

Al-Hikmah Education in the Digital Era: Roles and Challenges for Teachers

Mohd Azuan Sulaiman^{1*}, Nursyahirah Wahidah Masrom², Mohd Nothman Mohamad Nor³, Nur Zahirah Mohd Shukri⁴, Abdul Muqsith Ahmad⁵, Nor Salimah Abu Mansor⁶

Department of Islamic Studies, Faculty of Education and Social Sciences, Universiti of Selangor Bestari Jaya Campus^{1,2,3,4}, Faculty of Technical and Vocational, Sultan Idris Education University⁵, Faculty of Islamic Contemporary Studies (FKI), Sultan Zainal Abidin University⁶

Email: syahirahwahidah@unisel.edu.my, nothman@unisel.edu.my, zahirah@unisel.edu.my, muqsith@ftv.upsi.edu.my, norsalimah@unisza.edu.my
Corresponding Author Email: azuan87@unisel.edu.my*

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Abstract

Digital transformation in education brings challenges and opportunities for *Al-Hikmah's* approach to education, which is based on Islamic wisdom and the strengthening of spiritual values. This study analyzes the role and challenges of educators in implementing *Al-Hikmah* education in the digital era using the systematic literature review (SLR) method. The results of the study show that although digital technology can improve access and effectiveness of learning, there is a risk of distortion of fundamental values if not integrated wisely. Educators are required to have multidimensional competencies, including mastery of technology, digital pedagogy, and a philosophical understanding of digital transformation. The development of a blended learning-based learning ecosystem is a solution that allows harmonization between conventional and digital learning. In addition, student self-regulation is an important aspect in ensuring the sustainability of *Al-Hikmah* values in the digital environment. This study recommends the need for a holistic assessment that accommodates spiritual, ethical, and intellectual dimensions to ensure the effectiveness of *Al-Hikmah* education in the digital era.

Keywords: Al-Hikmah, Education, Digitalization, Educators

Introduction

The massive digital transformation in recent decades has fundamentally changed the educational landscape. This era of digitalization has not only overhauled the way knowledge is transmitted, but also restructured the entire paradigm of learning and teaching at various levels of education (Siringoringo & Alfariidzi, 2024). In this context, *Al-Hikmah* education an educational concept based on wisdom, transcendental values, and the formation of holistic

character faces significant challenges to maintain its essence while adapting to the demands of the digital era. Digitization of education brings a duality of impact, on the one hand offering opportunities to expand learning reach, but on the other hand it has the potential to distort the fundamental values of *Al-Hikmah* education if not integrated wisely (Sihombing et al., 2024). The acceleration of the implementation of digital technology in the realm of education is increasingly catalyzed by the COVID-19 pandemic situation, which has forced educational institutions around the world to switch to technology-based distance learning models. This abrupt transition exposes various inequalities in digital access and technological readiness among educators, including those who teach within the framework of *Al-Hikmah* education (San Mikael Sinambela et al., 2024). This phenomenon raises crucial questions about how the values of wisdom, spirituality, and morality which are the cornerstones of *Al-Hikmah* education can be effectively maintained and transformed in a digital ecosystem that tends to be materialistic and efficiency-oriented.

Al-Hikmah education, which is rooted in the Islamic intellectual tradition, emphasizes the simultaneous and balanced development of spiritual (*tarbiyah ruhiyyah*), intellectual (*tarbiyah 'aqliyyah*), and moral (*tarbiyah khuluqiyyah*). This holistic approach aims to form individuals who not only master worldly sciences, but also possess transcendental wisdom and deep spiritual awareness (Humairah et al., 2023). In the context of digitalization of education, there is a substantive concern that the spiritual and moral dimensions of *Al-Hikmah* education can be reduced to just algorithmic information transmission, without internalizing the values of wisdom that are its essence. In the Islamic educational tradition, teachers fulfill five primary roles that encompass a hierarchical spectrum ranging from technical aspects to profound spiritual dimensions. The teacher serves as a *Mudarris*—an instructor who imparts knowledge systematically and structurally. This role forms the foundation for transmitting accurate and beneficial knowledge to students. Then the teacher assumes the role of a *Mu'allim*, a knowledge conveyer who not only provides information but also cultivates deep understanding and encourages students to connect knowledge with real-life applications. The teacher acts as a *Muaddib*, an ethical educator who instills noble values, manners, and morals in students, in alignment with the principle of *ta'dib*, which emphasizes spiritual and moral discipline and as a *Murabbi*, the teacher holistically nurtures students, encompassing intellectual, emotional, and spiritual development, while strengthening their relationship with Allah SWT, fellow human beings, and the natural world. Finally, the teacher functions as a *Mursyid*, a spiritual guide who leads students on a journey of self-discovery and the realization of life's ultimate purpose. As a *Mursyid*, the teacher operates as a spiritual mentor, providing guidance in the cultivation of a divine character (*rabbani*) and the attainment of divine knowledge (*ma'rifatullah*). This structured progression of roles highlights the comprehensive and multidimensional nature of the teacher's responsibility in Islamic pedagogy.

The phenomenon of digital disruption requires educators in the *Al-Hikmah* tradition to develop multidimensional competencies that go beyond conventional technological literacy. Educators are faced with the imperative to reconstruct their pedagogical methodologies, creating a convergence between traditional wisdom values and contemporary technological capabilities. The transformation of the role of educators from knowledge transmitters to collaborative learning facilitators in the digital ecosystem demands a comprehensive redefinition of professional competencies, including technological,

pedagogical, and ethical-philosophical dimensions. The problem of interconnection between digital technology and *Al-Hikmah* education is articulated in various practical manifestations in the classroom. Educators often experience ethical dilemmas when integrating digital platforms designed with the paradigm of technical efficiency, but lack accommodating the reflective and contemplative dimensions that are characteristic of *Al-Hikmah* education (Sahri & Aziz, 2023). This gap creates an urgency to develop a theoretical and practical framework that allows educators to integrate digital technologies while maintaining the philosophical integrity of *Al-Hikmah* education.

Contemporary reality indicates that educational institutions that adopt the *Al-Hikmah* approach need to develop a learning ecosystem that is adaptive to technological developments without sacrificing the fundamental values that become their identity. The application of a blended learning approach that integrates traditional learning methods with modern digital capabilities has the potential to create an educational synthesis that combines the advantages of these two modalities (Marhani & Astuti, 2024). In this framework, digital technology is not just a technical instrument, but a transformative medium that can enrich the learning experience of *Al-Hikmah* if implemented with an adequate philosophical perspective. Recent research indicates that educators in the *Al-Hikmah* tradition who successfully integrate digital technology effectively are those who not only master the technical aspects, but also develop a critical understanding of the philosophical, psychological, and sociological implications of technology in the context of value education (Choli & Fikri Rachman, 2023). The capacity to critically evaluate various digital platforms and tools based on their compatibility with the principles of *Al-Hikmah* is a significant determinant of the success of technology integration in wisdom-based education.

