Volume 2 Issue 2 (April,2025)
Jurnal of Pedagogi : Jurnal Pendidikan
ISSN: : 3046-9554 (Online)

Education in the Digital Age: An Analysis of the Impact of Technology Integration in Learning on Improving Academic Quality and Social Skills of Students in Elementary School

Mohamad Idhan[1], Sudirman[2], Zulfitri[3], Nurzamsinar[4]
UIN Datokarama Palu[1], Institut Agama Islam DDI Polewali Mandar[2,4], FTIK IAIN Langsa[3]

DOI: https://doi.org/10.62872/0zb85m44

Abstract
The digital era has brought fundamental changes in education, particularly in the way students learn and teachers teach. This study aims to analyze the impact of technology integration in learning on improving students' academic quality and social skills in primary schools in the digital era. Digital transformation in education has brought significant changes in teaching methods, interaction between students and teachers, and students' learning patterns. Through a qualitative approach with literature study and structured observation in several elementary schools, this research found that the appropriate use of technology can improve concept understanding, accelerate access to information, and facilitate more personalized and adaptive learning. In addition, the integration of collaborative platforms and digital media also promotes the development of social skills such as communication, cooperation and empathy. However, the effectiveness of technology integration is highly dependent on infrastructure readiness, teacher competence, and proper guidance so that students do not get trapped in digital isolation. In conclusion, the integration of technology in primary school learning has great potential to support a more holistic transformation of education, not only improving academic quality, but also shaping a young generation that is socially competent and ready to face the challenges of the 21st century. This study recommends the importance of collaboration between education stakeholders, improving teachers' competencies and developing a contextualized digital curriculum as part of a long-term strategy in realizing quality and sustainable basic education
Keywords: *Digita- Education, Primary-School, Learning-echnology, Academi-Quality, Social-Skills*

Corresponding author :
Email Address : mohamadidhan64@gmail.com
Received March 18, 2025 Accepted April 13, 2025 Published April 29, 2025

Introduction
The digital revolution has brought major changes in various sectors of life, including education (Muzakky, 2023; Dito, 2021; Waruwu, 2022). The rapid development of information and communication technology (ICT) demands transformation in various aspects of the teaching-learning process. In this digital era, the integration of ICT in learning is no longer just an option, but has become

DOI: https://doi.org/10.62872/0zb85m44

an urgent need to create a learning process that is more effective, interactive, and relevant to the dynamics and demands of the times. The use of technology in education opens up great opportunities to enrich students' learning experiences, expand access to diverse learning resources, and support the creation of a more personalized, flexible, and student-centered learning approach.

Primary school, as the initial stage and foundation of formal education, plays a strategic role in shaping the readiness of the younger generation to face the challenges of the 21st century (Annur, 2023). At this level, students not only need to master basic competencies such as reading, writing, and arithmetic, but must also be equipped with critical thinking skills, creativity, the ability to collaborate, effective communication skills, and strong digital literacy. The integration of technology in primary school learning is an important means to develop these five competencies in a balanced manner. Through the utilization of digital tools, students can be trained to think analytically, generate creative ideas, work together on technology-based projects, and manage information critically and responsibly online. Therefore, strengthening the capacity of teachers in applying technology pedagogically and developing digital infrastructure in schools are key in ensuring that the goals of education in this digital era can be optimally achieved.

Various technological innovations, such as educational app-based learning, educational gamification, the use of Learning Management System (LMS), to artificial intelligence (AI)-assisted learning, have been widely applied to improve students' academic quality. These innovations not only make the learning process more interactive and engaging, but also allow personalization of learning according to each student's needs. For example, AI technology can assist teachers in identifying student weaknesses more accurately and provide appropriate material recommendations (Liriwati, 2023; Anas, 2024; Rochmawati, 2023). On the other hand, interaction through digital platforms also opens up great opportunities for students to develop 21st century social skills, such as working in virtual teams across regions and even across countries, sharing information effectively, and adapting in diverse digital communities. These skills are increasingly important in the era of globalization and digitalization, where remote collaboration and digital literacy have become an integral part of everyday professional and social life.Despite the enormous potential of technology, its application in primary schools remains problematic. Some studies show that technology integration can improve academic learning outcomes; however, others reveal challenges such as digital distraction, access gaps, low digital literacy, and reduced face-to-face social interaction. This shows that the success of technology integration is not only measured by academic achievement, but also by how technology can strengthen or weaken the social dimension of students.

