

## TECHNOLOGY-BASED LEARNING INNOVATION TO IMPROVE THE QUALITY OF EDUCATION IN THE DIGITAL ERA

Annisa Mayasari<sup>1\*</sup>, Devi Sulaeman<sup>2</sup>, Opan Arifudin<sup>3</sup>,  
Belina Anggia Gustami<sup>4</sup>, Rizqy Nur Sholihat<sup>5</sup>

<sup>1</sup>STAI Sabili Bandung, Indonesia

<sup>2,3</sup>Institut Agama Islam Rakeyan Santan, Indonesia

<sup>4</sup>STIT At-Taqwa Bandung, Indonesia

<sup>5</sup>UIN Syarif Hidayatullah Jakarta, Indonesia

E-mail: [annisamayasari020@gmail.com](mailto:annisamayasari020@gmail.com)<sup>1\*</sup>, [devisulaeman@gmail.com](mailto:devisulaeman@gmail.com)<sup>2</sup>, [opan.arifudin@yahoo.com](mailto:opan.arifudin@yahoo.com)<sup>3</sup>,  
[belina.a.gustami@gmail.com](mailto:belina.a.gustami@gmail.com)<sup>4</sup>, [rizqynursholihat@uinjkt.ac.id](mailto:rizqynursholihat@uinjkt.ac.id)<sup>5</sup>

Received: 01/01/2026 | Revised: 20/01/2026 | Accepted: 10/02/2026 | Published: 23/02/2026

### Abstract

The use of technology in the learning process can increase student learning motivation, accelerate conceptual understanding, and encourage the creation of a more interactive and engaging learning environment. This study aims to understand and describe technology-based learning innovations implemented in Islamic senior high schools (madrasah aliyah) to improve the quality of education in the digital era. The methodology used was a qualitative case study approach, conducted in one of the Islamic senior high schools in an urban area. Data were collected through in-depth interviews, participant observation, and documentation during the implementation of technological innovations in learning. The results show that the application of technology, such as the use of online learning platforms, digital media, and interactive tools, can increase student learning motivation and the effectiveness of the learning process. However, the success of these innovations is also influenced by factors such as teacher readiness in integrating technology, available facilities, and support from madrasah management. These findings conclude that technology-based learning innovations have great potential to improve the quality of education in Islamic senior high schools, provided they are supported by adequate training and the development of relevant digital learning resources. This study contributes to the development of innovative models of technology-based learning that are adaptive and sustainable in the digital era.

**Keywords:** *Learning Innovation, Technology-Based, Education Quality, Digital Era.*

### INTRODUCTION

The background to this research is based on the rapid development of technology and the shifting paradigm of education in the current digital era. In recent decades, advances in information and communication technology (ICT) have significantly impacted various aspects of human life, including education. This digital transformation requires educational institutions, particularly Islamic high schools (madrasah aliyah), to adapt to meet the needs of students who are increasingly familiar with technology and information. Sucipto and Kustandi, as quoted by (Arifudin, 2025) explain that digital learning is a form of information technology applied in education through a virtual world, also known as e-learning. The term "digital learning" is more appropriately used to describe efforts to transform the learning process in schools or universities into a digital format facilitated by internet technology.

Empirical data shows that the use of technology in the learning process can increase student motivation, accelerate conceptual understanding, and encourage a more interactive and engaging learning environment. For example, a 2020 UNESCO report stated that technology integration in education can improve learning outcomes by up to 30% compared to conventional methods (Sudrajat, 2024). Furthermore, research by the Indonesian Ministry of Religious Affairs in 2021 showed that Islamic high schools (madrasah aliyah) implementing technology-based learning innovations experienced a 15-20% increase in student learning outcomes and were better able to accommodate the diversity of student needs (Supriatna, 2025).

In Indonesia, programs to equalize internet access and develop technology facilities in Islamic schools (madrasah) have shown positive trends. According to data from the Language Development and Fostering Agency of the Ministry of Education and Culture, approximately 70% of Islamic high schools (madrasah aliyah) in Indonesia will have adopted technology in their learning by 2022 (Kartika, 2025). However, the success rate of implementation and the quality of the innovations implemented vary. Some madrasahs can utilize technology optimally, while others face challenges such as inadequate teacher training, limited facilities, and a lack of quality digital learning resources. Furthermore, a 2022 survey by the Center for Data and Statistics on Education and Culture (PDSPK) revealed that approximately 45% of teachers in Islamic high schools (madrasah aliyah) lacked confidence in integrating technology into the learning process (Kartika, 2024). This situation highlights the need for technology-based learning innovations that focus not only on tools but also on developing teacher competencies and providing relevant and high-quality digital learning resources.