Substantial challenges in *Al-Hikmah* education in the digital era are related to the problems of learning assessment. Conventional algorithm-based evaluation methodologies and information processing speeds are often inadequate to measure more complex dimensions of learning such as reflective wisdom, spiritual development, and ethical maturity which are integral aspects of *Al-Hikmah* education (Anggraeni et al., 2025). This condition raises an urgent need to develop a more comprehensive and holistic alternative assessment approach, which can accommodate the multidimensionality of learning objectives in the *Al-Hikmah* tradition. The shift in the educational landscape towards a digital ecosystem has also had significant consequences for the construction of the professional identity of *Al-Hikmah* educators. Teachers who previously identified themselves as spiritual and intellectual guides are now faced with the expectation of becoming technology facilitators and digital learning designers. This transformation of professional identity often causes cognitive dissonance and existential crisis among educators, which has implications for the effectiveness of their pedagogical praxis in the context of educational digitalization. The complex dynamics between *Al-Hikmah* education and digital transformation form a rich and multifaceted research field. A systematic investigation of the interaction between traditional wisdom values and contemporary technological capabilities has the potential to yield theoretical and practical insights that can enrich educational discourse in the digital age. A comprehensive study of the role and challenges of educators in the context of *Al-Hikmah* education in the digital era is becoming increasingly urgent, considering the acceleration of technology adoption in the realm of education which is predicted to continue in the coming decade (Hamzah et al., 2023).

Multilateral considerations on how digital technology can be directed to strengthen, not replace, the interpersonal relationship between teachers and students that are the foundation of *Al-Hikmah* education also needs special attention. The phenomenon of dehumanization of education, which is often associated with excessive digitalization, presents an existential challenge for the education model that emphasizes the importance of a dialogical and transformative relationship between educators and students (Arifah et al., 2023). In this context, the exploration of how technology can be reconfigured to reinforce, rather than degrade, the relational dimension of *Al-Hikmah* education becomes an intellectual imperative that cannot be ignored. The conceptualization of *Al-Hikmah* education in the digital context requires a deep understanding of the basic philosophy that underpins it. According to (Aaron, 2023), *Al-Hikmah* education is an integrated philosophical system that aims to produce highly civilized individuals with a solid identity and noble character, based on the wisdom messages of Luqman al-Hakim. In line with that, digital transformation in education requires a reorientation of fundamental values without sacrificing the essence of wisdom that is the spirit of Islamic education (Wiratama, 2011). This complexity poses a substantive challenge for educators to balance the technological approach with the need for holistic character development which is the main goal of *Al-Hikmah* education. (Yunus, 2017) underlines that *Al-Hikmah* education does not only transmit knowledge, but also facilitates the acquisition of practical wisdom that leads towards the worldly and ukhrawi. This challenge is further complicated by accelerating social changes that demand methodological reconstruction in the education system (Zaizul et al., 2014). In contemporary dynamics, education cooperatives can be an effective instrument in developing the leadership capacity of students (Nazirah et al., 2018), while the universal fraternity approach based on Islamic wisdom can strengthen the ethical dimension of *Al-Hikmah* education in the era of digital disruption (Zaki, 2021).

This systematic research aims to comprehensively analyze the roles and challenges faced by educators in the context of *Al-Hikmah* education in the digital era. Through a systematic literature review approach, this study will identify, evaluate, and synthesize empirical and theoretical findings from various recent studies that explore the intersection between *Al-Hikmah* education and digital transformation. The results of this study are expected to contribute to the development of a more robust conceptual framework to understand and respond to the complex dynamics of *Al-Hikmah* education in the contemporary digital landscape, as well as provide an empirical foundation for the formulation of more adaptive and transformative educational policies and practices. The massive digital transformation in recent decades has fundamentally changed the educational landscape. This era of digitalization has not only overhauled the way knowledge is transmitted, but also restructured the entire paradigm of learning and teaching at various levels of education (Siringoringo & Alfaridzi, 2024). In this context, *Al-Hikmah* education an educational concept based on wisdom, transcendental values, and the formation of holistic character faces significant challenges to maintain its essence while adapting to the demands of the digital era. Digitization of education brings a duality of impact, on the one hand offering opportunities to expand learning reach, but on the other hand it has the potential to distort the fundamental values of *Al-Hikmah* education if not integrated wisely (Sihombing et al., 2024).

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Research Methodology

This investigation applies the Systematic Literature Review (SLR) methodology as a structured approach to identify, evaluate, and synthesize the latest research findings on *Al-Hikmah* education in the context of the digital era. The SLR procedure is constructed by adapting the methodological framework recommended by Khan et al. (2020), including a series of stages that are implemented sequentially and systematically to ensure the comprehensiveness and quality of the review results. The research initiation stage begins with the formulation of research questions that are structured using the PICO (Population, Intervention, Comparison, Outcome) framework. Population in this context refers to educators who implement the *Al-Hikmah* approach; the intervention includes a variety of digital technology integration strategies; The comparison involves a traditional pedagogical approach versus a digital-based approach; while the outcomes evaluated include learning effectiveness, resilience of *Al-Hikmah's* fundamental values, and transformation of the role of educators.

Literature exploration is carried out through systematic searches in several leading scientific repositories, including Scopus, Web of Science, ERIC, ProQuest Education Database, and special databases for Islamic studies such as the Index Islamicus. Search strategies are developed by combining a set of relevant keywords using Boolean operators (AND, OR) to maximize search sensitivity and specificity. The main search terms include: "Al-Hikmah education", "Islamic wisdom pedagogy", "digital education", "technology integration", "teacher roles", "educational transformation", and their variations. Inclusion parameters were established to screen studies that met the following criteria: (1) published in the 2020-2025 temporal range, (2) in English or Arabic, (3) be a peer-reviewed journal article, indexed conference proceedings, or credible institutional research report, (4) explicitly address the integration of the *Al-Hikmah* approach with digital technology, and (5) focus on the role or challenge of educators. In contrast, exclusion criteria include: (1) non-empirical literature such as opinion or editorial, (2) studies that only discuss Islamic education in general without specific reference to the concept of *Al-Hikmah*, and (3) publications that focus exclusively on technical aspects without a pedagogical or philosophical dimension.