Previous studies tend to focus on the aspect of academic improvement through the use of technology, without examining in depth the relationship between academic improvement and the development of social skills simultaneously. Most studies focus on secondary and higher education, while research on the impact of technology integration at the primary school level is still relatively limited. The lack of studies that adopt a holistic approach linking cognitive (academic) and social-emotional dimensions in the primary school context is a gap that needs to be filled. This research presents a new approach by simultaneously exploring the impact of technology integration on two important aspects of primary education: students' academic quality and social skills. It not only analyzes the positive effects of technology integration, but also evaluates the challenges and potential risks, and offers a strategic model for balanced technology implementation. With this approach, the research aims to enrich the understanding of how basic education in the digital era can prepare students to become academically intelligent individuals who are also capable of socializing in digital and real environments. By filling the gap and offering new perspectives, this research is expected to become a reference in developing a more comprehensive and sustainable technology-based basic education policy.

Methodolgy

This research uses the library research method to analyze the impact of technology integration in learning on improving students' academic quality and social skills in primary schools. The literature study was chosen because it allows researchers to systematically review various theories, previous research results, and empirical reports to gain an in-depth understanding of the topic under study. Through this approach, the researcher was able to critically synthesize various perspectives and findings, as well as identify patterns, gaps and emerging trends in relevant academic studies. The data used in this research is secondary, obtained from reliable scientific sources such as national and international journals, reference books, research reports, conference proceedings articles, and official documents from

DOI: https://doi.org/10.62872/0zb85m44
educational institutions and world organizations such as UNESCO, OECD, and UNICEF. The selection of sources was done selectively by considering credibility, actuality and relevance to the research focus. In addition, the data was analyzed using a thematic approach, which allowed the researcher to categorize the information based on key themes relating to the enablers, challenges and implications of technology integration in basic education. Thus, this literature study method provides a strong theoretical and empirical foundation to draw valid conclusions relevant to the development of education in the digital era.

Literature selection criteria included publications that addressed technology integration in elementary education, studies that evaluated the effect of technology on students' academic quality and social skills, and articles published within the last ten years to maintain relevance to the latest technological developments. Data collection techniques were carried out by systematically searching through scientific databases such as Google Scholar, Scopus, ScienceDirect, and ERIC, using keywords such as educational technology, digital learning, academic achievement, social skills, elementary education, and technology integration. Data analysis was conducted using the content analysis method with the following steps: categorizing the findings based on the main themes, conducting thematic synthesis to identify patterns, relationships and differences between studies, and critiquing the strengths and weaknesses of each source reviewed. After that, systematic conclusions were drawn to provide a comprehensive picture of the impact of technology integration in the context of basic education. To maintain the validity of the data, this research applies source triangulation by comparing various studies from different approaches and contexts, and only uses literature that is indexed and has high academic credibility.

