration. A qualitative descriptive approach was employed. Data were collected through semi-structured, in-depth interviews with lecturers and students at an Indonesian higher education institution. The interview data were analyzed using thematic analysis involving data reduction, coding, categorization, and interpretation to identify recurring patterns and key themes related to technology adoption. The findings reveal seven major factors influencing learning technology adoption: (1) users' digital competence, (2) institutional support and management policies, (3) perceived ease of use and perceived usefulness, (4) availability of technological infrastructure, (5) quality of digital learning content, (6) technical support services, and (7) individual motivation and learning habits. The results indicate that successful technology adoption is determined not only by technological readiness but also by organizational commitment and users' adaptive capacities. This study contributes to the literature by proposing a multidimensional perspective that integrates individual, institutional, and technological determinants of learning technology adoption in higher education. The findings have practical implications for policymakers and university leaders in designing sustainable strategies to enhance digital learning implementation.

Keywords: Digital Competence, Higher Education, Institutional Support, Learning Technology Adoption, Qualitative Study.

INTRODUCTION

Over the last two decades, advances in information and communication technology have significantly transformed various aspects of human life, including higher education (Br. Sinulingga & Nasution, 2024). As institutions responsible for preparing highly qualified human resources, higher education institutions are expected to continually adapt to technological developments to maintain their relevance, effectiveness, and competitiveness in the digital era (Humiati & Budiarti, 2020). One of the most visible manifestations of this transformation is the increasing integration

of learning technologies into educational practices (Berdiferensiasi, 2023). These technologies include Learning Management Systems (LMS), video conferencing platforms, e-learning applications, blended learning environments, and various digital tools that support more flexible, interactive, and effective learning processes (I l m i n A, 2025).

The adoption of learning technology is no longer an optional innovation but a strategic necessity for improving educational effectiveness, efficiency, and accessibility (Pranata et al., 2025). This need became increasingly urgent following the COVID-19 pandemic, which forced educational institutions worldwide to rapidly shift from conventional face-to-face instruction to technology-supported learning environments. The pandemic accelerated digital transformation and highlighted the importance of technological readiness in ensuring educational continuity and resilience.

In response to these developments, higher education institutions have been encouraged to redesign traditional pedagogical practices and develop more systematic, structured, and future-oriented approaches to technology integration (Widagdo, 2025). This transformation involves not only the adoption of digital platforms but also changes in curriculum design, instructional strategies, technological infrastructure, and the digital competencies of lecturers and students (Rahman et al., 2025). Despite the growing adoption of learning technologies, their implementation remains uneven and often faces various challenges. The success of technology integration is influenced by multiple interrelated factors that extend beyond the availability of technological tools themselves (Nabila et al., 2023).

Previous studies have identified several determinants of technology adoption, including individual factors such as attitudes, perceptions, digital competence, and psychological readiness; institutional factors such as leadership support, organizational policies, infrastructure, and organizational culture; as well as external factors related to technological development, regulations, and socio-economic conditions (Rejeki, 2025). These factors interact dynamically and collectively shape the extent to which learning technologies are successfully adopted and utilized in higher education settings (Malay et al., 2025). Consequently, understanding these determinants is essential for developing effective and sustainable digital learning strategies (Nashrullah et al., 2025).

Although numerous studies have examined technology adoption in educational contexts, most investigations focus on specific variables, technologies, or quantitative measures of technology acceptance (Zulfikhar et al., 2024). As a result, there remains a need for a more comprehensive understanding of how individual, institutional, and technological factors simultaneously influence the adoption process from the perspectives of the primary stakeholders involved, namely lecturers and students. Such understanding is particularly important because successful technology adoption depends not only on technological readiness but also on users' experiences, perceptions, and interactions within the institutional environment.

Several factors have been identified as critical in influencing technology adoption, including infrastructure readiness, digital literacy, managerial support, institutional policies, perceived ease of use, and perceived usefulness (Hapzi Ali et al., 2022). In addition, organizational culture, reflected in institutional values, norms, and working habits, may facilitate or hinder the integration of technology into educational practices (Ariyanto et al., 2023). These factors interact to shape a productive digital learning ecosystem (Amananti, 2024). To explain this phenomenon, several theoretical frameworks have been widely employed, including the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Diffusion of Innovation Theory (Nurhayati, 2024). These frameworks provide useful perspectives for understanding technology adoption behavior and the factors that influence it (April-September et al., 2025).

Despite the relevance of these theoretical models, empirical evidence that integrates the perspectives of lecturers and students within a single analytical framework remains limited. This limitation creates a knowledge gap regarding how various adoption factors interact in actual higher

education settings. Addressing this gap is important because higher education institutions require evidence-based information to formulate policies and implementation strategies that are responsive to local needs and contextual challenges.

Therefore, this study was conducted to analyze the factors influencing the adoption of learning technologies in higher education from the perspectives of both lecturers and students. The study seeks to provide a comprehensive understanding of how individual, institutional, and technological factors shape the adoption process and contribute to the successful integration of learning technologies. The findings are expected to contribute to the growing body of knowledge on educational technology adoption and provide practical recommendations for higher education institutions in developing more effective, inclusive, and sustainable digital learning ecosystems (Indriati et al., 2023; Sarina Devi & Joy Nashar Utamajaya, 2025; Ratnawati & Lestari, 2025; Romlah, L. S., Iskandar, I., Wahid, L., Ali, N., & Badrudin, 2024).

METHOD

This study employed a qualitative multiple-perspective case study design to explore factors influencing the adoption of learning technologies in higher education. A qualitative approach was selected because the study aimed to gain an in-depth understanding of participants' experiences, perceptions, and practices regarding the adoption of learning technology in a real educational context.

Research Setting and Participants

The study was conducted at Universitas Islam Negeri (UIN) Sjech M. Djamil Djambek Bukittinggi, Indonesia. Participants were lecturers and students who had actively used digital learning technologies, including Learning Management Systems (LMS), video conferencing platforms, and other online learning applications.

Purposive sampling was used to select information-rich participants who possessed direct experience with technology-enhanced learning. A total of 15 participants were involved in the study, comprising 7 lecturers and 8 students from different academic disciplines. Participant selection was based on three criteria: (1) active involvement in technology-supported learning activities, (2) a minimum of one year of experience using digital learning platforms, and (3) willingness to participate in the study.

Data Collection

Data were collected between January and March 2025 through semi-structured in-depth interviews. An interview protocol was developed based on the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Diffusion of Innovations Theory.

The interviews explored participants' perceptions regarding: Digital competence and technological readiness; Institutional support and policy; Perceived ease of use and usefulness; Infrastructure availability; Learning content quality; Technical support services; Motivation and learning habits. Each interview lasted approximately 45–60 minutes and was conducted either face-to-face or via video conferencing. All interviews were audio-recorded with participants' consent and subsequently transcribed verbatim for analysis.