Globally, various countries have developed and widely implemented technology-based learning innovations. The United States, for example, has supported educational success at various levels through its 1:1 device program and integrated online learning platforms. In Southeast Asia, Singapore and Malaysia have innovated in the use of technology to improve education quality, including the development of digital curricula and technology-based teacher training. Based on a literature review and several previous studies, it has been widely found that integrating technology into learning can improve student motivation and learning outcomes at various levels of education. For example, research by (Andrivat, 2024) shows that the use of digital media and online platforms has a positive impact on the effectiveness of the learning process in public schools. Similarly, a study by (Romdoniyah, 2024) confirms that teacher training in technology mastery is a key factor in the successful implementation of technology-based learning innovations.

However, although numerous studies have addressed the successes and challenges of using technology in education, most of these studies are more general in nature and have not specifically examined the educational context of Islamic senior high schools (madrasah aliyah). Previous research has focused on general technological aspects without delving into implementation aspects, inhibiting factors, and innovation development strategies relevant to the characteristics and needs of madrasah aliyah. Furthermore, research examining the direct experiences of teachers and students in technology-based learning innovation processes in madrasahs is still limited. Furthermore, existing research has not comprehensively explored the success factors and barriers from the perspective of key stakeholders, such as teachers and principals, within the local context and educational culture of Islamic senior high schools. Therefore, this study seeks to fill this gap by conducting an in-depth case study of the experiences, challenges, and strategies used in implementing technology-based learning innovations in one Islamic senior high school, thereby providing more contextual and applicable insights for educational development in the digital era.

Based on this background, this research is crucial to explore and assess effective technology-based learning innovations in improving the quality of education in Islamic senior high schools (madrasah aliyah). This research is expected to contribute to the development of learning innovation models that are appropriate to the local context and able to address the challenges faced in adapting education to the digital era. Thus, implementing technology-based learning innovations in Islamic senior high schools (madrasah aliyah) is not only a necessity but also a significant opportunity to improve the overall quality of education. This aligns with the national education vision, which prioritizes strengthening student character and competency through innovative, relevant, and future-oriented learning.

## LITERATURE REVIEW

### Learning Innovation

Wina Sanjaya, quoted by (Kartika, 2023) defines learning innovation as a new idea, concept, or action in the curriculum and learning field that is considered new to solve educational problems. Danjaya, quoted by (Asitoh, 2025) defines innovative learning as an active learning process in which students develop their potential. Students are involved in experiences facilitated by teachers so that lessons flow through experiences that involve thoughts and emotions, are interwoven into fun and challenging activities, and encourage student initiative. According to Ibrohim, as quoted by (Kurniawan, 2025), educational innovation is any innovation in the field of education in the form of new ideas, concepts, tools, or methods aimed at achieving educational goals or solving problems in the field of education. Muslimin, as quoted by (Sanulita, 2024) explains that in the field of education, innovation usually arises from concerns among certain parties regarding the implementation of education. For example, teachers' concerns about the implementation of the teaching and learning process, which is considered less than successful, educational administrators' concerns about performance, or perhaps concerns about problems with performance and

results, even the education system. From the various opinions above, it can be concluded that educational innovation is something new in a particular social situation which is used to answer or solve a problem, which can be in the form of an idea, concept, object or perhaps an action.

## Learning Technology

Kitao Kenji, quoted (Nasril, 2025) explains that digital learning includes hardware (infrastructure) aspects in the form of a set of computers that are interconnected with each other and have the ability to send data, whether in the form of text, messages, graphics, video, or audio. With this capability, digital learning can be interpreted as a computer network that is interconnected with other computer networks throughout the world. Meanwhile, Sucipto and Kustandi, quoted (Aidah, 2024) explain that digital learning can also be interpreted as a learning process that is carried out through a network (computer network), which is usually via the internet or intranet. With internet facilities, digital learning does not continuously depend on teachers, because access to information (knowledge) is broader and more complete, so that learners can learn anytime and anywhere.

Suciati quoted (Andrivat, 2025) revealed that digital learning is a tool that can enable students to hone their skills according to the times and is designed to provide opportunities for students to develop critical reasoning and problem solving, through collaboration and communication. Furthermore, explained by Nanang Hidayat, et al. quoted (Judijanto, 2025) revealed that digital learning can be interpreted as a digital processing system that encourages active learning, knowledge construction, inquiry, and exploration in students, as well as allowing for long-distance communication and data sharing that occurs between teachers and/or students in different physical classroom locations. From the definition above, it can be concluded that digital learning is a learning system that doesn't take place in a single room, eliminating physical interaction between teacher and learner, and face-to-face interaction is conducted virtually. The use of digital technology can also make learning more engaging and stimulate student curiosity through the simultaneous support of animation and music.