Results and Discussions

Based on the review of various literature sources, the integration of technology in learning in elementary schools has been proven to have a broad impact, both on improving academic quality and on the development of students' social skills (Armini, 2024; Hatima, 2025). The use of various digital media in learning, such as interactive applications, e-learning platforms, augmented reality (AR), virtual reality (VR), and learning management systems (LMS), has consistently shown effectiveness in improving learning outcomes. These media not only enrich the learning experience, but also increase students' intrinsic motivation, deepen understanding of teaching materials, and encourage active engagement in the learning process. Numerous studies show that students who use technology in an integrated manner in the learning process tend to show significant improvements in academic outcomes compared to students who learn using traditional lecture-based methods. The integration of visual elements, sound, text, and interactivity in technology-based learning media has also been proven to stimulate students' various senses simultaneously, strengthen memory, and make the learning process more enjoyable, meaningful, and easy to understand. Wider access to digital learning resources such as e-books, learning videos, virtual simulations, and online discussion forums provide flexibility in accessing materials anytime and anywhere. This allows students to learn according to their own pace and learning style, making learning more inclusive and adaptive. In this context, technology integration contributes greatly to meeting the needs of students with visual, auditory, kinesthetic learning styles, or a combination of the three.

Not only in the academic aspect, the application of technology also contributes to the character building of learning independence from an early age (Hadi, 2024; Hidayat, 2023; Agustina, 2024). Through the use of LMS, students learn to organize their own learning schedule, set achievement targets, and explore additional materials independently. In addition, by getting used to accessing various digital information sources, students are encouraged to develop critical thinking skills, information literacy skills, and skills in sorting and evaluating the credibility of sources. Thus, the integration of technology in basic education not only responds to the challenges of the digital age, but also prepares the younger generation to become lifelong learners who are adaptive, creative, think critically, and ready to face the complexity of a changing future world.

The effectiveness of technology integration in improving academic outcomes is highly dependent on educators' readiness in designing technology-based learning strategies (Baharuddin, 2024; Isti'ana, 2024; Aprianto, 2023). The use of digital devices without proper pedagogical guidance has the potential to cause distraction, reduce the level of student focus, create excessive dependence on technology, and create boredom in learning due to exposure to information overload. This finding shows that the presence of technology, although offering various conveniences and innovations, still requires

DOI: https://doi.org/10.62872/0zb85m44

a careful and targeted approach so that it can support, not hinder learning objectives. Systematic efforts are needed to equip teachers with technopedagogical competence, which is the ability to integrate technology into learning designs effectively, creatively, and focus on achieving educational goals. Models such as TPACK (Technological Pedagogical Content Knowledge) are important references in understanding how teachers can harmoniously combine content knowledge, pedagogy and technology. To support the development of these competencies, ongoing training should be designed not only to be technical in nature (such as the use of applications or hardware), but also include pedagogical aspects such as the selection of media in accordance with the characteristics of the material and student needs, digital classroom management, and the application of technology-based active learning methods.

Providing responsive technical support, for example through IT service units in schools, is essential to overcome technical barriers that teachers may face in their daily practice. The development of technology-based professional learning communities (PLCs) is also an effective strategy to strengthen collaboration among teachers, share best practices and enrich digital learning innovations. Equally important, schools need to develop internal policies that encourage the wise, ethical and responsible use of technology. These policies can include guidelines for the use of devices in the classroom, regulations related to student cybersecurity, and digital literacy programs to equip students with the skills to understand the risks and benefits of the digital world. With adequate support in terms of training, infrastructure, professional collaboration and institutional policies, educators will not only be able to select and adapt appropriate digital tools, but also create learning experiences that are meaningful, contextualized and balanced between technological innovation and traditional pedagogical values. Through this approach, technology truly becomes a tool for educational transformation that has a positive and sustainable impact..

In addition to influencing academic aspects, technology integration also contributes significantly to the development of students' social skills in elementary schools (Wahyudi, 2024; Putra, 2024; Manurung, 2024). Through the use of various digital media and platforms such as online discussion forums, online project collaboration, digital role-based simulations, and team-based project management applications, students are trained to communicate effectively, work together in virtual teams, and develop empathy and critical thinking skills in interacting with others. Collaborative projects across schools or even across countries, for example through co-writing programs or virtual Model United Nations (MUN) simulations, allow students to experience first-hand how to build consensus, appreciate cultural differences, and contribute to group discussions.