Literature selection is carried out through a gradual process, starting with a scan of titles and abstracts to eliminate studies that are clearly irrelevant, followed by a full-text evaluation of articles that pass the initial selection. To minimize selection bias, the assessment process was carried out independently by two researchers, involving a third researcher to resolve disagreements through deliberative consensus. Evaluation of the methodological quality of each selected study was carried out using critical assessment instruments adapted to accommodate the diversity of research designs, including qualitative, quantitative, and mixed methods studies. The aspects evaluated include conceptual coherence, methodological rigidity, credibility of findings, and contextual relevance. Data extraction from studies that met the criteria was carried out using a standardized format that comprehensively documented bibliographic information, research characteristics, methodology, key findings, and theoretical and practical implications. Inductive thematic analysis is applied to identify, categorize, and synthesize emergent themes related to the role and challenges of educators in implementing the *Al-Hikmah* approach in a digitalized learning environment. Throughout the process, transparency and reproducibility are upheld through comprehensive documentation of each methodological stage, including subjective decisions taken during the selection and analysis process. Methodological limitations are also explicitly articulated to facilitate a more contextual and critical interpretation of the results.

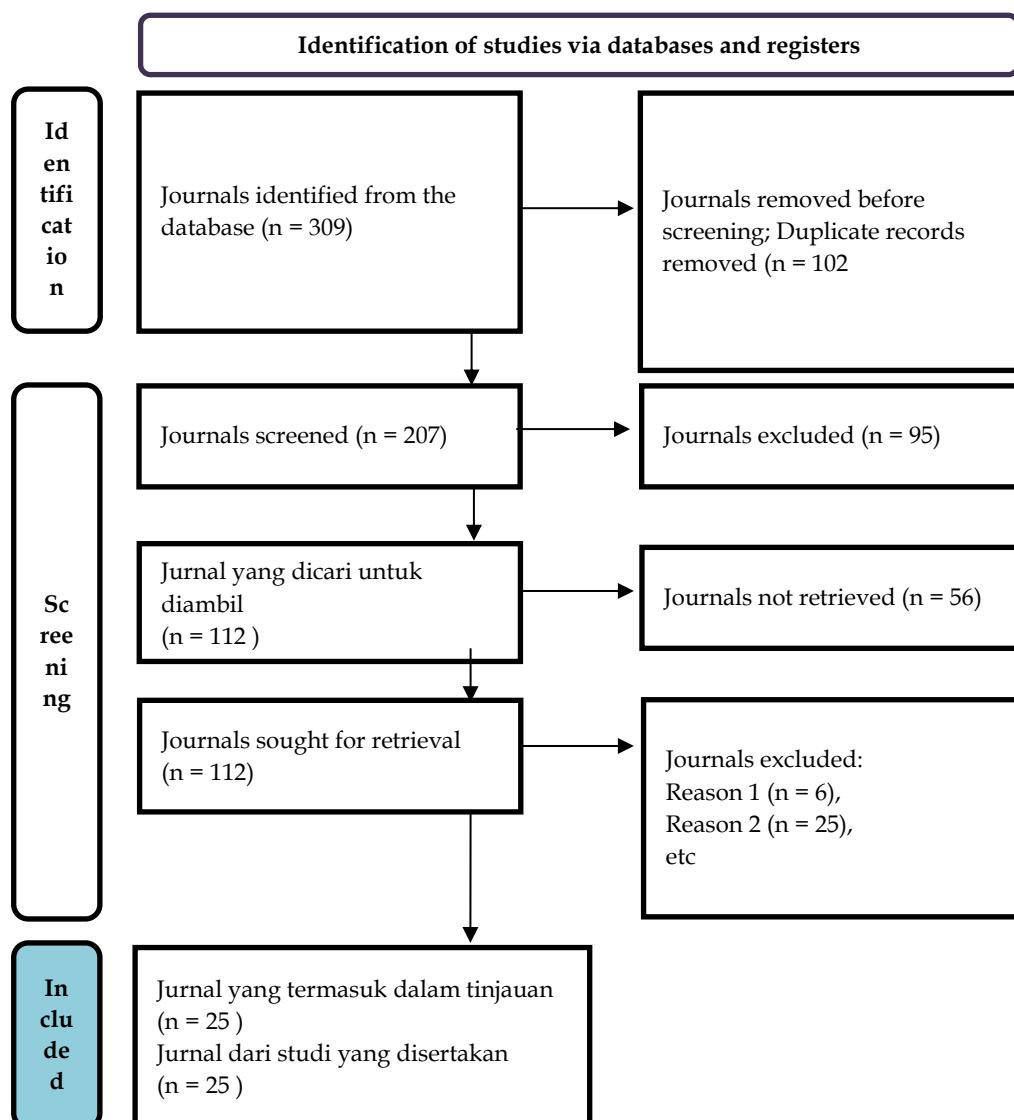


Figure 01. Flowchart Prisma

Discussion and Findings

Table 1

Journal Synthesis

o	N ng	Headi	Author & Year	Research Objectives	Research Methods	Key Results & Findings	Relevance to SLRs and Interactive Digital Media
1	Exploring the intersection of Islam and digital technology: A bibliometric analysis		(Wahid, 2024)	Identify key developments and trends in digital Islamic studies, including influential authors, collaboration patterns, and theme evolution in the Scopus database literature from 1969-2024	Bibliometric and sentiment analysis using Biblioshiny, R-Studio, VOSViewer, and N-Vivo	Academic attention to Islam and digital technologies has increased since the early 2000s with the shift to online platforms for religious expression and community building. The integration of digital technology in Islamic practices increased from 2008 to 2021, with a focus on social media and mobile applications. Instagram has become an important space for the expression of Islamic identity since 2021. The study reveals how digital Islam blends conventional and modern techniques, uses a cross-disciplinary theoretical approach, and significantly engages women.	It is immediately relevant because it examines the intersection between Islam and digital technology, showing how digital platforms are a means for religious expression, education, and engagement. Highlights recent developments in the interactive digital media landscape related to Islamic practices and identities.
2	Facing the Challenges of Globalization: Transforming Madrasah Education from Bilingual to International Classrooms		(Supriyanto et al., 2025)	Analyze the process of transforming bilingual classes into international classes at MTs Ummusshabri Kendari and evaluate the community's response to the transformation	Case study approach; In-depth interviews, participatory observations, and document analysis	Transformation involves significant changes in curriculum, pedagogical approaches, and learning infrastructure. MTs Ummusshabri adopts the Cambridge curriculum integrated with the national curriculum and Islamic values. The main challenges include improving	It is relevant because it describes the transformation of Islamic education in the face of globalization and digitalization, including the adaptation of curriculum and learning infrastructure that integrates

				teacher competence, providing adequate facilities, and balancing international standards with madrasah identities. The response of the public, especially parents, has generally been positive, despite concerns regarding the cost of education and academic pressure.	international standards with Islamic values. Demonstrate how Islamic educational institutions respond to the need for global skills development including digital literacy.
3	Student's Attachment to Social Media and the Challenges of Moderate Islamic Education (Implementation During the Covid-19 Pandemic)	(Susanto & Dwijayanto, 2022)	Examining the problem of school-age children's dependence on gadgets and social media and analyzing the challenges of implementing moderate Islamic education during the Covid-19 pandemic	Literature research with descriptive methods; Primary data from a KPAI survey with 14,169 respondents in 34 provinces in Indonesia	It is very relevant because it identifies the challenges and opportunities of online learning in moderate Islamic education. Showing how attachment to social media can be directed towards positive educational outcomes, as well as the importance of supervision in the use of interactive digital media.
4	Islamic Education in England: Opportunities and Threats	(Erdoğan, 2020)	Evaluate religious education opportunities for Muslim families in the UK and analyse institutions or structures that provide Islamic education opportunities	Qualitative document analysis; Academic books and articles, statistical records, reports from state and private institutions, school curricula, school inspection reports, and court decisions	Relevant to providing an international perspective on Islamic education and its challenges. Highlighting the importance of standardizing the quality of education and handling stigma in the Islamic education system,