## Quality of Education

According to Hari Sudrajat, quoted (Awaludin, 2024) quality education is education that will produce graduates who have competencies and abilities, both from vocational or academic fields, based on social and personal competencies, and noble moral values. With education, it will be able to produce complete human beings so that they are able to integrate charity, knowledge, and faith. Meanwhile, Choirun, quoted (Kartika, 2020) explains that the quality of education is a learning outcome, which concerns the learning and teaching achievements achieved by students, both related to knowledge, attitudes, or behavior after studying Islamic religious education for a certain period of time/semester, expressed in the form of report card/semester grades.

Sudarwan Danim, quoted (Hanafiah, 2022), states that educational quality refers to input, process, output, and impact. Input quality can be assessed from several perspectives. First, the quality of human resources, such as principals, teachers, administrative staff, and students, is good. Second, the quality of material input, such as teaching aids and textbooks, is met. books, curriculum, infrastructure, school facilities, and so on. Third, whether software input criteria, such as regulations, organizational structures, and job descriptions, are met. Fourth, the quality of inputs that reflect expectations and needs, such as vision, motivation, perseverance, and ideals. According to Sri Minarti in (Kartika, 2022) when viewed from educational outcomes, the quality of education is considered high if it is able to produce academic and extracurricular excellence in students who are declared to have graduated from a certain level of education or completed a specific learning program. It can be concluded that the quality of education is the degree of excellence in managing education effectively and efficiently to produce academic and extracurricular excellence in students who are declared to have passed a level of education or completed a certain learning program.

## METHOD

According to Rahardjo, as quoted by Arifudin (2020), a research method is a way to obtain and seek tentative truth, not absolute truth. The result is scientific truth. Scientific truth is open to continuous testing, criticism, and even revision. Therefore, there is no best method for seeking truth; there is only the appropriate method for a specific purpose based on the existing phenomenon. Budiharto, as quoted by (Awaludin, 2023), states that the choice of research method must be tailored to the research being conducted to achieve optimal results. Researchers used a qualitative approach with a case study design to gain a deep understanding of technology-based learning innovations to improve the quality of education in the digital era. According to Nursalam in (Erfiyana, 2025), a case study is research that includes an assessment aimed at providing a detailed description of the background, nature, and characteristics of a case. In other words, a case study focuses on a case intensively and in detail. Research in this

method is carried out in depth on a situation or condition in a systematic manner, starting from making observations, collecting data, analyzing information, and reporting results. The approach used in this research is a qualitative approach. According to Iskandar in (Alammy, 2025), a qualitative approach is where qualitative research as a scientific method is often used and implemented by groups of researchers in the social sciences, including educational science. Iskandar in (Rosmayati, 2025) explains the qualitative research approach as a process of research and understanding based on methods that investigate social phenomena and human problems. This study employed qualitative research with field research methods. According to (Maulana, 2025), this approach aligns with the primary objective of the study, which is to describe and analyze the management of educational facilities and infrastructure to improve school quality. Therefore, this method will be able to explain the research problem (Ningsih, 2025).

According to Yin (Aslan, 2025), the purpose of case study research is not merely to explain what the object of study is like but also to explain the circumstances and how the case occurred. Meanwhile, Waluya (Arifudin, 2024) states that the purpose of case studies is to develop in-depth knowledge about the object of study, meaning that this study is exploratory in nature. Bogdan and Taylor in (Abduloh, 2020) explain that qualitative research methodology is a research procedure that produces descriptive data in the form of written or spoken words from people and observable behavior. In this study, researchers create a complex picture, examine words, detailed reports of respondents' views, and conduct studies in natural situations, specifically related to technology-based learning innovations to improve the quality of education in the digital age. Engineering can be seen as a means of carefully performing technical work using the mind to achieve a goal. Although research is essentially a scientific endeavor, it is conducted to systematically collect realistic data to establish the truth. Research methodology is a means of finding a solution to any problem. In this case, the author gathered information on technology-based learning innovations to improve the quality of education in the digital age, among others (Ningsih, 2024).