In this process, students not only learn to convey ideas in writing, but also to build strong data-based arguments, active listening, and understanding different points of view as part of a collective decision-making process. Engagement in digital learning environments encourages students to be more adaptive to various communication styles, both oral and written, formal and informal, while improving negotiation and conflict resolution skills through online media. They also learn to strengthen their sense of individual responsibility in the context of collective work, for example by meeting deadlines, dividing roles in projects, and being accountable for the contributions of each team member. Furthermore, these experiences shape critical 21st century skills such as cross-cultural collaboration, digital literacy, emotional intelligence in online interactions and creative problem-solving. With the growing trend of remote working and global collaboration in various industry sectors, the ability to adapt, interact effectively in digital spaces, and understand socio-cultural nuances are key competencies that are in high demand. Therefore, the integration of technology in basic learning not only enriches students' learning experience in the present, but also strategically prepares students to face the dynamics of the future world of work and social life, which demands collaborative skills, critical thinking, flexibility, and cross-cultural sensitivity on a global scale (Hakim, 2024; Putra, 2024).

It is undeniable that over-reliance on digital interactions can hinder the development of students' face-to-face social skills (Harahap, 2022; Setiadi, 2024). Important skills such as reading facial expressions, picking up non-verbal cues, understanding voice intonation, and building in-person interpersonal relationships can be neglected if student interactions are too much mediated by technology. Human interaction that is rich in emotion, spontaneity and depth of meaning is difficult to fully replace by screen-based communication, which tends to be flat and lacks emotional enrichment. Furthermore, phenomena such as “distracted socialization,” the tendency to divide attention between in-person conversations and digital devices, further exacerbates this challenge. Children who are too accustomed to communicating via text or social media may have difficulty maintaining eye contact, understanding the other person's body language, or responding to the emotional dynamics of face-to-face interactions.

DOI: https://doi.org/10.62872/0zb85m44

It is important for educators to create a healthy balance between the use of technology and hands-on learning activities (Setiadi, 2024; Salim, 2022; Manora, 2024). Concrete strategies that can be implemented include increasing face-to-face discussion sessions, organizing role plays that simulate real social situations, establishing conventional group work that requires physical collaboration, and integrating extracurricular activities based on social interaction such as debate clubs, theater, team sports, and community social activities. In addition, project-based learning (PBL) approaches that require students to directly interact, discuss, negotiate and present their work to real audiences can be an effective alternative to balancing digital and social skills. It is also important for schools to adopt a blended learning policy that proportionally manages the use of technology and face-to-face activities.

With this comprehensive approach, technology integration in education not only enriches students' learning experiences with digital innovations, but also maintains the essence of human relationships that are an important foundation in social life, forming a generation that is both digitally savvy and highly empathetic. Furthermore, the analysis also revealed factors that influence the success or failure of technology integration in basic education. The main supporting factors include the availability of adequate technology infrastructure, teachers' digital competence, support from national and local education policies, and the existence of ongoing training programs to improve the capacity of educators. Without this infrastructure support, the potential of technology in learning cannot be optimized and may even widen the digital divide between regions, especially between urban and rural areas. Teachers' digital competencies play a crucial role in determining the extent to which technology can be used meaningfully in the learning process. Teachers who have high digital literacy can select, modify and adapt various digital tools and resources according to learning needs, implement innovative teaching strategies, and utilize data from digital platforms to monitor and assess student learning progress. In contrast, teachers who are less skilled in technopedagogical aspects tend to use technology only superficially, for example only to replace conventional lecture methods without changing the interaction model or enriching students' learning experience.

Education policy support, both at national and local levels, is also a strategic factor that determines the success of technology integration. Progressive policies, such as school digitization programs, special funding for educational technology, 21st century competency-based curriculum, and national standards for student and teacher digital literacy, will create a conducive environment for the development of technology-based learning ecosystems. Equally important, the existence of sustainable, practice-based teacher training programs that are integrated with the contextual needs of schools is an important catalyst to accelerate the adoption and innovation of technology use in the classroom. However, challenges also need to be considered, such as budget constraints in certain areas, resistance to changes in school culture, as well as gaps in digital capabilities between educators and between regions. For this reason, the technology integration approach must be designed comprehensively, taking into account technical, pedagogical, cultural factors, as well as the sustainability of policy support so that the transformation of digital education truly has a positive and equitable impact.