Data Analysis

The collected data were analyzed using thematic analysis following the framework proposed by Braun and Clarke (2006). The analysis involved six stages: Familiarization with the data through repeated reading of interview transcripts; Initial coding of meaningful statements and experiences;

Searching for recurring themes and patterns; Reviewing and refining themes; Defining and naming themes; Producing the final analytical report.

To enhance analytical rigor, coding was conducted independently by two researchers. Discrepancies were discussed until consensus was achieved. The identified themes were then compared with existing theoretical frameworks, including TAM, UTAUT, and Diffusion of Innovation Theory, to strengthen interpretation and theoretical contribution.

Trustworthiness

The trustworthiness of the findings was ensured through several strategies. First, data triangulation was achieved by involving both lecturers and students as participants. Second, member checking was conducted by sharing interview summaries with selected participants to verify the accuracy of interpretations. Third, peer debriefing was performed with educational technology experts to review coding consistency and thematic development. Finally, an audit trail documenting all research procedures, coding decisions, and analytical processes was maintained to ensure transparency and dependability.

Ethical Considerations

Prior to data collection, all participants received information regarding the objectives of the study and provided informed consent. Participation was voluntary, and confidentiality was maintained by anonymizing all participant identities during data analysis and reporting.

FINDINGS

Analysis of interview data from lecturers and students revealed seven major themes influencing the adoption of learning technologies in higher education. These themes emerged from repeated coding and categorization of participants' experiences regarding the use of Learning Management Systems (LMS), video conferencing platforms, and other digital learning applications.

1. Digital Competence as a Primary Determinant of Technology Adoption

The findings indicate that digital competence is one of the most influential factors affecting learning technology adoption. Lecturers with stronger digital literacy skills demonstrated greater confidence in utilizing LMS features, online assessment tools, and virtual communication platforms. Similarly, students with prior experience using digital technologies adapted more easily to technology-enhanced learning environments.

Several participants reported that limited technological skills often created barriers to technology integration. One lecturer stated:

"At the beginning, I experienced difficulties operating several LMS features because I had never received formal training. After participating in workshops, I became more confident in using the system."

These findings suggest that digital competence significantly affects users' readiness and willingness to adopt learning technologies.

2. Institutional Support and Policy Facilitate Technology Adoption

Interview data revealed that institutional support plays a crucial role in encouraging technology adoption. Participants emphasized the importance of leadership commitment, institutional policies, training programs, and the provision of infrastructure.

Lecturers reported that clear institutional regulations regarding LMS utilization reduced uncertainty and increased consistency in technology use across courses. Students also perceived institutional support as essential for ensuring the continuity of digital learning practices.

One participant explained:

"The university provides regular training and technical assistance, which motivates lecturers to continue using digital learning platforms."

This finding indicates that technology adoption is not solely an individual decision but is strongly influenced by organizational commitment and policy support.

3. Perceived Ease of Use and Usefulness Encourage Adoption

Both lecturers and students emphasized that technology must be easy to use and provide clear benefits for learning activities. Participants reported that user-friendly platforms increased their willingness to utilize learning technologies regularly.

Several students indicated that complicated systems reduced motivation and limited technology utilization. Conversely, technologies that simplified communication, assignment submission, and access to learning resources were viewed positively.

The findings demonstrate that perceived ease of use and perceived usefulness remain important considerations in technology adoption decisions.

4. Infrastructure Availability Supports Successful Implementation

The availability of reliable infrastructure emerged as another important theme. Participants frequently mentioned internet connectivity, hardware availability, and platform accessibility as critical requirements for successful technology integration.

Several respondents reported experiencing disruptions due to unstable internet connections, particularly during synchronous online learning sessions.

One student noted:

"When the internet connection is unstable, it becomes difficult to follow lectures and participate in discussions."

These findings indicate that technological infrastructure remains a fundamental prerequisite for the effective adoption of learning technology.

5. Quality of Digital Learning Content Influences User Engagement

Students consistently highlighted the importance of interactive and relevant digital learning content. Participants explained that learning materials incorporating multimedia elements, videos, visual presentations, and interactive activities were more engaging than conventional text-based resources.

Lecturers also acknowledged the need to redesign learning materials to suit digital environments. According to participants, high-quality content increased student participation and motivation.

This finding suggests that successful technology adoption depends not only on technological platforms but also on the quality of learning content delivered through those platforms.

6. Technical Support Strengthens User Confidence

Technical support emerged as an important factor affecting technology adoption. Participants reported that responsive assistance from IT personnel reduced frustration when encountering technical difficulties.

Common issues reported by participants included login failures, platform errors, and connectivity problems. The availability of technical assistance enabled users to resolve these problems more efficiently and continue using the technology.

Consequently, technical support contributes significantly to users' confidence and sustained engagement with digital learning systems.

7. Motivation and Learning Habits Shape Technology Adoption

The final theme relates to users' motivation and learning habits. Participants who regularly used technology in their daily activities demonstrated greater adaptability to digital learning environments.

Students described technology as an integral part of their academic activities, while lecturers who embraced innovation were more likely to experiment with new digital teaching approaches.

The findings indicate that intrinsic motivation and prior experience with technology positively influence technology adoption for learning.

Overall, the study identified seven interconnected factors influencing learning technology adoption in higher education: (1) digital competence, (2) institutional support and policy, (3) perceived ease of use and usefulness, (4) infrastructure availability, (5) digital content quality, (6) technical support, and (7) motivation and learning habits. These findings demonstrate that technology adoption is shaped by the interaction of individual, institutional, and technological factors rather than by technological resources alone.

DISCUSSION

The findings demonstrate that learning technology adoption in higher education is influenced by the interaction of individual, institutional, and technological factors. The interview results indicate that successful technology integration is determined not only by the availability of digital platforms but also by users' readiness, institutional commitment, and supportive learning environments. These findings provide empirical evidence that technology adoption is a multidimensional process requiring collaboration among lecturers, students, administrators, and technical support units.

1. Users' Digital Competence

The findings reveal that digital competence is a fundamental factor influencing the adoption of learning technologies. Lecturers and students with adequate digital skills showed greater confidence in utilizing Learning Management Systems (LMS), video conferencing applications, and other digital learning tools. Conversely, participants with limited technological skills experienced difficulties adapting to digital learning environments, which often reduced their willingness to use technology effectively.