					limitations. Negative perceptions of Muslim schools and Islamophobia are also obstacles. Online practicum learning has a significant effect on students' understanding of concepts. Obstacles during online practicum learning include: availability of tools and materials, internet network instability, quota limitations, gadget quality, and lack of theoretical understanding related to practicum.	which also applies in the context of digital learning. It is immediately relevant because it examines the effectiveness of online learning in the development of concept understanding, identifies technical and pedagogical obstacles that need to be overcome in the implementation of interactive digital learning.
5	The Effect of Online Practicum Learning on Concept Understanding of UST Yogyakarta Science Student	(Susanti et al., 2022)	Analyzing the influence of online practicum learning on students' understanding of concepts	Quantitative descriptive; test instrument with 8 description questions; data analysis using the T test		
6	International Islamic University Malaysia's (IIUM) Islamic Education Teacher Trainees' Self-Efficacy during Teaching Practicum	(Nicka Puspita Sriminangga, 2013)	Exploring the self-efficacy of Islamic Education teacher trainers in three domains (curriculum design and implementation, teaching, and classroom assessment) during the practicum	Sequential exploratory mixed method; a survey of 56 Islamic Education students in their final year at IIUM; Interviews with four randomly selected trainer teachers	High level of self-efficacy among Islamic Education teacher trainers, especially in the use of technology (89.3%) and cooperation with peers and administrators (85.7%). Five areas of self-efficacy improvement: high-level teaching, differentiated teaching, classroom management, learning assessment, and lesson assessment.	It is relevant because it shows the high confidence of teachers in the use of technology, which is essential for the implementation of interactive digital media in teaching. Identify areas of development needed to improve teachers' digital competencies.
7	Analysis of emergency remote teaching in formal education: crosschecking three contemporary	(Kasperski et al., 2023)	Analyzed field reports from 89 Hebrew and Arabic-speaking ICT schools in Israel during the COVID-19 pandemic	Qualitative analysis based on three established models of technology integration and Educator	The analysis (n = 872 statements) yields aspects in the teacher's report that fit the theoretical model, along with the aspects that extend this model to the ERT and the	It is particularly relevant because it proposes a comprehensive framework for emergency

	techno-pedagogical frameworks		using three technology integration models	Digital Competencies (DigCompEdu)	missing aspects of the report. Based on the findings, the researcher proposes a comprehensive framework for ERT that can be used to design teacher professional development.	distance learning that can be applied to similar situations in the future, including the development of teachers' digital competencies and the implementation of technology in remote teaching.
8	Developing Indonesian language learning assessments: Strengthening the personal competence and Islamic psychosocial of teachers	(Sukenti et al., 2020)	Developing Indonesian learning assessments for high school teachers by strengthening Islamic personality and psychosocial competencies	Ex post facto approach; The questionnaire was distributed to 213 Indonesian teachers and analyzed descriptively and regressively	Teachers' mastery of personality competencies, Islamic psychosocial, and Indonesian assessment is at an intermediate level of mastery. Islamic personality and psychosocial competencies together are very strong in developing the ability to assess Indonesian language learning.	It is relevant because it emphasizes the importance of Islamic psychosocial aspects in the development of teacher competence, which also plays a role in the effectiveness of the use of interactive digital media and the formation of student self-regulation.
9	Islamic moderation in elementary school: strengthening the Aswaja Annadhliyah curriculum in preventing religious radicalism	(Ibda et al., 2024)	Improving teachers' ability to enrich, redesign, develop, and test the Ahlussunah Waljamaah (Aswaja) Annadhliyah curriculum in strengthening Islamic moderation	Participatory action research models Stephen Kemmis, Robin McTaggart, and Rhonda Nixon	Islamic moderation through strengthening the Aswaja Annadhliyah curriculum is carried out by enriching and redesigning the curriculum in terms of objectives, content/materials, methods/activities, and assessment/evaluation. The focus of development is on the basic principles of Aswaja, Ukhuwah Nahdliyah, and Mabadi Khaira Ummah in the aspects of fikrah, aqidah, harakah, and amaliyah.	It is relevant because it shows how the Islamic moderation curriculum can be developed and applied practically, which can be integrated with interactive digital media for the promotion of the values of moderation and the prevention of radicalism online.

0	1	The Development of Teaching Materials Based on Context and Creativity To Increase Students Scientific Literacy	(Rahmani et al., 2021)	Developing context-based teaching materials and creativity to improve science literacy of elementary school students	Research and Development (R&D); Preliminary Studies, Development of Teaching Materials, and Limited Trials with One-Shot Case Studies	The results of the analysis of the assessment of teaching materials by material experts showed that the content feasibility aspect was 90%, the presentation feasibility aspect was 78%, the language feasibility aspect was 83%, and the context and creativity assessment aspect was 92%. The assessment of media experts shows that the size of teaching materials is 69%, the cover is 86%, and the content design is 85%.	Relevant because it shows the development of high-quality teaching materials that integrate context and creativity, principles that can also be applied in the development of interactive digital media to improve science literacy and student self-regulation.
1	1	Challenges and Readiness of Islamic Education Teachers in Innovative Teaching and Learning	(Suhid et al., 2021)	Exploring technological innovations in today's education and their effects on Islamic Education teachers	Literature analysis	Identify obstacles to the implementation of technology education in Islamic education and offer solutions for the Islamic education system so that it does not lag behind in global development. Contribute to the strengthening of the Islamic education system to engage in innovation and transformation.	It is very relevant because it directly discusses the readiness and challenges of Islamic education teachers in adopting technological and learning innovations, identifying the need for adaptation of the Islamic education system to technological development s.
2	1	Importance performance analysis model for implementation in national education standards (SNPs)	(Mujahidin et al., 2021)	Analyzing the implementation of three national education standards (SNP) in Ummul Quro Islamic school (UQ) and the Bogor Hajj Brotherhood Foundation (YPHB)	Primary data from the questionnaire distributed to thirty respondents; analysis with the IPA (Importance-Performance Analysis) model	The application of management standards, graduate competency standards, and educator and education staff standards in UQ and YPHB Islamic boarding schools has been optimal with a level of compatibility between interests and performance at	Relevant because it highlights the importance of quality and management standards in Islamic educational institutions, which also applies to the implementation of interactive