On the other hand, a number of challenges that often arise also need serious attention. Limited access to technology in remote areas is still a major barrier to equalizing the quality of technology-based education (Suwitomo, 2023; Wika, 2025; Aranda, 2024). The digital literacy gap, both among students and educators, creates inequality in the optimal utilization of technology. Resistance to the adoption of new technologies, often driven by uncertainty, fear of change or unfamiliarity with its benefits, is also a hindering factor that cannot be ignored. In addition, a lack of understanding of technology-based pedagogical approaches means that the use of digital devices in the classroom is often superficial, without really supporting meaningful learning objectives. Therefore, technology integration efforts need to be designed comprehensively, taking into account the readiness of human resources, infrastructure, as well as student-centered pedagogical strategies to achieve optimal results.

The implication of this finding is that the successful integration of technology in learning in primary schools does not rely solely on the provision of hardware and software. Providing facilities without being matched with effective management strategies risks making technology just an additional tool, not as a medium of learning transformation. Therefore, there needs to be serious investment in human resource development, especially in improving teachers' digital literacy and pedagogical competence. In addition, the development of a technology-based curriculum that is integrated with national learning objectives is essential to provide clear direction and standards. This curriculum should be able to balance the development of students' academic abilities, 21st century skills and social-emotional character.

DOI: https://doi.org/10.62872/0zb85m44

The creation of a digital learning culture is also key to success, where students, teachers and the entire school community encourage the productive, critical and ethical use of technology. Programs such as structured digital literacy, technology-based character education and cross-disciplinary collaborative project-based learning can be alternative approaches to bring this culture to life. With these approaches, students will not only master technical skills, but also be able to think creatively, collaborate, empathize and adapt in the midst of the changing dynamics of the digital world. Without this holistic and targeted effort, technology integration risks failing to have a meaningful long-term impact in shaping a competent and characterized future generation.

Thus, the integration of technology in basic education offers great potential to improve the quality of learning holistically, covering students' cognitive, social, emotional and ethical aspects. However, to realize these benefits to the fullest, a planned, integrated and reflective approach to new challenges that continue to emerge along with the rapid development of technology is required. This integration effort requires not only infrastructure and human resources readiness, but also a willingness to continuously adapt and evaluate learning practices to remain relevant and effective. Technology in education should be viewed not as an end in itself, but rather as a strategic tool that supports the achievement of a broader vision of education: forming a smart, adaptive, collaborative, creative and ethical generation amidst the dynamics of the 21st century. Therefore, any technological innovation must always be linked to human values, sustainability and social justice, so that digital education not only produces technically competent individuals, but also contributes positively to society and the world. Technology integration centered on character development and critical thinking skills will be an important foundation in preparing students to face complex and ever-changing global challenges (Chyntia, 2023; Saputra, 2024; Asrah, 2024).:

Conclusions

Based on the analysis of the literature study, it can be concluded that the integration of technology in learning in primary schools has a significant positive impact on improving academic quality and developing students' social skills. The use of technology-based learning media, such as interactive applications, e-learning platforms and other digital devices, can increase learning motivation, accelerate concept understanding and result in better academic achievement. However, the success depends on teachers' ability to manage the use of technology pedagogically, with structured and goal-oriented strategies. On the other hand, technology integration also contributes to the development of students' social skills through various forms of digital collaboration and online interaction. However, over-reliance on digital interactions can reduce face-to-face social skills, so a balance is needed between technology-based learning and in-class social activities. Factors supporting the success of technology integration include the availability of adequate infrastructure, teacher competence in digital literacy, education policy support and ongoing training programs. In contrast, barriers such as limited access to technology, low digital literacy and resistance to change remain challenges to overcome. Overall, technology has great potential to improve the quality of basic education but its utilization must be thoughtful, planned and oriented towards holistic student development. Thus, technology integration will not only produce students who excel academically, but also form strong, adaptive, social characters who are ready to face challenges in the digital era.