This finding suggests that digital competence serves as an enabling factor shaping users' readiness to engage with educational technologies. Mastering information and communication technology is the primary foundation for integrating tools such as Learning Management Systems (LMS), video conferencing applications, and other digital platforms into learning practices (Kualitas et al., 2023). This finding aligns with the Technology Acceptance Model (TAM), which emphasizes that users' capabilities influence perceived ease of use and perceived usefulness (Azkiya, 2023). Lecturers who are comfortable with technology tend to be more willing to implement learning innovations, while students with higher levels of digital literacy are generally more adaptive to technology-based learning environments (Ilmiah & Pendidikan, 2023).

The finding implies that higher education institutions need to continuously strengthen digital literacy programs and professional development initiatives to improve users' technological readiness.

2. Management Support and Institutional Policy

The study found that institutional support significantly influences the adoption of learning technologies. Participants highlighted the importance of leadership commitment, training opportunities, infrastructure provision, and clear institutional regulations for implementing digital learning. These forms of support create an environment conducive to lecturers and students using technology more consistently.

This finding indicates that technology adoption is not merely an individual decision but also an organizational process shaped by institutional policies and support systems. Institutional support and policies implemented by universities are therefore critical determinants of successful technology adoption (Munir & Zumrotus, n.d.). The provision of infrastructure, continuous training, and supportive policies strengthens institutional readiness for digital transformation (J. J. Teknologi, 2025). This finding is consistent with the UTAUT framework, which highlights facilitating conditions as important predictors of technology use behavior. Consequently, institutional strategies should encompass infrastructure development, human resource capacity building, and visionary policy support (Shobri, 2025).

3. Perceived Ease of Use and Perceived Usefulness

Interview data revealed that users are more likely to adopt technology when it is perceived as easy to use and beneficial for learning activities. Participants consistently reported that complex systems reduce motivation and create resistance, whereas user-friendly platforms encourage continued use.

These findings confirm that user perceptions remain a central factor in determining technology adoption behavior. When digital systems are perceived as difficult to operate, ineffective, or unable to provide added value, users tend to avoid utilizing them (Anthonio et al., 2024). This finding reinforces the Technology Acceptance Model, which states that intention to use technology is strongly influenced by perceived ease of use and perceived usefulness. In the context of higher education, technologies that simplify communication, assessment, and access to learning materials are more likely to be accepted and integrated into learning practices.

4. Availability of Adequate Infrastructure

The findings further indicate that the availability of infrastructure remains a fundamental requirement for successful technology adoption. Participants frequently emphasized the importance of stable internet connectivity, adequate hardware, and accessible digital platforms. Several respondents reported that technical disruptions and poor internet quality negatively affected their learning experiences.

These findings suggest that infrastructure serves as the operational foundation for technology integration. Reliable and evenly distributed infrastructure is therefore essential to support the successful implementation of digital learning (Inovasi & Ips, 2025). This includes internet access, hardware availability, and responsive technical support systems (Miftakhudin et al., 2025). Consistent with previous studies, infrastructure disparities remain a major barrier to digital transformation (B. Teknologi, 2025). The findings also support reports indicating that digital infrastructure gaps continue to challenge the implementation of educational technology in developing countries (Fatah et al., 2025).

5. Quality and Interactivity of Learning Materials

The findings show that students place considerable importance on the quality of digital learning content. Interactive, relevant, and well-structured learning materials were perceived to increase engagement, motivation, and understanding. In contrast, static and poorly designed content often reduced students' interest in participating in digital learning activities.

This finding highlights that technology alone cannot guarantee effective learning outcomes. The quality of learning content remains a decisive factor in determining the success of technology-supported learning. Previous studies similarly suggest that well-structured, relevant, and interactive learning materials enhance motivation and effectiveness in learning (Selfiana et al., 2025). This finding is also consistent with instructional design principles that emphasize integrating pedagogical, aesthetic, and interactive elements to create meaningful learning experiences (Ritonga, 2025). Therefore, institutions should prioritize not only technology procurement but also the development of high-quality digital learning resources.

6. Technical Support and Responsiveness

The study identified technical support as an important factor affecting users' confidence in learning technologies. Participants explained that timely assistance from IT personnel helped them overcome technical difficulties and continue using digital platforms without significant interruptions.

These findings indicate that technical support contributes to the sustainability of technology adoption by reducing user frustration and uncertainty. Technical issues such as login failures, access difficulties, and system disruptions can negatively affect user motivation (Isma et al., 2023). Therefore, support mechanisms, including helpdesks, technical teams, and user guidance services, are crucial for providing immediate solutions (Djafar et al., 2025). Consistent with previous studies, technical support enhances user trust and represents an integral component of successful learning technology implementation (Dan & Era, 2024).

7. Motivation and Individual Learning Habits

The findings reveal that motivation and learning habits influence how quickly users adapt to technology-supported learning environments. Participants who regularly used technology in their daily activities showed greater readiness to embrace digital learning innovations compared to those with limited exposure.

This finding demonstrates the importance of intrinsic factors in shaping technology adoption behavior. Internal motivation, psychological readiness, and adaptive learning habits contribute significantly to users' willingness to engage with digital learning systems (Kognitif & Diri, 2024). Students and lecturers who are accustomed to using technology tend to demonstrate greater openness to innovation (Bangsa et al., 2022). This finding is consistent with Rogers' Diffusion of Innovation Theory, which emphasizes that individual characteristics and openness to innovation influence the speed and success of technology adoption within organizations and social systems (Susanti et al., 2025).

Overall, the findings indicate that learning technology adoption in higher education is shaped by a combination of digital competence, institutional support, user perceptions, infrastructure readiness, learning content quality, technical support, and individual motivation. These factors interact dynamically and collectively determine the success of technology integration. Consequently, higher education institutions need to adopt a holistic strategy that simultaneously addresses technological, organizational, and human dimensions to achieve sustainable digital transformation.

CONCLUSION

This study demonstrates that the adoption of learning technologies in higher education is a multidimensional process shaped by the interplay among individual, institutional, and technological factors. Based on interviews with lecturers and students, seven key determinants of successful

technology adoption were identified, namely digital competence, institutional support and policy, perceived ease of use and usefulness, infrastructure availability, quality of digital learning content, technical support, and individual motivation and learning habits.

The findings indicate that technology adoption is not solely determined by the availability of digital platforms or technological infrastructure. Rather, successful implementation depends on user readiness, institutional leadership commitment, and a supportive learning ecosystem. Among these factors, digital competence and institutional support emerged as the most critical enablers, as they influence users' confidence, willingness, and consistency in using learning technologies.

This study contributes to the understanding of learning technology adoption by providing empirical evidence that the adoption process is shaped by the dynamic interaction between human, organizational, and technological dimensions. The findings highlight the importance of adopting a holistic approach to digital transformation in higher education, where technological investment should be accompanied by capacity-building programs, supportive policies, high-quality digital content, and responsive technical assistance.