						a very good level. Islamic educational institutions must strive to improve performance through the preparation of their respective duties, job descriptions, use of work procedures, and socialization management systems.	digital media and the development of self-regulatory learning.
3	1	Character Education between The Western Context and Islamic Perspective	(Sarwadi & Nashihin, 2023)	Comparing the concept of character education in the Western context and the Islamic perspective	Literature review	Character and Moral Education is a similar concept from the western context and the Islamic perspective. Islam's main sources for moral instruction are the Qur'an and Hadith, with the Prophet Muhammad PBUH as an example. The suggested approach to character education in Islam is based on a mental-spiritual approach through soul management, habituation, exemplary lifestyle, and a healthy environment.	It is relevant by showing the harmony between Western character education and Islamic perspectives, which can be integrated in the development of digital learning media that considers moral and moral values, as well as supporting students' self-regulation.
4	1	Selection of Alternative Strategies to Solve Online-Based Learning Problems	(Umam, 2020)	Identifying alternative strategies to address online learning problems	Not explicitly stated	Not explicitly mentioned in the abstract	Potentially relevant to SLR as it discusses alternative strategies for online learning, related to interactive digital media and possible solutions to improve its effectiveness.
5	1	Online Learning Triggers Moral Degradation of Education in the Era of the Covid 19 Pandemic	(Saifuddin & Hanik, 2020)	Discussing the decline in the quality of education and student morale in the era of the Covid-19 pandemic due to online learning	Library reset method	Online learning affects the character and morale of students because it is not carried out face-to-face and teachers cannot directly instill moral values. The character of students can change	It is relevant because it identifies moral challenges in online learning and emphasizes the need for strategies to instill moral

						to good or bad depending on the role of parents as teachers in learning from home.	values in distance learning, which is related to the development of digital media that considers moral aspects.
6	1	Efforts to Use Distance Learning Model to Improve the Spiritual Aspects of SD 2 Medini Students	(Rosmayanti, 2020)	Analyze the use of distance learning models to improve students' spiritual aspects	Not explicitly stated	Not explicitly mentioned in the abstract	Relevant because it discusses the integration of spiritual aspects in distance learning, which deals with SLR about Al-Hikmah education in the digital age and how spiritual values can be strengthened through interactive digital media.
7	1	Analysis of the Impact of the Merdeka Curriculum Policy on Stakeholders At Primary School	(Wardani et al., 2023)	Criticizing the policy aspects of the 2022 Independent curriculum for elementary schools in order to obtain a prescription for the future	Policy analysis in the form of narrative discussions	Changes in the 2022 Merdeka curriculum for elementary schools are incremental. The 2022 Merdeka Curriculum aims to restore the quality of learning that has regressed and prepare for the golden generation of 2045. The Character Education Strengthening Program and the Pancasila Student Profile Program show that ethical education is very important for the success of the golden generation.	It is relevant because it discusses the development of the latest national curriculum that needs to be integrated with a digital approach, and emphasizes the importance of character education which is also an important aspect of Al-Hikmah education.
8	1	Improving The Professional Teacher Competence Through Clinical Supervision Based on Multicultural	(Arifin et al., 2023)	To examine how clinical supervision activities can promote multiculturalism in Indonesia and improve	Qualitative approach; Data collection techniques through observation, documentatio	Clinical supervision activities for teachers in Islamic boarding schools begin with supervision planning, followed by microteaching	It is relevant because it shows the importance of supervision and professional development

		Values in Islamic Boarding Schools		teacher professionalism	n, interviews, and focused discussions	and observation activities. Teacher competency development is based on learning preparation, discussion, and the role of teachers as the main actors in clinical supervision activities. Multicultural value-based clinical supervision can improve pedagogic, personality, social, and professional competence.	of teachers in the context of Islamic education, including in the aspect of effective use of technology and digital media. A multicultural approach is also important in the development of inclusive digital media. It is relevant because it shows how basic skills in Islamic education (reading and writing the Qur'an) can be improved through systematic learning strategies, which can be strengthened with interactive digital media.
9	1	Learning Strategies for Reading and Writing the Quran: Improving Student Competence as Preservice Teachers at the Faculty of Tarbiyah and Teacher Training	(Hakim et al., 2022)	Critically analyze the strategies and policies applied in learning to read and write the Qur'an	Qualitative approach; Data collection through interviews, observations, and documentation studies	Learning the skills of reading and writing the Qur'an starts from mapping the abilities of all students, but the follow-up of the mapping is not realized in continuous learning. The intracurricular and extracurricular activities carried out can improve students' competence in reading and writing the Qur'an.	Relevant because it shows how basic skills in Islamic education (reading and writing the Qur'an) can be improved through systematic learning strategies, which can be strengthened with interactive digital media.
0	2	Exploring the Online Learning Experience of Filipino College Students During Covid-19 Pandemic	(Giray et al., 2022)	Understanding the online learning experience of Filipino college students enrolled in the 2020-2021 academic year during the COVID-19 pandemic	Qualitative surveys with open-ended questions; Thematic Analysis	Four themes were classified from the data collected: (1) negative views of online schools, (2) positive views of online schools, (3) difficulties faced in online schools, and (4) motivation to continue learning. Although many students find positive aspects of online learning, the majority of respondents have difficulty adapting due to issues related to technology, internet connectivity, mental health, finances, and time and space management.	Relevant because it highlights the experiences and challenges of online learning from a student's perspective, which provides insights for the development of more effective interactive digital media and considers the needs of users.

1	2	Attitudes Toward the Integration of Digital Games Into Instruction in Teacher Education Colleges During the Covid-19 Pandemic	(Avidov-Ungar & Hayak, 2022)	Examining how senior academic staff from a large sample of teacher education colleges view the integration of digital games into teacher teaching	Semi-structured interviews; Interpretive-constructivist approach	The findings suggest that discussions around visions and policies related to technology and its application in practice should take into account the specific cultural needs and academic readiness of the population served by universities.	Relevant because it discusses the integration of digital games in teacher education instruction, showing the importance of considering cultural context and academic readiness in the application of educational technology, including interactive digital media.
	2	Development of Religious Education in Junior High Schools for Sustainable Development Goals (Sdgs): a Study in Surakarta	(Inayati et al., 2025)	Analyzing the pattern of religious education development in elite junior high schools in Surakarta to support the achievement of the SDGs	In-depth interviews, observation of the implementation of religious programs, and documentation	Both schools implement a pattern of religious education that is integrated with the national curriculum through excellent programs such as memorization of the Qur'an, thematic-based Islamic studies, and social activities relevant to SDGs values, such as social inclusion and environmental concern. These programs not only enhance students' religious understanding but also shape their character as a generation that is aware of social and environmental responsibility.	Relevant because it shows how Islamic education can be integrated with sustainable development goals, highlighting the potential of interactive digital media to support religious education relevant to contemporary issues and character building.
	2	Fostering self-regulated learning skills through flipped learning strategy projects: an exploration of pre-service teachers' experiences in Indonesia	(Alfurqan et al., 2024)	Exploring the perceptions, challenges, and skill acquisition of prospective Islamic Studies teachers who implement a flipped learning strategy (FLS) project during	Mixed method approach; questionnaires, unstructured interviews, and written reflections	The perception of FLS implementation is very positive, recognizing its potential to improve technological skills, effective time management, and student engagement. Challenges include students' resistance to assignments outside the	It is very relevant because it directly examines the development of self-regulation skills through reverse learning strategies, which is an approach that