References

Agustina, A. M., & Wulandari, S. S. (2024). Pengaruh Guru Dalam Pembentukan Karakter Dan Pembelajaran Daring Terhadap Hasil Belajar Siswa Di Smk Ketintang Surabaya. Jurnal Review Pendidikan Dan Pengajaran (Jrpp), 7(3), 6936-6949. Https://Doi.Org/10.31004/Jrpp.V7i3.29374

Anas, I., & Zakir, S. (2024). Artificial Intelligence: Solusi Pembelajaran Era Digital 5.0. J-Sakti (Jurnal Sains Komputer Dan Informatika), 8(1), 35-46. Http://Dx.Doi.Org/10.30645/J-Sakti.V8i1.764

Annur, P. A., Susanti, E., & Gera, I. G. (2023). Urgensi Pendidikan Moral Sekolah Dasar Dalam Membentuk Karakter Religius Di Era Digital Menurut Henry Alexis Rudolf Tilaar. Jurnal Edukasi, 1(3), 271-287. Https://Doi.Org/10.60132/Edu.V1i3.182

Aprianto, D., & Wahyudi, A. (2023). Integrasi Manajemen Kurikulum, Pengembangan Profesional

DOI: https://doi.org/10.62872/0zb85m44
Guru, Dan Teknologi Pendidikan Dalam Meningkatkan Hasil Belajar Siswa. Jurnal Review Pendidikan Dan Pengajaran (Jrpp), 6(3), 4414-4424. Https://Doi.Org/10.31004/Jrpp.V6i3.30950

Aranda, M. D. D. (2024). Peningkatan Dan Pemerataan Perkembangan Teknologi Di Dunia Pendidikan Melalui E-Learning Di Indonesia: Kajian Literatur. Jurnal Cakrawala Akademika, 1(4), 1434-1446. Https://Doi.Org/10.70182/Jca.V1i4.32

Armini, N. K. (2024). Evaluasi Metode Penilaian Perkembangan Siswa Dan Pendidikan Karakter Dalam Kurikulum Merdeka Pada Sekolah Dasar. Metta: Jurnal Ilmu Multidisiplin, 4(1), 98-112. Https://Doi.Org/10.37329/Metta.V4i1.2990

Asrah, A., Marwa, S., & Usman, L. (2024). Inovasi Pengembangan Kurikulum Pendidikan Dasar Dalam Menghadapi Tantangan Global. Passikola: Jurnal Pendidikan Dasar & Madrasah Ibtidaiyah, 1(1), 34-40. Https://Jurnal.Stainmajene.Ac.Id/Index.Php/Pgmi/Article/View/1199/569

Baharuddin, B., & Hatta, H. (2024). Transformasi Manajemen Pendidikan: Integrasi Teknologi Dan Inovasi Dalam Meningkatkan Efektivitas Pembelajaran. Jurnal Review Pendidikan Dan Pengajaran (Jrpp), 7(3), 7355-7544. Https://Doi.Org/10.31004/Jrpp.V7i3.29703

Cynthia, R. E., & Sihotang, H. (2023). Melangkah Bersama Di Era Digital: Pentingnya Literasi Digital Untuk Meningkatkan Kemampuan Berpikir Kritis Dan Kemampuan Pemecahan Masalah Peserta Didik. Jurnal Pendidikan Tambusai, 7(3), 31712-31723. Http://Repository.Uki.Ac.Id/Id/Eprint/13649

Dito, S. B., & Pujiastuti, H. (2021). Dampak Revolusi Industri 4.0 Pada Sektor Pendidikan: Kajian Literatur Mengenai Digital Learning Pada Pendidikan Dasar Dan Menengah. Jurnal Sains Dan Edukasi Sains, 4(2), 59-65. Https://Doi.Org/10.24246/Juses.V4i2p59-65