Because it requires library materials for its data sources, this research utilizes library research. Researchers require books, scientific articles, and other literature related to the topics and issues they are exploring, both printed and online (Heriman, 2024). Seeking information from data sources requires the use of data collection techniques. Amir Hamzah in (Muslim, 2023) claims that data collection is an effort to gather information related to the topic being studied. The author used library research methods to collect data. Specifically, the author began with a library search to gather information from books, dictionaries, journals, encyclopedias, papers, periodicals, and other sources that shared perspectives on technology-based learning innovations to improve the quality of education in the digital age. Furthermore, Amir Hamzah in (Pujiaty, 2024) states that data collection is defined as various efforts to gather facts related to a topic of discussion being or will be explored. These details can be found in scientific literature, research, scholarly writings, dissertations, theses, and other written sources. According to (Hoerudin, 2023), data collection can be conducted in various circumstances, using different sources, and employing different techniques.

Three methods were used to collect data: interviews, observation, and documentation. Researchers conducted observations related to the management of educational facilities and infrastructure to improve school quality. Observation is part of the research process that directly examines the phenomena being studied (Erfiyana, 2024). This method allows researchers to directly observe and experience the atmosphere and conditions of the research subjects (Sehabudin, 2024). The observations in this study focused on technology-based learning innovations to improve the quality of education in the digital age. The interview technique in this study is a structured interview, namely an interview conducted using various established standard guidelines, questions are arranged according to information needs and each question is needed to reveal each empirical data (Wahyudinata, 2024).

Documentation is a data collection technique using existing written documents or records (Erfiyana, 2023). Documentation comes from the word document, which means written objects. In implementing the documentation method, researchers investigate written objects, such as books, magazines, meeting minutes, and diaries. According to Moleong in (Marlin, 2025), the documentation method is a way of collecting information or data through examining archives and documents. Furthermore, according to (Hambali, 2025), the documentation strategy is also a data collection technique proposed to research subjects. This data collection method using the documentation method is carried out to obtain data on the state of the institution (research object), namely technology-based learning innovations to improve the quality of education in the digital era. Moleong, quoted (Pujiaty, 2025), explains that the collected data was analyzed using an interactive analysis model consisting of data reduction, data presentation, and conclusion drawing. Meanwhile, Syarifah et al. in (Suhud, 2025) explain that data reduction is carried out by filtering relevant information, presenting data in a systematic narrative form, and drawing conclusions based on research findings. To ensure data validity, this study used source triangulation, namely comparing information from sources. According to Moleong in (Kosasih, 2025), source triangulation helps increase the validity of research results by

comparing various perspectives on the phenomenon being studied. Muhadjir in (Ekawati, 2024) stated that data analysis is an activity of conducting, searching and compiling records of findings systematically through observations and interviews so that the researcher focuses on the research he is studying. After that, making a finding material for others, editing, classifying, and presenting it. Data validity techniques using triangulation techniques include techniques and sources. Data analysis using the Miles and Huberman model in (Tanjung, 2020) consists of data collection, data reduction, data presentation, and drawing conclusions.

## RESULTS AND DISCUSSION

### Research Result

In this study, data were collected through in-depth interviews, participatory observation, and documentation during the implementation process of technology-based learning innovations at Madrasah Aliyah in urban area X. The results of the data analysis show various aspects related to the implementation of these innovations, ranging from motivation, strategies, obstacles, to their impact on the quality of education. Participants in this study included 10 subject teachers, 30 students in grades 11 and 12, and the madrasah principal. The innovations implemented included the use of online learning platforms like Google Classroom and Edmodo, digital media like instructional videos, and interactive tools like quizzes and online discussion forums. These innovations were implemented over the course of the 2023/2024 academic semester. Interview data shows that most teachers feel interested and motivated to integrate technology into the learning process. One teacher stated, "I feel more creative in delivering material through digital media, and this makes students more enthusiastic." Students also responded positively, with 85% stating that technology-based learning made it easier for them to understand the material and were more motivated to learn.

Teachers implemented various strategies, such as creating digital teaching materials, assigning assignments through online platforms, and using quizzes and polling features to increase participation. Observations showed that the use of learning videos and interactive simulations significantly improved conceptual understanding. Furthermore, teachers conducted regular internal training and shared experiences to improve their technological competency. Despite the many benefits, several obstacles were encountered during the implementation process. Data shows that limited facilities are the main obstacle, such as unstable internet connections and a lack of adequate computers/laptops. According to the madrasah principal, "Some students and teachers still have difficulty accessing technology optimally due to infrastructure constraints." Furthermore, some teachers expressed a lack of confidence in managing digital platforms due to a lack of adequate training and concerns about security and privacy. Observations and document assessments showed that this innovation had a positive impact on the quality of learning. Average student grades increased by 10% compared to the previous semester, and attendance and active participation in online classes reached 90%. Teachers reported that students were more active in asking questions and discussing in online forums. Furthermore, online formative assessments provided real-time insights into student progress, enabling teachers to adjust teaching strategies.