In practice, higher education institutions should strengthen digital literacy programs for lecturers and students, improve technological infrastructure, provide continuous professional development opportunities, and establish institutional policies that encourage the sustainable integration of technology. Future research may expand the scope of investigation by involving multiple higher education institutions and employing mixed-method or quantitative approaches to validate and generalize the findings across different educational contexts.

REFERENCES

Adien, R., Amjad, H., Sukirman, Marlina, L., & Febriyanti. (2025). Transformasi Pendidikan Berkualitas: Faktor Pendukung Dan Strategi Peningkatan Mutu. *Irfani: Jurnal Pendidikan Islam*, *21*(1), 75–97. https://journal.iaingorontalo.ac.id/index.php/ir/article/view/2149

Ambar, S., Ihsan, M., Ramadhani, A., & Nazuar, M. (2024). Team collaboration as code of ethics: Implementation in educational technology career prospects. *Hipkin Journal of Educational Research*, *1*(1), 113–126. https://doi.org/10.64014/hipkin-jer.v1i1.2

Ananda Roro Wulandari, Afninda Ainun Arvi, Mohammad Irfandi Iqbal, Fatrining Tyas, Indra Kurniawan, & Mochammad Isa Anshori. (2023). Digital Hr : Digital Transformation In Increasing Productivity In The Work Environment. *Jurnal Publikasi Ilmu Manajemen*, *2*(4), 29–42. https://doi.org/10.55606/jupiman.v2i4.2729

Andry, J. F., Lee, F. S., Purnomo, Y., Christianto, K., Mulyo, J. R., & Putra, R. A. (2024). Pemanfaatan Teknologi Informasi Pada Sekolah Menengah Atas Di Belinyu. *Jurnal AbdiMas Nusa Mandiri*, *6*(2), 135–143. https://doi.org/10.33480/abdimas.v6i2.5589

Anthonio, L., Pangaribuan, E. S., & Ongko, F. (2024). *Resistensi Dosen Terhadap Perkembangan Teknologi Digital dalam Pembelajaran di Era Pendidikan Modern*. *6*.

April-september, N. N. E., Indria, L., & Hakim, M. F. (2025). *Analisis Ketergantungan Mahasiswa Universitas Merangin terhadap ChatGPT dengan Machine Learning*. *7924*(September), 35–41.

Ardha Zahro Nareswari, & Hafidz. (2025). Integrasi Teknologi Informasi Dalam Kurikulum Pendidikan Agama Islam di Indonesia; Pendekatan Teori Difusi Inovasi M.Rogers. *Jurnal IHSAN Jurnal Pendidikan Islam*, *3*(1), 129–137. https://doi.org/10.61104/ihsan.v3i1.437

Ariyanto, Z. R., Sari, N. P., Nurhidayah, O., Hikmahwati, R., Hayat, S., & Sulistyono, Y. (2023). Kajian Fenomena Kesenjangan Generasi dalam Konteks Kehidupan Kampus menurut Perspektif Ilmu Komunikasi. *Jurnal Ilmiah Ilmu Sosial*, *9*(2), 193–208. https://doi.org/10.23887/jiis.v9i2.70980

Aulia Fanani, B. (2025). Kesenjangan Infrastruktur Pendidikan di Daerah Terpencil: Studi Kasus di SDN 4 Gombengsari Kalipuro. *Al-Amin: Jurnal Ilmu Pendidikan Dan Sosial Humaniora*, *3*(1), 63–78. https://doi.org/10.53398/alamin.v3i1.433

Azahra, A. D., Alayfia, F., Oktaviani, H. A. E., Amanda, N. T., Azzahra, R., Kasfia, S. R., Zahra, T. N., & Imron, A. (2023). Penolakan Terhadap Perubahan Dan Perilaku Dalam Organisasi. *Jurnal Visionida*, *9*(2), 218–232. https://doi.org/10.30997/jvs.v9i2.11048

Azkiya, S. R. (2023). *Analisis Penerimaan Aplikasi iKalsel Menggunakan Teori Technology Acceptance Model (TAM). 14*(1), 21–31. https://doi.org/10.20885/unilib.Vol14.iss1.art3

Bangsa, U. B., Dasar, G. S., & Bangsa, U. B. (2022). *Implementasi Literasi Digital Di Kalangan*. *9*(3), 942–950.

Berdiferensiasi, P. (2023). *Abnauna (Vol. 2) (No. 2) Thn 2023 DOI: - https://jurnal.iaibafa.ac.id/index.php/Abnauna p-ISSBN - e-ISSBN*. *2*(2), 53–65.

Br.Sinulingga, S. P., & Nasution, M. I. P. (2024). Analysis of Challenges and Opportunities in the Development of Information and Communication Technology in the Digital Era: Future Perspective. *Jurnal Ilmiah Ekonomi Dan Manajemen*, *2*(12), 25–35. https://doi.org/10.61722/jiem.v2i12.3018

D, G. M., Hambali, M. A., Abdulganiyu, O. H., & Lawrence, E. (2022). Enhance Facial Biometric Template Security using Advance Encryption Standard with Least Significant Bit. *Journal of Computer Science and Engineering (JCSE)*, *3*(2), 60–70. https://doi.org/10.36596/jcse.v3i2.527

Dan, P., & Era, P. (2024). *Mengintegrasikan Teknologi Untuk Peningkatan*. *08*, 127–140.

Darmawan, I. (2025). Sinergi Teknologi Informasi Dan Kewirausahaan: Menyongsong Era Inovasi Yang Berkelanjutan Sebagai Strategi Untuk Penciptaan Nilai Tambah. *Jurnal Bisnis Dan Manajemen*, *21*(1), 27–40. https://doi.org/10.23960/jbm.v21i1.3713

Diva Dhiyaul Auliyah, Sevia Rahayu Nur Habibah, Rosaliana, & Faelasup, F. (2024). Analisis Pengaruh Rencana Pelaksanaan Pembelajaran Terhadap Kualitas Pembelajaran. *Jurnal Ilmu Pendidikan & Sosial (Sinova)*, *2*(3), 203–216. https://doi.org/10.71382/sinova.v2i3.150

Djafar, C., Mania, S., Nur, M., & Rasyid, A. (2025). *Optimalisasi Evaluasi Program Sistem Informasi Akademik Berbasis Model Responsive-Countenance Di Perguruan Tinggi*. *25*, 355–371. https://doi.org/10.35965/eco.v25i2.6711

Entriza, A. N., & Puspitasari, F. F. (2025). Studi Literatur: Integrasi Teknologi Informasi Dalam Pelatihan Guru Sebagai Upaya Meningkatkan Kualitas Pembelajaran. *Al-Idarah : Jurnal Kependidikan Islam*, *15*(1), 62–73. https://ejournal.radenintan.ac.id/index.php/idaroh/article/view/25912

Faqih Rifaldy, F. R., M N Alfi Syahrin, M. N. A. S., M Irsan Prayoga, M. I. P., Fajar Syakbani, F. S., & Mhd. Furqan, M. F. (2025). Visualisasi Dan Statistik Deskriptif Beserta Analisis Dataset Status Gizi Balita Tahun 2022 Per Provinsi Di Indonesia Menggunakan Pemrograman R. *Jurnal Informatika Dan Teknik Elektro Terapan*, *13*(3). https://doi.org/10.23960/jitet.v13i3.7025

Fatah, U. S., Sultan, U., & Syafiuddin, M. (2025). *Meningkatkan Aksesibilitas Pendidikan Melalui Teknologi : Tantangan Dan Solusi Di Negara Berkembang*. *11*, 224–231.