				their initial field practice		classroom and subject-specific obstacles. Qualitative data analysis highlights the development of multifaceted SRL skills, including cognitive engagement, metacognitive knowledge, resource management, and motivational beliefs.	utilizes interactive digital media. Demonstrating the effectiveness of this approach in the context of Islamic teacher education.
4	2	Cluster-Mentoring for Sustainable Competency: A Case Study of PTK Training for Islamic Education Teachers in Junior High Schools	(Mubin et al., 2023)	Investigating the effectiveness of the Cluster-Mentoring-based mentor program in supporting the sustainability of the competency program for Islamic Education teachers at the junior high school level in Sleman Regency	Case studies; observations, online interviews, and documentation	The PTK and Mendeley training programs based on Zoom meetings with Cluster-Mentoring methods and practices have succeeded in increasing the understanding of Islamic Education teachers about PTK preparation. The training was practical, with 63% of teachers having no trouble finding research problems, 57% having no trouble creating a background to the problem, and 70% finding Mendeley's app training easy to understand. Cluster-Mentoring grouping helps participants understand the material better.	It is relevant because it shows the effectiveness of the group mentoring approach in developing the competence of Islamic Education teachers, including in the use of technology. This model can be adapted for skill development in the use of interactive digital media.
5	2	Integration of Islamic and Indonesian Education in the Perspective of KH. Salahuddin Wahid	(Rosyidin & Arifin, 2021)	Understanding the integration of Islam and Indonesia from the perspective of KH. Salahuddin Wahid, including his influence on education issues	Qualitative approach with literature study and descriptive-analytical data analysis	Integration in education occurs through various approaches, including (1) internalization of religious values, (2) strengthening character and moral education through Islamic religious education, (3) combining religious and non-religious education, (4) combining Islamic religious education with science and technology. (5)	It is relevant because it shows an integrative approach between Islamic education and Indonesian national education, including the merger of religious education with science and technology.

equalization and improvement of the quality of Islamic boarding schools, (6) promoting Islamic history education in Indonesia, and (7) promoting Aswaja and NU education.	This integration model provides a conceptual framework for the development of interactive digital media that balances Islamic values with technological advancement s.
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Transformation of Islamic Education in the Digital Era

The development of digital technology has changed the landscape of Islamic education significantly. Wahid (2024) points out that academic attention to the integration of Islam and digital technologies has increased rapidly since the early 2000s, with a substantive shift towards online platforms for religious expression and community building. The use of social media and mobile apps in Islamic practices has increased dramatically between 2008 and 2021, with Instagram becoming an important space for the expression of Islamic identity since 2021. These findings illustrate how Islamic educational institutions need to adapt to technological advances. In line with this, (Supriyanto et al., 2025) outlining the transformation of the madrasah from a bilingual approach to an international class, which includes significant changes in the curriculum, pedagogical methods, and learning infrastructure that integrates digital technology. This transformation requires increasing teacher competence, providing adequate facilities, and balancing international standards with madrasah identity.

In this context, (Ibda et al., 2024) demonstrating how the Islamic moderation program through strengthening the Aswaja Annahdliyah curriculum can be developed and implemented effectively in the digital education environment. The focus of development includes the basic principles of Aswaja, Ukhuwah Nahdliyah, and Mabadi Khaira Ummah in the aspects of fikrah, aqidah, harakah, and amaliyah which can be integrated with interactive digital media. (Rosyidin & Arifin, 2021) expand this discussion by analyzing the perspective of KH. Salahuddin Wahid on the integration of Islamic and national education through seven approaches, including the internalization of religious values, the strengthening of character education, and the merger of religious education with science and technology, which provides a conceptual framework for the development of digital learning media that balances Islamic values with technological advancements.

The Role of Interactive Digital Media in Improving Student Self-Regulation

Interactive digital media has a crucial role in improving students' self-regulation skills. (Alfurqan et al., 2024) explore the implementation of flipped learning strategies that utilize interactive digital media to develop self-regulation skills in prospective Islamic Studies teachers. Their research reveals a positive perception of this approach, despite challenges in the form of students' resistance to assignments outside the classroom. The analysis showed the development of multifaceted self-regulation skills, including cognitive engagement, metacognitive knowledge, resource management, and motivational beliefs.

(Susanti et al., 2022) Strengthen this understanding by examining the influence of online practicum learning on students' understanding of concepts. Although digital learning has been proven to have a significant effect on concept understanding, obstacles such as the availability of tools, internet network instability, quota limitations, gadget quality, and lack of theoretical understanding are obstacles that need to be overcome. (Susanto & Dwijayanto, 2022) adding an important dimension by examining how school-age children's attachment to gadgets and social media can be directed to strengthen moderate Islamic values through well-supervised educational content, thereby preventing exposure to narratives of intolerance, extremism, and radicalism.

(Rahmani et al., 2021) contribute an understanding of the development of context-based teaching materials and creativity that can be implemented in interactive digital media. The results of their analysis showed a high level of feasibility in terms of content (90%), presentation (78%), language (83%), and assessment of context and creativity (92%), providing a standard for the development of quality digital content. (Sarwadi & Nashihin, 2023) complementing the discussion by showing the harmony between Western character education and Islamic perspectives, with a mental-spiritual approach through soul management, habituation, role models, and a healthy environment that can be integrated in digital learning media to support students' self-regulation.

Challenges and Strategies for Developing Teachers' Digital Competencies in Al-Hikmah Education

Teachers face various challenges in adopting digital technology for *Al-Hikmah* education. (Suhid et al., 2021) identify obstacles to the implementation of technology education in Islamic education and offer solutions so that the Islamic education system does not lag behind in global development. (Kasperski et al., 2023) provides a comprehensive framework for emergency distance learning based on the analysis of reports from 89 schools, which can be used to design teachers' professional development in the implementation of distance teaching technology. Ismail et al. (2024) reported a high level of self-efficacy among Islamic Education teacher trainees, especially in the use of technology (89.3%) and collaboration with colleagues (85.7%), but also identified five areas that need improvement: high-level teaching, differentiated teaching, classroom management, learning assessment, and lesson assessment. (San Mikael Sinambela et al., 2024) demonstrated the effectiveness of the Cluster-Mentoring approach in Classroom Action Research training for Islamic Education teachers, with the result that 63% of teachers had no trouble finding research problems and 70% felt that Mendeley's application training was easy to understand. This grouping method has been proven to help participants understand the technology material better. (Arifin et al., 2023) It adds an important dimension by demonstrating how multicultural value-based clinical supervision can improve teachers' pedagogic, personality, social, and professional competencies, including in the effective use of technology and digital media.