Most teachers and students stated that this innovation needs to be further developed and refined. Several teachers proposed further training on technology management and the creation of more innovative digital content. The madrasah principal emphasized that they plan to propose procuring internet facilities and additional devices to support this innovation on an ongoing basis. Overall, empirical data shows that technology-based learning innovations at Islamic Senior High Schools (Madrasah Aliyah) in urban X have a positive impact on increasing learning motivation, the effectiveness of the learning process, and student learning outcomes. However, this success is greatly influenced by factors such as facility readiness, teacher competence, and management support. Therefore, infrastructure development, ongoing training, and strengthening technology management are key to ensuring the sustainability and quality of education in the digital era.

### Discussion

The application of technology in learning has become a primary focus in efforts to improve the quality of education in the digital age. This research was inspired by theories explaining how technological innovation can enhance learning effectiveness. One of the most relevant theories is Rogers' Innovation Theory, as cited (Saepudin, 2023), which explains that individuals will accept and use technological innovations if they directly see their benefits. The use of digital media in learning at Islamic Senior High Schools (Madrasah Aliyah) has a fundamental rationale. Digital media is crucial to the learning process in the technological era. According to Kemp, E.J. in (Afifah, 2024) learning media has three benefits: providing motivation, presenting information, and providing instructions.

According to Husamah quoted (Farid, 2025) that there are four characteristics of digital learning in the model (blended learning), namely: 1) Learning that combines various delivery methods, learning models, learning methods, and various technology-based learning media, 2) As a modification of conventional or face-to-face learning, independent learning, and learning via online (e-learning), 3) Learning is supported by an effective combination of delivery and teaching methods, learning models, and learning methods, and 4) Educators and parents of students have equally important roles, educators as facilitators, and parents as supporters. In the context of education, previous research has shown that the application of technology can improve learning motivation, student engagement, and learning outcomes (Hwang, 2015); (Kim, 2017). For example, research by (Hwang, 2015) found that the use of computer-based simulators in chemistry learning can improve student performance and increase learning motivation.

Digital learning has advantages in learning. In line with Setiawan's opinion quoted (Nuryana, 2024) said that the advantages of digital learning are that digital technology has a positive impact that is felt in the digital era, including: 1) the information needed will be faster and easier to access; 2) the growth of innovation in various fields oriented towards digital technology that can make work easier; 3) the emergence of digital-based mass media; (4) increasing the quality of human resources through the use and development of technology; 5) the emergence of various learning resources such as online libraries, online discussions, and online learning media; and 6) the emergence of various kinds of online businesses (e-businesses) that provide various kinds of needs.

However, research also shows that the implementation of technology in learning does not always run smoothly. Barriers such as technical difficulties, lack of student ability in using technology, and lack of support from educators can affect the effectiveness of technology implementation in learning (Selwyn, 2010). In line with the opinion of Setiawan quoted (Arif, 2024) said that technology has a negative impact that is felt in digital learning, namely: 1) copyright infringement due to easy access and makes it easier to cheat (plagiarism); 2) the occurrence of shortcut thinking where it is trained to think short and lack of concentration in activities; 3) misuse of knowledge used to commit criminal acts; 4) less effective technology as a learning tool. Furthermore, Muhasim quoted (Zulfa, 2025) that the shortcomings of digital learning are that educators must always guide their students to anticipate the negative influences caused by technological developments that can disrupt morals, behavior, and even become a threat to them.

In the context of Islamic high schools, previous research has shown that the application of technology can improve the quality of education. For example, research by (Ismail, 2017) found that the use of mobile-based applications in learning can increase student engagement and improve learning outcomes. To learn more about technology-based learning innovations in Islamic high schools, this study uses theories such as Rogers' Innovation Theory and the Student Engagement Theory in Learning (Fredricks et al, 2004). These theories help explain how technological innovation can improve learning motivation, student engagement, and learning outcomes. Thus, this research can significantly contribute to understanding how technology-based learning innovations can improve the quality of education in Islamic senior high schools (madrasah aliyah). The results can also provide useful information for educators, curriculum developers, and policymakers in improving education quality through the application of technology.