Fatchudin, A. (2025). Peran Pendidikan Profesi Guru dalam Meningkatkan Kualitas Pendidikan. *Pendidikan Indonesia*, *2*(2), 214–226.

Fatimatuzzahra, & Hidayat, A. (2024). Meningkatkan Aktivitas, Berpikir Kritis Dan Hasil Belajar Pada Muatan PPKn Menggunakan Model Pintu Pada Kelas V Sdn Manarap Lama 1. *Didaktik : Jurnal Ilmiah PGSD FKIP Universitas Mandiri*, *10*(04), 212–222.

Fitiani, A., Watawalaini, A., Ismail, F., Astuti, M., Studi, P., Pendidikan, M., Islam, A., Raden, U., & Palembang, F. (2025). Conceptual Study of Innovation, Diffusion, and Dissemination Processes in the Global Education World Kajian Konseptual Proses Inovasi, Difusi, dan

Diseminasi dalam Dunia Pendidikan Global. *JKIP : Jurnal Kajian Ilmu Pendidikan*, *6*(2), 409–415. http://journal.al-matani.com/index.php/jkip/index

Habibani, R. A., & Frinaldi, A. (2025). Inovasi Budaya Organisasi Publik Dalam Era Digital: Peluang Dan Strategi Implementasi. *SOCIAL : Jurnal Inovasi Pendidikan IPS*, *5*(2), 407–421. https://doi.org/10.51878/social.v5i2.5365

Haki, U., Prahastiwi, E. D., & Selatan, U. T. (2024). Strategi Pengumpulan dan Analisis Data dalam Penelitian Kualitatif Pendidikan. *Jurnal Inovasi Dan Teknologi Pendidikan*, *3*(1), 1–19. https://doi.org/10.46306/jurinotep.v3i1.67

Handayani, K. (2024). Strategi Adaptif untuk Mempertahankan Tenaga Kerja di Era Society 5.0: Menghadapi Tantangan Cobot. *Jurnal Penelitian Multidisiplin Bangsa*, *1*(3), 185–200. https://doi.org/10.59837/jpnmb.v1i3.50

Handrian, E., & Novita, M. (2025). Adopsi Inovasi Kebijakan Digital yang Inklusif: Studi Kasus Aplikasi SIPINTAR PEDULI di Kota Pekanbaru. *PUBLIKA : Jurnal Ilmu Administrasi Publik*, *11*(1), 105–119. https://doi.org/10.25299/jiap.2025.21882

Hapzi Ali, Hamdan, H., & M. Rizky Mahaputra. (2022). Faktor Eksternal Perceived Ease of Use dan Perceived Usefulness pada Aplikasi Belanja Online: Adopsi Technology Accepted Model. *Jurnal Ilmu Multidisplin*, *1*(3), 587–604. https://doi.org/10.38035/jim.v1i3.75

Heriyanto, & Handri Santoso. (2025). Analisa Kesiapan Sekolah dalam Pemanfaatan Teknologi untuk Pembelajaran. *Didaktika: Jurnal Kependidikan*, *14*(1 Februari), 223–232. https://doi.org/10.58230/27454312.1981

Hufron, M. (2023). *Muaddib*. *2*(1).

Humiati, H., & Budiarti, D. (2020). Peran Perguruan Tinggi Dalam Meningkatkan Sumber Daya Manusia. *JMM - Jurnal Masyarakat Merdeka*, *3*(1), 13–24. https://doi.org/10.51213/jmm.v3i1.46

I l m i n a. (2025). *1*(1), 35–43.

Ilmiah, J., & Pendidikan, W. (2023). *Analisis Pengaruh Literasi Digital terhadap Kemandirian Belajar Mahasiswa dalam Era Internet Dedy Aswan Universitas Negeri Makassar*. *9*(20), 949–955.

Indriati, P., Salim, M. F. S., Sihite, M., & Zulkifli. (2023). Kinerja Perguruan Tinggi Dalam Perspektif Kinerja Layanan, Strategi Pemanfataan Teknologi Dan Kompetensi Sumberdaya Manusia. *JIMP : Jurnal Ilmiah Manajemen Pancasila*, *3*(1), 12–30. https://doi.org/10.35814/jimp.v3i1.4088

Inovasi, J., & Ips, P. (2025). *1,2,3,4*. *5*(1), 258–265.

Irzeq Rozeqqi. (2024). Integrasi Teknologi Dalam Kurikulum Pendidikan Ekonomi. *Jurnal Kajian Pendidikan*, *1*(1), 22–31.

Isdianto, A., Indunissy, N. Al, & Fitrianti, N. (2025). *Peran Tafakur Islam Dalam Mengatasi Kecemasan: Integrasi Spiritualitas Qur'ani dan Psikologi Modern The Role Of Islamic Tafakur In Overcoming Anxiety: Integrating Qur'anic Spirituality and Modern*. *1*(2), 227–242.

Isma, A., Isma, A., Isma, A., Isma, A., Makassar, U. N., Barat, U. S., Teknik, F., & Makassar, U. N. (2023). *Peta Permasalahan Pendidikan Abad 21 di Indonesia*. *01*(September), 11–28.