Hadi, A. (2024). Implementasi Kurikulum Merdeka Dalam Pendidikan Islam: Integrasi Nilai-Nilai Keislaman Dan Kemandirian Belajar. Jurnal Review Pendidikan Dan Pengajaran (Jrpp), 7(4), 15522-15534. Https://Doi.Org/10.31004/Jrpp.V7i4.36750

Hakim, M. N., & Abidin, A. A. (2024). Platform Merdeka Mengajar: Integrasi Teknologi Dalam Pendidikan Vokasi Dan Pengembangan Guru. Kharisma: Jurnal Administrasi Dan Manajemen Pendidikan, 3(1), 68-82. Https://Doi.Org/10.59373/Kharisma.V3i1.47

Harahap, R. R. (2022). Pengaruh Penggunaan Media Sosial Terhadap Keterampilan Komunikasi Interpersonal Siswa Sma Swasta Kartika 1-4 Pematangsiantar. Communication & Social Media, 2(2), 86-90. Https://Doi.Org/10.57251/Csm.V2i2.1469

Hatima, Y., Fajrudin, L., Jatmiko, A. B., & Jodiyariyan, R. A. (2025). Analisis Penerapan Model Pembelajaran Terpadu Tipe Webbed Dalam Meningkatkan Hasil Belajar Siswa Sekolah Dasar. Journal Of Professional Elementary Education, 4(1), 67-78. Https://Doi.Org/10.46306/Jpee.V4i1.115

Hidayat, A. G. (2023). Pembelajaran Jarak Jauh Menggunakan V-Mapel Dalam Membentuk Karakter Mandiri Belajar Siswa Sekolah Dasar. Jurnal Terapung: Ilmu-Ilmu Sosial, 5(1), 1-9. Http://Dx.Doi.Org/10.31602/Jt.V5i1.10290

Isti'ana, A. (2024). Integrasi Teknologi Dalam Pembelajaran Pendidikan Islam. Indonesian Research Journal On Education, 4(1), 302-310. Https://Doi.Org/10.31004/Irje.V4i1.493

Liriwati, F. Y. (2023). Transformasi Kurikulum; Kecerdasan Buatan Untuk Membangun Pendidikan Yang Relevan Di Masa Depan. Ihsan: Jurnal Pendidikan Islam, 1(2), 62-71. Https://Doi.Org/10.61104/Ihsan.V1i2.61

Manora, H., Khasanah, N. L., & Putri, F. N. (2024). Dampak Penggunaan Teknologi Dalam Manajemen Pembelajaran Pendidikan Islam Anak Usia Dini. Bouseik: Jurnal Pendidikan Islam Anak Usia Dini, 2(2), 161-178. Https://Doi.Org/10.37092/Bouseik.V2i2.921

Manurung, F. A. R., Padriansyah, A., Sitorus, E. R. A., Hasanah, M., & Saleh, K. (2024). Pengaruh Penggunaan Smartphone Terhadap Prestasi Akademik Dan Keterampilan Sosial Siswa Sekolah Dasar: Studi Kasus Di Uptd Sdn 10 Desa Bangun Sari. Jurnal Iptek Bagi Masyarakat, 4(1), 25-37. Https://Doi.Org/10.55537/Jibm.V4i1.907

Muzakky, R. M. R., Mahmuudy, R., & Faristiana, A. R. (2023). Transformasi Pesantren Menghadapi Era Revolusi Digital 4.0. Aladalah: Jurnal Politik, Sosial, Hukum Dan Humaniora, 1(3), 241-255. Https://Doi.Org/10.59246/Aladalah.V1i3.371

Putra, J. E., Sobandi, A., & Aisah, A. (2024). The Urgency Of Digital Technology In Education: A Systematic Literature Review. Jurnal Educatio: Jurnal Pendidikan Indonesia, 10(1), 224-234. Http://Dx.Doi.Org/10.29210/1202423960