## CONCLUSION

Based on the research results, it can be concluded that technology-based learning innovations at Madrasah Aliyah in urban X have shown a significant positive impact on improving the quality of education. The implementation of various digital media, online learning platforms, and interactive tools can increase student learning motivation, strengthen conceptual understanding, and improve their overall learning outcomes. Furthermore, these innovations can also increase student engagement in the learning process, so that they are not merely passive recipients but actively participate in discussions and digital assignments. However, the successful implementation of this innovation depends on various supporting factors, such as the readiness of the technological infrastructure, teacher competence in digital media management, and support from madrasah management. Obstacles encountered, such as limited internet access and a lack of device facilities, are key challenges that require serious attention to ensure the innovation's sustainable and equitable implementation. Overall, technology-based learning innovations in Islamic senior high schools (madrasah aliyah) represent a strategic step in addressing the challenges of education in the digital age. Developing and enhancing teacher competencies, providing adequate facilities, and ongoing training are key factors in ensuring the success and sustainability of these innovations. Therefore, these innovations are expected to improve the quality of Islamic senior high school education in general and prepare students to compete and contribute effectively in the ever-evolving digital era.

REFERENCES

- Abduloh, A. (2020). Effect of Organizational Commitment toward Economical, Environment, Social Performance and Sustainability Performance of Indonesian Private Universities. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 6951–6973.
- Afifah, H. (2024). Implementasi Technology Acceptance Model (TAM) Pada Penerimaan Aplikasi Sistem Manajemen Pendidikan Di Lingkungan Madrasah. *Jurnal Tahsinia*, 5(9), 1353–1367.
- Aidah, A. (2024). Pengembangan Sistem Informasi Manajemen Dalam Dunia Pendidikan. *Jurnal Tahsinia*, 5(6), 966–977.
- Alammy, L. L. (2025). Peran Guru Terhadap Perkembangan Karakter Anak Usia Dini Di PAUD TKIT Nuralima. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 4(12), 4721–4736. <https://doi.org/https://doi.org/10.54443/sibatik.v4i12.3925>
- Andrivat, Z. (2024). Penggunaan Game Edukasi Digital Untuk Meningkatkan Efektivitas Motivasi Belajar Siswa Kelas III. *Jurnal Primary Edu*, 2(3), 348–363.
- Andrivat, Z. (2025). Implementasi Pembelajaran Tematik Perkembangan Teknologi Melalui Pendekatan Pembelajaran Berbasis Masalah Untuk Meningkatkan Hasil Belajar Siswa Kelas III Sekolah Dasar. *Jurnal Primary Edu*, 3(3), 264–279.
- Arif, M. (2024). Tantangan dan Peluang dalam Inovasi Pembelajaran Islam di Era Digital. *Global Education Journal*, 2(1), 73–80.
- Arifudin, O. (2024). Utilization of artificial intelligence in scientific writing. *Journal of Technology Global*, 1(2), 131–140.
- Arifudin, O. (2025). Why digital learning is the key to the future of education. *International Journal of Education and Digital Learning (IJEDL)*, 3(4), 201–210.
- Asitoh, A. (2025). Efektivitas Meronce Kartu Huruf Terhadap Kemampuan Mengenal Huruf Anak Usia Dini Di PAUD A. Sopyan Karawang. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 5(1), 453–468.
- Aslan, A. (2025). Analisis Dampak Kurikulum Cinta Dalam Pendidikan Islam Sebagai Pendidikan Transformatif Yang Mengubah Perspektif Dan Sikap Peserta Didik: Kajian Pustaka Teoritis Dan Praktis. *Prosiding Seminar Nasional Indonesia*, 3(1), 83–94.
- Awaludin, A. (2023). Strategi Guru Dalam Menanamkan Pendidikan Karakter Pada Anak Usia Dini Di PAUD Cendekia Muslim. *Plamboyan Edu*, 1(3), 257–269.
- Awaludin, A. (2024). Urgensi Manajemen Pendidikan Dalam Rangka Meningkatkan Mutu Pendidikan Islam Di Madrasah. *Jurnal Tahsinia*, 5(2), 253–271.
- Ekawati, P. A. (2024). Pengaruh Perencanaan Pembelajaran dan Kreativitas Guru terhadap Hasil Belajar Mata Pelajaran SKI Siswa Kelas VIII MTs.Yasiba Kota Bogor. *Dirosah Islamiyah*, 6, 1003–1023.
- Erfiyana, E. (2023). Upaya Meningkatkan Peran Aktif Mahasiswa Dalam Membangun Pemberdayaan Kegiatan Di Lingkungan Masyarakat. *Jurnal Karya Inovasi Pengabdian Masyarakat (JKIPM)*, 1(2), 87–97.
- Erfiyana, E. (2024). Implementasi budaya mutu sekolah melalui pendekatan total quality management. *Jurnal Tahsinia*, 5(7), 1055–1066.
- Erfiyana, E. (2025). Islamic School Financial Management: A Case Study of Islamic Junior High Schools in Rural Areas. *International Journal Of Science Education and Technology Management*, 4(2), 33–44.
- Fahimah, N. (2024). Peningkatan Kemampuan Menyimak Anak Pada Usia 5-6 Tahun Melalui Media Papan Flanel Di PAUD Janitra. *Jurnal Tahsinia*, 5(4), 547–555.
- Farid, M. (2025). Mekanisme Pengambilan Keputusan Berbasis Sistem Informasi Manajemen Dalam Lembaga Pendidikan Islam. *Jurnal Tahsinia*, 6(1), 86–103.
- Fredricks et al. (2004). School engagement: Prospective relations between social and academic motivation. *Journal of Educational Psychology*, 96(1), 142-155.
- Hambali, I. (2025). Strategi Kepala Madrasah Dalam Meningkatkan Profesionalisme Guru Fiqih Di Madrasah Aliyah Swasta. *Jurnal Tahsinia*, 6(1), 73–85.
- Hanafiah, H. (2022). Penanggulangan Dampak Learning Loss dalam Meningkatkan Mutu Pembelajaran pada Sekolah Menengah Atas. *JIIIP-Jurnal Ilmiah Ilmu Pendidikan*, 5(6), 1816–1823.
- Heriman, M. (2024). Pengembangan Kurikulum Berbasis Keterampilan Abad ke-21: Perspektif dan Tantangan. *Reslaj: Religion Education Social Laa Roiba Journal*, 6(6), 2724–2741.