Ismaya, P., Aisyah, A., Sibuea, J. M., & Marini, A. (2024). Mengoptimalkan Manajemen Pendidikan SD yang Efektif dengan Teknologi dan Standar Kompetensi Guru. *Jurnal Pendidikan Guru Sekolah Dasar*, *1*(3), 11. https://doi.org/10.47134/pgsd.v1i3.530

Izzati, I. (2021). Pemanfaatan Google Classroom sebagai Media Pembelajaran di Masa Pandemi di MI Unwanul Falah. *Yasin*, *1*(1), 45–53. https://doi.org/10.58578/yasin.v1i1.4

Kahfi, M., & Ulfah, M. (2024). Perencanaan Media Pembelajaran Di Smk Sandikta Bekasi. *Journal Education and Government Wiyata*, *2*(1), 78–92. https://doi.org/10.71128/e-gov.v2i1.73

Kamil, I., & Susyanti, J. (2024). Penerapan Business Process Management Dan Knowledge Management Dalam Meningkatkan Kapabilitas Organisasi. *Jurnal Ilmu Ekonomi Dan Ekonomi Islam*, *1*(1), 18–23. https://journal.salahuddinal-ayyubi.com/index.php/Alji/index

Kekuasaan, I., Pembelajaran, D. A. N., Membentuk, D., & Organisasi, S. (2025). *Interaksi kekuasaan, budaya, dan pembelajaran dalam membentuk strategi organisasi*. *4*(8), 2377–2388.

Kholishna Fatihatur Rohmah, Muhammad Rifqi Ilhami, Amin Komsiatun, Muhammad Agil Aditya Atazki Wede, Syifa Mardhiyah, Rachmat Fauzi, & Fania Mutiara Savitri. (2024). Dinamika Kemajuan Teknologi Dalam Pengembangan Sumber Daya Manusia Di Ranah Pendidikan. *Jotika Journal In Management and Entrepreneurship*, *3*(2), 56–62. https://doi.org/10.56445/jme.v3i2.118

Kognitif, G., & Diri, R. (2024). *Kunci Sukses Pembelajaran Efektif : Tinjauan Sistematic Literature Review Memahami Hubungan*. *2*, 73–79.

Kualitas, P., Kasus, P., & Al, M. (2023). *Pembelajaran Berbasis E-Learning di Madrasah Dalam*. *21*(3), 275–289.

Lubis, Z., Zahra, S., Lubis, K. A., Saragih, R. M., Syaputri, W., Khairani, U., & Hasibuan, R. H. (2024). Peran Literasi Teknologi Dalam Meningkatkan Efektivitas Manajemen. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah*, *9*(1), 276–289. https://www.doi.org/10.30651/jms.v9i1.21480

M Herry Khusni, & Wahyu Indah Susanti. (2024). Difusi Dan Inovasi Dalam Pembelajaran Pada Sekolah Menengah. *Edu Research*, *5*(1), 10–22. https://doi.org/10.47827/jer.v5i1.151

Ma, A.-. (2025). *Al- Ma'lumat*. *3*, 58–81.

Made, N., Dianis, F., & Arlinayanti, K. D. (2024). *Perubahan Paradigma Pendidikan Melalui Pemanfaatan Teknologi di Era Global*. *4*, 50–63.

Maharani, A. F., Fawaz, D. M., Larissa B. Y, R., Kusumasari, I. R., & Nugroho, R. H. (2024). Analisis Model Pengambilan Keputusan Pendekatan Rasional dan Normatif. *Jurnal Akuntansi, Manajemen, Dan Perencanaan Kebijakan*, *2*(2), 8. https://doi.org/10.47134/jampk.v2i2.534

Malay, I., Tania, C., & Ardiansyah, F. R. (2025). Dampak Penerapan Teknologi dalam Meningkatkan Efektivitas Pembelajaran di Lingkungan Pendidikan Sekolah dan Universitas The Impact of Technology Implementation in Enhancing Learning Effectiveness in School and University Education Environments. *Edu Society: Jurnal Pendidikan, Ilmu Sosial, Dan Pengabdian Kepada Masyarakat*, *5*(1), 14–29. https://jurnal.permapendis-sumut.org/index.php/edusociety

Melanie Surya, I. A., & Moramowati, N. L. A. (2023). Efektivitas Penggunaan Teknologi dalam Pendidikan Terhadap Kinerja Akademik. *Metta : Jurnal Ilmu Multidisiplin*, *3*(4), 531–545. https://doi.org/10.37329/metta.v3i4.2740

Miftakhudin, M., Farkhan, M., & Izaki, M. (2025). *Optimalisasi Pembelajaran Jarak Jauh pada Institusi Pendidikan di Indonesia melalui Platform E-Learning Berbasis Cloud Computing*. *8*(2), 37–42.

Muhadi, Jarir, Khairina, Rajuna, & Prasetyo, E. (2025). *Evaluasi Perencanaan Desain Pembelajaran , Pelaksanaan Proses*. *5*(2), 159.

Muhammad Chaidir, Sari Andini, Ulfa Hayana Sari Harahap, & Abdul Fattah Nasution. (2024). Peran dan Proses Berfikir Sistem dalam Konteks Pendidikan. *Student Research Journal*, *2*(6), 84–92. https://doi.org/10.55606/srj-yappi.v2i6.1629

Munir, M., & Zumrotus, I. (n.d.). *Manajemen Pendidikan Islam di Era Digital : Transformasi dan Tantangan Implementasi Teknologi Pendidikan*. 1–13.

Nabila, J. R., Shofa, Sari, W. V. N., & Devi, A. C. (2023). Senyawa Morfin: Mudarat Dan Manfaat Dalam Perspektif Sains Dan Islam. *E-Jurnal EP Unud, 3 [10] : 467-475 ISSN: 2303-0178*, *5*, 86–88. https://ejournal.uin-suka.ac.id/saintek/kiiis/issue/view/287/2469

Najwa, A. (2025). *Pengaruh Psikologis Mahasiswa Terhadap Penggunaan AI : Scoping Review*. *3*, 547–555.

Nashrullah, M., Syaiful Rahman, Abdul Majid, Nunuk Hariyati, & Budiyanto. (2025). Transformasi Digital dalam Pendidikan Indonesia: Analisis Kebijakan dan Implikasinya terhadap Kualitas Pembelajaran. *Mudir : Jurnal Manajemen Pendidikan*, *7*(1), 52–59. https://doi.org/10.55352/mudir.v7i1.1290

No, V., Wahyudi, M., Purnama, R. A., Atrinawati, L. H., & Gunawan, D. (2024). *Jurnal MENTARI : Manajemen Pendidikan dan Teknologi Informasi Mengeksplorasi Dampak Teknologi Pembelajaran Aktif di Institusi Pendidikan Kejuruan Menengah*. *2*(2), 142–153.