Moral challenges in digital learning have also received attention. (Saifuddin & Hanik, 2020) Identifying the potential for moral degradation in online learning due to the limitations of direct interaction, emphasizing the need for strategies to instill moral values in distance learning. (Rosmayanti, 2020) expand the discussion by analyzing the distance learning model

to improve the spiritual aspects of students, which are closely related to the integration of *Al-Hikmah* values in interactive digital media. (Sukenti et al., 2020) highlighted the importance of Islamic psychosocial aspects in the development of teacher competence, which plays a role in the effectiveness of the use of interactive digital media and the formation of student self-regulation. Overall, *Al-Hikmah* education in the digital era requires a holistic approach that integrates Islamic values with technological advancements, considers the development of student self-regulation, and improves teachers' digital competencies through continuous training and institutional support.

Conclusion

Al-Hikmah education in the digital era faces significant challenges and opportunities in adapting the values of Islamic wisdom to technological developments. The study shows that while digitalization can expand access to education, there is a risk of degradation of spiritual and moral values if not integrated wisely. Educators in the *Al-Hikmah* system are required to develop multidimensional competencies, which include digital literacy, technology-based pedagogy, and a philosophical understanding of the implications of digitalization on transcendental values. Blended learning methodology is a potential solution in maintaining a balance between conventional and digital learning. In addition, student self-regulation is a crucial aspect that needs to be developed so that they can make optimal use of digital media without losing their moral and spiritual orientation. Educators who are able to adapt the *Al-Hikmah* approach with technology tend to be more effective in internalizing wisdom values to students. Therefore, a more comprehensive assessment framework is needed to measure the effectiveness of the integration of *Al-Hikmah* education in the digital environment, which includes spiritual, ethical, and intellectual dimensions in a balanced manner. This research contributes to providing insights for the development of educational policies and practices that are more adaptive to the digital era without sacrificing the fundamental values of *Al-Hikmah* education.

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References

- Alfurqan, Fakhruddin, A., Narulita, S., & Handrianto, C. (2024). Fostering self-regulated learning skills through flipped learning strategy projects: an exploration of pre-service teachers' experiences in Indonesia. *Perspektivy Nauki i Obrazovania*, 72(6), 154–170. <https://doi.org/10.32744/pse.2024.6.10>
- Anggraeni, D., Afroni, A., & Zubaidah, A. (2025). *Adaptation and Transformation of Islamic Boarding School Education in Facing The Era of Muslim Society* 5. 0. 7(3), 705–726.
- Arifah, S., Arnidah, A., & Haling, A. (2023). Development of character education digital book students class VIII SMPIT Al-Hikmah Pangkajene. *Curriculum Innovation*, 20(2), 289–304.
- Arifin, S., Sutama, Aryani, S. A., Prayitno, H. J., & Waston. (2023). Improving The Professional Teacher Competence Through Clinical Supervision Based on Multicultural Values in

- Islamic Boarding School. *Nazhruna: Journal of Islamic Education*, 6(3), 386–402. <https://doi.org/10.31538/nzh.v6i3.4037>
- Avidov-Ungar, O., & Hayak, M. (2022). Attitudes Toward the Integration of Digital Games Into Instruction in Teacher Education Colleges During the Covid-19 Pandemic. *Journal of Information Technology Education: Research*, 21, 623–639. <https://doi.org/10.28945/5037>
- Choli, I., & Fikri Rachman, M. (2023). the Role of Islamic Religious Education Teachers in Increasing Students' Religious Awareness. *Al-Risalah*, 14(2), 316–327. <https://doi.org/10.34005/alrisalah.v14i2.2638>
- Erdoğan, İ. (2020). İngiltere'de İslam Eğitimi: Fırsatlar ve Tehditler. *Cumhuriyet İdiyat Dergisi*, 24(2), 687–714. <https://doi.org/10.18505/cuid.703185>
- Giray, L., Gumalin, D., Jacob, J., & Villacorta, K. (2022). Exploring the Online Learning Experience of Filipino College Students During Covid-19 Pandemic. *Peuradeun Scientific Journal*, 10(1), 227–250. <https://doi.org/10.26811/peuradeun.v10i1.691>
- Hakim, R., Ritonga, M., Khodijah, K., Zulmuqim, Z., Remiswal, R., & Jamalyar, A. R. (2022). Learning Strategies for Reading and Writing the Quran: Improving Student Competence as Preservice Teachers at the Faculty of Tarbiyah and Teacher Training. *Education Research International*, 2022. <https://doi.org/10.1155/2022/3464265>
- Harun, H. (2023). Al-Hikmah Educational Philosophy In Character Formation. *Nucl. Phys.*, 13(1), 104–116.
- Humairah, A. E., Ramli, R., Ahmad, L. O. I., & Sakka, A. R. (2023). Holistic Learning in the Perspective of the Qur'an and Hadith. *Journal of Semiotics-Q: A Study of the Science of the Quran and Tafsir*, 3(2), 223–239. <https://doi.org/10.19109/jsq.v3i2.21638>
- Ibda, H., Wijanarko, A. G., Azizah, F. N., Amnillah, M., & Ro'uf, A. (2024). Islamic moderation in elementary school: strengthening the Aswaja Annadhliyah curriculum in preventing religious radicalism. *Journal of Education and Learning*, 18(4), 1246–1253. <https://doi.org/10.11591/edulearn.v18i4.21821>
- Inayati, N. L., Mustofa, T. A., Rohmani, A. F., Anggraini, F. N., & Muthoifin. (2025). Development of Religious Education in Junior High Schools for Sustainable Development Goals (SDGs): a Study in Surakarta. *Journal of Lifestyle and SDG'S Review*, 5(2), 1–22. <https://doi.org/10.47172/2965-730X.SDGsReview.v5.n02.pe04411>
- Kasperski, R., Porat, E., & Blau, I. (2023). Analysis of emergency remote teaching in formal education: crosschecking three contemporary techno-pedagogical frameworks. *Research in Learning Technology*, 31(1063519), 1–14. <https://doi.org/10.25304/rlt.v31.2982>
- Marhani, & Astuti, A. R. T. (2024). Meta-Analysis of Children's Moral Education in the Digital Era: A Bibliometric Analysis (1977-2021). *Khizanah al-Hikmah : Journal of Library, Information, and Archives Science*, 12(1), 172–182. <https://doi.org/10.24252/kah.v12i1a14>
- Mubin, M. N., Kim, M., & Fauziah, A. (2023). *ClusterMentoring-for-Sustainable-Competency-A-Case-Study-of-PTK-Training-for-Islamic-Education-Teachers-in-Junior-High-Schools_2023_Yogyakarta-Jurusan-Pendidikan-Agama-Islam-Fakultas-Ilmu-Tarbiyah-dan-Keguruan-UIN-Sun.pdf*. 20(1).
- Mujahidin, E., Syamsuddin, Nurhayati, I., Hafidhuddin, D., Bahruddin, E., & Endri, E. (2021). Importance performance analysis model for implementation in national education standards (SNPs). *Academic Journal of Interdisciplinary Studies*, 10(5), 114–128. <https://doi.org/10.36941/ajis-2021-0127>