- Hoerudin, C. W. (2023). Penerapan Media Vocabulary Card Dalam Meningkatkan Penguasaan Kosakata Bahasa Indonesia Anak Usia 4-5 Tahun. *Plamboyan Edu*, 1(2), 208–219.
- Hwang. (2015). The effects of using a computer-based simulator on learning outcomes in high school chemistry. *Journal of Science Education and Technology*, 24(2), 167-176.
- Ismail. (2017). The effects of using mobile learning applications on student engagement and learning outcomes in high school mathematics. *Journal of Educational Technology Development and Exchange*, 10(1), 1-14.
- Judijanto, L. (2025). Ethics And Security in Artificial Intelligence and Machine Learning: Current Perspectives In Computing. *International Journal of Society Reviews (INJOSER)*, 3(2), 374–380.
- Kartika, I. (2020). Implementasi Manajemen Berbasis Sekolah Dalam Meningkatkan Mutu Pendidikan Di Sekolah Menengah Atas. *Jurnal Al-Amar*, 1(2), 137–150.
- Kartika, I. (2022). Dampak Penggunaan Media Pembelajaran Interaktif Terhadap Mutu Pembelajaran Pendidikan Agama Islam. *Jurnal Al-Amar*, 3(4), 562–577.
- Kartika, I. (2023). Peningkatan Kualitas Pendidikan Agama Islam Di Sekolah Dasar Melalui Pendekatan Kreatif Dan Inovatif. *Jurnal Karya Inovasi Pengabdian Masyarakat (JKIPM)*, 1(2), 120–130.
- Kartika, I. (2024). Strategi Implementasi Sistem Informasi Manajemen Untuk Meningkatkan Pengelolaan Data Pendidikan Islam Yang Efisien. *Jurnal Al-Amar*, 5(3), 392–407.
- Kartika, I. (2025). Peran Sistem Informasi Manajemen Dalam Meningkatkan Kualitas Pendidikan Dan Administrasi Di Lembaga Pendidikan Islam. *Jurnal Al-Amar*, 6(4), 660–675.
- Kim. (2017). The effects of using a learning management system on student engagement and learning outcomes in high school English. *Journal of Educational Technology Development and Exchange*, 9(2), 1-15.
- Kosasih, M. (2025). Tantangan dan Peluang Implementasi Kurikulum 2013 pada Mata Pelajaran Pendidikan Agama Islam di Era Digital Di MAN 7 Depok. *At-Tadris: Journal of Islamic Education*, 4(1), 80–91. <https://doi.org/https://doi.org/10.56672/attadris.v4i1.454>
- Kurniawan, M. A. (2025). Lokakarya Pengembangan Pembelajaran Dan Asesmen Bagi Guru Sekolah Dasar. *Jurnal Bakti Tahsinia*, 3(1), 109–120.
- Marlin, D. (2025). Optimalisasi Strategi Pembelajaran Dalam Meningkatkan Prestasi Belajar Peserta Didik Pada Mata Pelajaran Pendidikan Agama Islam. *Jurnal Tahsinia*, 6(8), 1217–1230.
- Maulana, A. (2025). Strategi Manajemen Pendidikan Berbasis Filsafat Ekonomi untuk Sustainable Organizational Development. *Jurnal Ilmu Pendidikan*, 4(2), 1–7.
- Muslim. (2023). Manajemen Pembelajaran Pendidikan Agama Islam Dalam Mewujudkan Karakter Religius Pada Peserta Didik. *Edukasi Islami: Jurnal Pendidikan Islam*, 12(1), 917–932.
- Nasril, N. (2025). Evolution And Contribution Of Artificial Intelligencess In Indonesian Education. *Journal of International Multidisciplinary Research*, 3(3), 19–26.
- Ningsih, I. W. (2024). Implementasi Pembentukan Karakter Profil Pelajar Pancasila Dalam Pembelajaran Al-Qur'an Metode Tilawati di Kabupaten Bogor. *Jurnal Tahsinia*, 5(3), 391–405.
- Ningsih, I. W. (2025). Relevansi Moderasi Beragama Dalam Manajemen Pendidikan Islam Di Indonesia: Strategi Membangun Karakter Toleran Dan Inklusif. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 4(11), 3605–3624.
- Nuryana, M. L. (2024). Implementasi Dan Transformasi Sistem Informasi Manajemen Di Era Digital. *Jurnal Tahsinia*, 5(9), 1325–1337.
- Pujiaty, E. (2024). Strategi pengelolaan pendidikan inklusif untuk meningkatkan aksesibilitas di sekolah dasar. *Jurnal Tahsinia*, 5(2), 241–252.
- Pujiaty, E. (2025). Manajemen Keuangan Sekolah dalam Pengembangan Program Pendidikan Berbasis Teknologi. *Jurnal Tahsinia*, 6(6), 941–955.
- Romdoniyah, F. F. (2024). Implementasi Kebijakan Education Mangement Information System (EMIS) Di Seksi PD. Pontren Pada Kemenag Kota Bandung. *Jurnal Tahsinia*, 5(6), 953–965.
- Rosmayati, S. (2025). Integrasi Filsafat Manajemen dalam Peningkatan Efektivitas Ekonomi Pendidikan di Organisasi Modern. *Jurnal Ilmu Pendidikan (ILPEN)*, 4(1), 1–6.
- Saepudin, S. (2023). Inovasi Pembelajaran Pendidikan Agama Islam Berbasis ICT di Era Industri 4.0. *EduInovasi: Journal of Basic Educational Studies*, 3(2), 571-586.
- Sanulita, H. (2024). Analysis Of The Effectiveness Of Audio Visual Learning Media Based On Macromedia Flash Usage On School Program Of Increasing Student Learning Motivation. *Journal on Education*, 6(2), 12641–12650.