Nufuz, D. A., Mahendra, M. H., Faqih, A., & Setianingrum, N. (2025). Strategi Efektif Dalam Manajemen Perubahan: Membangun Ketahanan Organisasi Di Era Digital Devi. *Jurnal Penelitian Nusantara*, *1*, 540–547. https://padangjurnal.web.id/index.php/menulis/article/view/388/378

Nurhayati, D. (2024). Analisis Penerimaan dan Penggunaan Teknologi UTAUT3 dalam Layanan Musik Digital. *MALCOM: Indonesian Journal of Machine Learning and Computer Science*, *5*(1), 175–189. https://doi.org/10.57152/malcom.v5i1.1650

Nurlita, M., Jupri, A., & Priatna, B. A. (2025). Analisis pembelajaran matematika pada materi peluang dengan pendekatan TPACK dalam perspektif teori belajar konstruktivisme. *JPMI (Jurnal Pembelajaran Matematika Inovatif)*, *8*(3), 367–382. https://doi.org/10.22460/jpmi.v8i3.26668

Nurmalasari, R., & Elmunsyah, H. (2024). *Peran Aplikasi Elemen Mesin sebagai Mobile Learning Interaktif untuk Optimasi Pembelajaran Digital pada Pendidikan Vokasi*. *13*(2), 1583–1594.

Nurul Melani Haifa, Indah Nabilla, Virda Rahmatika, Rully Hidayatullah, & Harmonedi Harmonedi. (2025). Identifikasi Variabel Penelitian, Jenis Sumber Data dalam Penelitian Pendidikan. *Dinamika Pembelajaran : Jurnal Pendidikan Dan Bahasa*, *2*(2), 256–270. https://doi.org/10.62383/dilan.v2i2.1563

Oktarina, W., Desmita, V., Mukharromah, F., Hanoselina, Y., & Syafril, R. (2025). Kepemimpinan Inovatif dalam Dunia Pendidikan , Analisis Peran Nadiem Makarim dalam Transformasi Pendidikan Indonesia. *Jurnal Ilmu Manajemen Dan Pendidikan*, *02*(01), 188–198.

Pengabdian, J., Global, M., & Timur, L. (2025). *DEVOTE : 4*(2), 183–190.

Permana, B. S., Hazizah, L. A., & Herlambang, Y. T. (2024). Teknologi Pendidikan: Efektivitas Penggunaan Media Pembelajaran Berbasis Teknologi Di Era Digitalisasi. *Khatulistiwa: Jurnal Pendidikan Dan Sosial Humaniora*, *4*(1), 19–28.

Pranata, J. P., Ismail, F., & Astuti, M. (2025). *JKIP : Jurnal Kajian Ilmu Pendidikan Analysis of Characteristics of Educational Innovation , Educational Strategy and Educational Innovation Strategy Analisis Karakteristik Inovasi Pendidikan , Strategi Pendidikan dan Strategi Inovasi Pendidikan*. *6*(2), 545–553.

Puspita, D. P., & Dewi, D. E. C. (2024). Desain Pengembangan Kurikulum Pendidikan Agama Islam Dalam Pendidikan Karakter Di Smp Negeri 13 Kaur. *JPT: Jurnal Pendidikan Tematik*, *5*(1), 1–9.

Putri, L. J., Salamah, U., & Husnusyifa, A. (2025). *Pengembangan Soft Skills Komunikasi Interpersonal Mahasiswa dalam Program Kampus Mengajar : Analisis Teori Difusi Inovasi*. *4*(3), 718–733. https://doi.org/10.54259/mukasi.v4i3.4988

Radi, M. R. (2024). Keuntungan Dan Kendala Pada Strategi Penggunaan Kembali Dalam Proses Pengembangan Perangkat Lunak. *Jurnal Informatika Dan Sistem Informasi*, *10*(2), 101–108. https://doi.org/10.37715/juisi.v10i2.4895

Rafsanjani, A., Amelia, A., Maulidayani, M., Anggraini, A., & Tanjung, L. A. (2024). Pendekatan Sistem dalam Meningkatkan Pendidikan untuk Membangun Mutu Kualitas Pendidikan di SMP Swasta Pahlawan Nasional. *Jurnal Bintang Pendidikan Indonesia* , *2*(1), 168–181.

Rahma, A., & Wantini. (2024). Tingkah laku manusia dalam lingkungan sosial. *Jurnal Global Ilmiah*, *1*(10), 732–738.

Rahman, A., Herman, Asriadi, & Mardi. (2025). Strategi Transformasi Pendidikan Dalam Pengembangan Sumber Daya Manusia (SDM) Unggul Di Perguruan Tinggi Kabupaten Bone. *Journal of Indonesian Scholars for Social Research*, *5*(1), 97–106. https://creativecommons.org/licenses/by/4.0/

Ratnawati, R., & Lestari, G. D. (2025). Integrasi Teknologi Dalam Difusi Inovasi Pendidikan: Pendekatan Kepemimpinan Kolaboratif Di Era Digital. *Consilium: Education and Counseling Journal*, *5*(1), 572. https://doi.org/10.36841/consilium.v5i1.5980

Rejeki, S. K. (2025). Persepsi Mahasiswa terhadap Implementasi Pembelajaran Berbasis Teknologi di Perguruan Tinggi. *Journal of Multidisciplinary Inquiry in Science Technology and Educational Research*, *2*(1), 1296–1303. https://doi.org/10.32672/mister.v2i1.2506

Resal, A., Rahman, S. A., & Rukayah, R. (2022). Pengaruh Lingkungan Pendidikan Terhadap Minat Belajar Siswa di Sekolah Dasar. *JPPSD: Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, *2*(1), 103. https://doi.org/10.26858/pjppsd.v2i1.30995

Ridwan Kurnia Rahim, & Aldri Frinaldi. (2023). Transformasi Budaya Di Sektor Publik Indonesia : Menuju Inovasi Dan Efesiensi. *Jurnal Manajemen, Ekonomi Dan Akutansi (JUMEA)*, *1*(2), 93–103. https://doi.org/10.69820/jumea.v1i2.89

Ritonga, S. (2025). *Desain Media Pembelajaran dalam Pendidikan*. *10*(2), 562–577.

Rodhiyah, M., Sulistyowati, R., Dewi, R. F., Maghfiroh, L., Arrasyid, & Fawwaz, A. (2024). Pengenalan Teknologi Komputer dan Pelatihan Fundamental Microsoft Word bagi Siswa SDN Sidobogem. *Jurnal Pengabdian Kepada Masyarakat Nusantara*, *6*(1), 1695–1700.