- Nazirah, S., Zahrin, A., Perdani, R., & Sawai. (2018). Evaluation to School Cooperatives in Shaping Student Leadership Styles. *Al-Hikmah Journal*, 6(June), 107–121.
- Nicka Puspita Sriminangga. (2013). Strategic Planning Of Information Technology At The Annur li Al-Murtadlo Malang Islamic Boarding School Using The Wetherbe Method. *Journal of Technology*, 1(1), 69–73.
- The Development of Teaching Materials Based on Context and Creativity To Increase Students Scientific Literacy. *Peuradeun Scientific Journal*, 9(2), 345–364. <https://doi.org/10.26811/peuradeun.v9i2.506>
- Rosmayanti, E. (2020). Efforts to use the distance learning model to improve the spiritual aspects of SD 2 Medini students. *The Urgency of Multicultural Education in Indonesia in Islamic Religious Education*, 1(1), 35–46.
- Rosyidin, M. A., & Arifin, I. (2021). Integration of Islamic and Indonesian Education in the Perspective of KH. Salahuddin Wahid. *Journal of Islamic Religious Education*, 18(2), 227–256. <https://doi.org/10.14421/jpai.2021.182-02>
- Sahri, S., & Aziz, S. (2023). The Role of Pesantren as Traditional Islamic Education Institutions in the Digital Era. *Sahri*, 13(1), 98–112.
- Saifuddin, M. A., & Hanik, E. U. (2020). Online Learning Triggers Moral Degradation of Education in the Era of the Covid 19 Pandemic. *Al Hikmah: Journal of Education*, 1(2), 193–200. <https://doi.org/10.54168/ahje.v1i2.24>
- San Mikael Sinambela, Joy Novi Yanti Lumbantobing, Mima Defliyanti Saragih, Al Firman Mangunsong, Chairun Nisa, Johan Pardamean Simanjuntak, & Jamaludin Jamaludin. (2024). The Digital Divide in the World of Education Today and in the Future. *Journal of Indonesian Education Stars*, 2(3), 15–24. <https://doi.org/10.55606/jubpi.v2i3.3003>
- Sarwadi, S., & Nashihin, H. (2023). Character Education between The Western Context and Islamic Perspective. *Al Hikmah: Journal of Education*, 4(1), 1–12. <https://doi.org/10.54168/ahje.v4i1.146>
- Sihombing, A. S., Rahardjo, R. S., & Ichsan Fauzi Rachman... (2024). The Role of Teachers and Educators in Encouraging Digital Literacy for Sustainable Development. *MERDEKA: Scientific Journal ...*, 1(3), 360–370.
- Siringoringo, R. G., & Alfaridzi, M. Y. (2024). The Influence of Learning Technology Integration on the Effectiveness and Transformation of the Digital Era Education Paradigm. *Journal of Yudistira: Research Publications of Education and Language*, 2(3), 66–76.
- Suhid, A., Naser, M. Y. M., Ahmad, A. M., A. M., Abah, N. C., Jusoh, R., & Zaremohzzabieh, Z. (2021). Challenges and Readiness of Islamic Education Teachers in Innovative Teaching and Learning. *Peuradeun Scientific Journal*, 9(2), 293–308. <https://doi.org/10.26811/peuradeun.v9i2.588>
- Sukenti, D., Tambak, S., & Charlina. (2020). Developing indonesian language learning assessments: Strengthening the personal competence and islamic psychosocial of teachers. *International Journal of Evaluation and Research in Education*, 9(4), 1079–1087. <https://doi.org/10.11591/ijere.v9i4.20677>
- Supriyanto, Hadisi, L., Parin, Dirman, & Raehang. (2025). Facing the Challenges of Globalization: Transforming Madrasah Education from Bilingual to International Classrooms. *Nazhruna: Journal of Islamic Education*, 8(1), 17–30. <https://doi.org/10.31538/nzh.v8i1.125>
- Susanti, S., Ernawati, T., & Erlangga, S. Y. (2022). The Effect of Online Practicum Learning on Concept Understanding of UST Yogyakarta Science Student. *Al Hikmah: Journal of Education*, 3(1), 79–92. <https://doi.org/10.54168/ahje.v3i1.99>

- Susanto, & Dwijayanto, A. (2022). Student's Attachment To Social Media And The Challenges Of Moderate Islamic Education (Implementation During the Covid-19 Pandemic). *Peuradeun Scientific Journal*, 10(2), 331–352. <https://doi.org/10.26811/peuradeun.v10i2.728>
- Umam, S. (2020). Selection of strategies as an alternative solution to online-based teaching problems. *The Urgency of Multicultural Education in Indonesia in Islamic Religious Education*, 1(1), 35–46.
- Wahid, S. H. (2024). Exploring the intersection of Islam and digital technology: A bibliometric analysis. *Social Sciences and Humanities Open*, 10(March), 101085. <https://doi.org/10.1016/j.ssaho.2024.101085>
- Wardani, H. K., Sujarwo, Rakhmawati, Y., & Cahyandaru, P. (2023). Eanalysis of the Impact of the Merdeka Curriculum Policy on Stakeholders At Primary School. *Peuradeun Scientific Journal*, 11(2), 513–530. <https://doi.org/10.26811/peuradeun.v11i2.801>
- Wiratama, A. (2011). The concept of Islamic education and its challenges according to Syed Muhammad Naquib al-Attas. *At-Ta'dib*, 5(1), 27–41. <https://doi.org/10.21111/at-tadib.v5i1.582>
- Yunus, M. (2017). Education Of Al-Hikmah In The Qur'an (Analysis of Madhui Tafsir). *Al-Hikmah Education in the Qur'an (Analysis of Maudhui's Tafsir) EDUCATION, IV*, 205–212.
- Zaizul, Rahman, Ismail, I., & Ismail, K. (2014). Strategy Of The *Balanced Human Development Model For Religious Studies (PISPA) Based On Ibn Khaldun's Theory Of Social Change In Religious Studies At The National University Of Malaysia*. 6(2), 43–52.
- Zaki, H. A. H. (2021). *Islamic wisdom about human brotherhood and coexistence with others*. 19, 2021.