- Sehabudin, B. (2024). Manajemen Program Ekstrakurikuler Dalam Membentuk Karakter Peserta Didik. *Jurnal Tahsinia*, 5(9), 1383–1394.
- Selwyn. (2010). Learning about learning in a digital age: A review of the literature on e-learning and learning technology. *Electronic Journal of e-Learning*, 8(1), 1-11.
- Sudrajat, J. (2024). Enhancing the Quality of Learning through an E-Learning-Based Academic Management Information System at Madrasah Aliyah Negeri. *EDUKASIA Jurnal Pendidikan dan Pembelajaran*, 5(2), 621–632. <https://doi.org/https://doi.org/10.62775/edukasia.v5i2.1724>
- Suhud, U. (2025). Pemberdayaan Ekonomi Kreatif Berbasis Pariwisata Alam di Kawasan Dieng: Kolaborasi Strategis Fakultas Ilmu Manajemen (Kegiatan PkM). *JURNAL LOCUS: Penelitian & Pengabdian*, 4(10), 9685–9694.
- Supriatna, U. (2025). Technology-Based Learning Management in Improving Learning Outcomes In Junior High Schools. *International Journal of Science Education and Technology Management (IJSETM)*, 4(2).
- Tanjung, R. (2020). Analisis Pengaruh Penilaian Kinerja Dan Kompensasi Terhadap Produktivitas Kerja Pada PDAM Kabupaten Karawang. *Jurnal Ilmu Manajemen*, 10(1), 71–80. <https://doi.org/https://doi.org/10.32502/jimn.v10i1.2719>
- Wahyudinata, Y. R. (2024). Dampak manajemen pembelajaran terhadap hasil penilaian peserta didik. *Jurnal Tahsinia*, 5(1), 79–92.
- Zulfa, A. A. (2025). Peran Sistem Informasi Akademik Berbasis Web Dalam Upaya Meningkatkan Efektivitas Dan Efisiensi Pengelolaan Akademik Di Perguruan Tinggi. *Jurnal Tahsinia*, 6(1), 115–134.