Romlah, L. S., Iskandar, I., Wahid, L., Ali, N., & Badrudin, B. (2024). Manajemen Mutu Pendidikan Islam dalam Upaya Meningkatkan Prestasi PTKIN. At-Tajdid: Jurnal Pendidikan dan Pemikiran Islam, 8(1), 213-227. *AT-TAJDID: Jurnal Pendidikan Dan Pemikiran Islam*, *8*(1), 214–227. https://ojs.ummetro.ac.id/index.php/attajdid/article/view/3341

Salimodo, D., Christofer S., T., & Lestari, A. (2023). Inovasi Dalam Manajemen Kurikulum: Pemanfatan Teknologi Dalam Meningkatkan Pembelajaran. *Al-Rabwah*, *17*(02), 87–97. https://doi.org/10.55799/jalr.v17i02.271

Sarina Devi, & Joy Nashar Utamajaya. (2025). Pengaruh Tingkat Adopsi Teknologi Digital dan Integrasi Sistem Informasi terhadap Kinerja Organisasi. *Jurnal Ilmiah Sains Teknologi Dan Informasi*, *3*(2), 36–46. https://doi.org/10.59024/jiti.v3i2.1166

Selfiana, D., Najah, S., Wulandari, S., & Rif, D. (2025). *Efektivitas Pembelajaran Online Terhadap Motivasi Belajar Mahasiswa*. *3*, 268–277.

Sesmiarni Z, Hoque ME, Susanto P, Islam MA and Hendrayati H (2024) Adoption of SPACE-learning management system in education era 4.0: an extended technology acceptance model with self-efficacy. Front. Educ. 9:1457188. doi: 10.3389/feduc.2024.1457188

Shobri, M. (2025). *Peran Kepala Madrasah sebagai Leader Visioner : Strategi Penguatan Mutu dan Integritas Lembaga Pendidikan Islam*. *3*(3), 191–210.

Sofiah, M. A., Sitiaimah, & Pratama, A. R. (2024). Manajemen Mutu Terpadu dalam Pendidikan: Kerangka Komprehensif untuk Meningkatkan Kinerja Institusi dan Hasil Siswa. *Didaktika: Jurnal Kependidikan*, *13*(001 Des), 993–1006. https://www.jurnaldidaktika.org/contents/article/view/1385

Sofwatillah, Risnita, Jailani, M. S., & Saksitha, D. A. (2024). Teknik Analisis Data Kuantitatif dan Kualitatif dalam Penelitian Ilmiah. *Journal Genta Mulia*, *15*(2), 79–91.

Solviana, M. D. (2020). Pemanfaatan Teknologi Pendidikan di Masa Pandemi Covid-19: Penggunaan Gamifikasi Daring di Universitas Muhammadiyah Pringsewu Lampung. *Al Jahiz: Journal of Biology Education Research*, *1*(1), 1–14. https://doi.org/10.32332/al-jahiz.v1i1.2082

Soraya, F., & Marzuki, I. (2024). Transformasi Model Evaluasi Pembelajaran Berbasis Teknologi Di Era Society 5.0. *Tadarus Tarbawy : Jurnal Kajian Islam Dan Pendidikan*, *6*(2), 167–179. https://doi.org/10.31000/jkip.v6i2.12925

Susanti, R., Dewi Maharani, S., & Anwar, Y. (2025). Penerapan Unsur-unsur Difusi Inovasi dalam Teknologi Pendidikan Berupa Virtual Lab. *JIIP (Jurnal Ilmiah Ilmu Pendidikan)*, *8*(5), 5272–5279. http://jiip.stkipyapisdompu.ac.id

Susanto, T. T. D., Lusiana, L., Trimiltin, R., & Runiasih, M. (2025). Penerapan Soft Systems Methodology (SSM) dalam Penyelesaian Masalah Kompleks di Lembaga Pendidikan. *Jurnal Manajemen Pendidikan*, *10*(2), 462–475.

Teknologi, B. (2025). *Strategi Manajemen Pendidikan di Era Digital : Optimalisasi*. *2*(4), 376–383. https://doi.org/10.59996/jurnalpelitanusantara.v2i4.698

Teknologi, J. J. (2025). *Pemanfaatan Teknologi Digital Dalam Manajemen Pendidikan Untuk Meningkatkan Kualitas Pembelajaran*. *2*(1), 19–24.

Wahyuni, M. S., Pratama, M. I., Abdal, N. M., Atmasani, D., & Makassar, U. N. (2024). Evaluasi Kemampuan Profesional Mahasiswa Calon Guru Informatika Melalui Praktik Pengalaman Lapangan. *INTEC Journal: Information Technology Education of Journal*, *3*(3), 105–112.

Walidin, W., Ali, Z., & Siregar, B. (2025). *Rekonseptualisasi Peran Guru dalam Inovasi Kurikulum Pendidikan Agama Islam di Era Kurikulum Merdeka*. *8*(2), 233–248. https://doi.org/10.32528/tarlim.v8i2.3726

Widagdo, T. B. (2025). Pandangan Konseptual Pembelajaran Mendalam Menuju "Transformasi Pendidikan. *Jurnal Cerdik: Jurnal Pendidikan Dan Pengajaran*, *4*(2), 51–75. https://doi.org/10.21776/ub.jcerdik.2024.005.02.05

Wiraguna, S. A. (2024). Metode Normatif dan Empiris dalam Penelitian Hukum: Studi Eksploratif di Indonesia. *Public Sphere: Jurnal Sosial Politik, Pemerintahan Dan Hukum*, *3*(3). https://doi.org/10.59818/jps.v3i3.1390

Yulita, H., & Hidajat, K. (2021). Pengaruh Adopsi Inovasi E-Learning terhadap Minat Belajar Mahasiswa Dimediasi Motivasi Belajar pada Era New Normal. *Journal of Business & Applied Management*, *14*(1), 027. https://doi.org/10.30813/jbam.v14i1.2709

Zai, L. F., Ndraha, A. B., Mendrofa, S. A., & Lahagu, P. (2023). Analisis Pemanfaatan Teknologi Informasi Terhadap Kinerja Pegawai Pada Kantor Kecamatan Lolofitu Moi. *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis Dan Inovasi Universitas Sam Ratulangi).*, *10*(3), 2348–2370. https://doi.org/10.35794/jmbi.v10i3.54208

Zamroh, Daulay, M. I., & Ediputra, K. (2024). Pengaruh Model Pengajaran Terarah Terhadap Pemahaman Matematik Dan Hasil Belajar Kognitif Matematika Siswa Kelas VI SDN 7 Citra Damai The Influence Of Directed Teaching Models On Mathematical Understanding And Cognitive Learning Outcomes Of Mathematics Fo. *Jiic: Jurnal Intelek Insan Cendikia*, 4455–4462.

Zulfikhar, R., Mustofa, M., Hamidah, E., Sapulete, H., Wilson Sitopu, J., & Nurmalia Sari, M. (2024). Dampak Integrasi Teknologi dalam Pembelajaran Terhadap Prestasi Akademis Mahasiswa Perguruan Tinggi. *Journal on Education*, *6*(4), 18381–18390. https://doi.org/10.31004/joe.v6i4.5787