DOI: https://doi.org/10.62872/0zb85m44

Putra, L. D., Shiddiq, A. J., Khafi, I., & Nugroho, B. (2024). Integrasi Teknologi Immersive Learning Dalam Pembelajaran Sekolah Dasar. Jurnal Riset Madrasah Ibtidaiyah, 4(2), 218-230. Https://Doi.Org/10.32665/Jurmia.V4i2.3349

Rochmawati, D. R., Arya, I., & Zakariyya, A. (2023). Manfaat Kecerdasan Buatan Untuk Pendidikan. Jurnal Teknologi Komputer Dan Informatika, 2(1), 124-134. Https://Doi.Org/10.59820/Tekomin.V2i1.163

Salim, N. A. (2022). Integrasi Teknologi Dalam Pendidikan Anak Usia Dini: Menilai Dampaknya Pada Perkembangan Kognitif. Jurnal Warna: Jurnal Pendidikan Dan Pembelajaran Anak Usia Dini, 7(02). Https://Doi.Org/10.24903/Jw.V7i2.1533

Saputra, H. (2024). Penguatan Kemampuan Peserta Didik Dalam Menghadapi Era Society 5.0 Melalui Pembelajaran Matematika. Bersatu: Jurnal Pendidikan Bhinneka Tunggal Ika, 2(2), 287-302. Https://Doi.Org/10.51903/Bersatu.V2i2.640

Setiadi, F. M., Maryati, S., & Mubharokkh, A. S. (2024). Analisis Dampak Penggunaan Gadget Terhadap Perkembangan Psikologis Dan Keagamaan Anak Usia Dini (Tk Dan Sd) Dalam Perspektif Pendidikan Agama Islam. Muaddib: Islamic Education Journal, 7(1), 1-11. Https://Doi.Org/10.19109/Muaddib.V7i1.24432

Setiadi, F. M., Maryati, S., & Mubharokkh, A. S. (2024). Analisis Dampak Penggunaan Gadget Terhadap Perkembangan Psikologis Dan Keagamaan Anak Usia Dini (Tk Dan Sd) Dalam Perspektif Pendidikan Agama Islam. Muaddib: Islamic Education Journal, 7(1), 1-11. Https://Doi.Org/10.19109/Muaddib.V7i1.24432

Siwitomo, D. P. A., Fitriyani, N. N., & Fadhilah, N. N. (2023, December). Kolaborasi Pendidikan: Strategi Inovasi Mengatasi Permasalahan Pendidikan Di Indonesia. In Prosiding Seminar Nasional Kemahasiswaan (Vol. 1, No. 1, Pp. 64-68). Https://Doi.Org/10.56983/Prosidingkemahasiswaan.V1i1.1456

Wahyudi, N. G., & Jatun, J. (2024). Integrasi Teknologi Dalam Pendidikan: Tantangan Dan Peluang Pembelajaran Digital Di Sekolah Dasar. Indonesian Research Journal On Education, 4(4), 444-451. Https://Doi.Org/10.31004/Irje.V4i4.1138

Waruwu, E., Ndraha, A. B., & Lase, D. (2022). Peluang Dan Tantangan G20 Dalam Transformasi Manajemen Pendidikan Di Era Revolusi Industri 4.0 Dan Civil Society 5.0 Pasca Pandemi Covid-19. Jurnal Ilmiah Maksitek, 7(3), 26-32. Https://Makarioz.Sciencemakarioz.Org/Index.Php/Jim/Article/View/345

Wika, M. (2025). Antara Komitmen Dan Realita: Studi Kualitatif Terhadap Kebijakan Pemerataan Pendidikan Di Wilayah Terpencil Merauke. Riggs: Journal Of Artificial Intelligence And Digital Business, 4(1), 89-96. Https://Doi.Org/10.31004/Riggs.V4i1.376 .