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Insan Kamil-Oriented Islamic Higher Education in Society 5.0: A Systematic Literature Review of Digital Transformation, Curriculum Integration, and Value-Based Islamic Leadership

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ABSTRACT

Purpose – This study formulates an integrative conceptual model of Islamic education at Islamic Religious Higher Education Institutions (PTKIS) in the Society 5.0 era by linking the orientation of insan kamil, digital technology, an Islamic curriculum, and value-based Islamic leadership to prevent the reduction of education into a merely technical process and the risk of dehumanization.

Design/methods/approach – The study used a conceptual design through a systematic literature review for the period 2020 to 2025. Searches were conducted in Scopus, Google Scholar, DOAJ, and accredited national journal portals using keywords related to Islamic education, insan kamil, Society 5.0, PTKIS, and digital transformation. Of 412 identified articles, 62 articles passed the inclusion criteria through title screening, abstract screening, and full review. Data were analyzed using thematic analysis and descriptive mapping.

Findings – The literature was dominated by conceptual studies or literature studies (40 of 62; 65%), indicating a gap in empirical evidence. Four main themes were identified: integration of Islamic curriculum and pedagogy with technology; Islamic digital leadership and governance; adoption of key technologies and ethical dilemmas; and character and spirituality formation in digital spaces. The synthesis produced an Input-Process-Output-Outcome framework grounded in Islamic values and spirituality, with outputs of spiritual-moral, critical-intellectual, digital-technological, and social-collaborative competencies that lead to insan kamil.

Research implications – This model guides PTKIS in integrative curriculum design, strengthening digital literacy and artificial intelligence ethics, developing e-leadership based on amanah, adil, and ihsan, and collaboration of the campus, family, and community ecosystems.

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1. Introduction

The development of the Society 5.0 concept originating from Japan marks a major shift in the orientation of global development, in which digital technology is no longer viewed merely as a production tool, but as an instrument to realize a human-centered society. This transformation integrates artificial intelligence, the internet of things, big data, and cyber technology to address social problems while improving quality of life (Fukuda, 2020; Nakazato et al., 2020). In education, Society 5.0 opens major opportunities for the creation of learning ecosystems that are more adaptive, inclusive, and personal. However, this change also requires a clear value orientation so that digitalization does not lead to dehumanization or merely the industrialization of knowledge. Therefore, education needs to combine technological aspects with moral and spiritual foundations so that it does not lose direction.

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The global digitalization of education has increasingly accelerated, especially since the COVID-19 pandemic forced learning systems to shift to the online domain (UNESCO, 2019). Digital transformation is an urgent need for the education sector in order to remain relevant to societal developments (OECD, 2021). Digital literacy is seen as a 21st-century competence that must be mastered by both learners and educators (OECD, 2021). In Indonesia, efforts to digitalize education have been ongoing, but they still face constraints in the form of infrastructure gaps, limitations in human resources, and low digital literacy among educators and students (Novriana & Soegoto, 2023; Restalia & Khasanah, 2025). This condition shows that digitalization cannot be understood only as a technical process, but also as a social process that requires cultural, ethical, and value readiness.

In the context of Islamic education, the main goal to be achieved is the formation of insan kamil, namely individuals who have balance between spiritual, moral, intellectual, and social dimensions. This concept not only emphasizes mastery of knowledge, but also the integration of faith values and noble character as the foundation of character (Al-Attas, 1993; Nasr, 2007). Therefore, digital transformation in the environment of Islamic Religious Higher Education Institutions (PTKIS) must be directed toward achieving insan kamil, not merely technological adaptation. Several studies emphasize that the formation of insan kamil in the Society 5.0 era is only possible through a curriculum that combines technology with Islamic values (Baizhuma et al., 2025; Husni & Atoillah, 2022). Thus, Islamic education has the opportunity to make a unique contribution to the development of a digital society that remains grounded in spirituality.

Although discourse on insan kamil and Society 5.0 is increasingly discussed, the existing literature still shows a number of gaps. International research more often emphasizes technical aspects of Society 5.0, such as the adoption of cutting-edge technology, smart campuses, and digital innovation for educational efficiency (Mourtzis et al., 2022; Narvaez Rojas et al., 2021). In contrast, national research tends to be normatively conceptual and is still limited in empirical testing (Sutrisno, 2024; Troisi et al., 2024). This indicates that there has not been a comprehensive study that truly connects Islamic values, technology, and the concept of insan kamil within the framework of Islamic higher education. In fact, the need for such an integrative framework is very urgent given that the challenges of the digital era are increasingly complex. Therefore, this study seeks to fill this gap through a conceptual analytical approach.

This article aims to synthesize the latest literature for the period 2020 to 2025 that discusses Islamic education, insan kamil, and Society 5.0. The synthesis process was conducted by critically reviewing sixty-two articles that met the inclusion criteria, both in terms of thematic relevance and methodological quality. The main objective of this study is to formulate an integrative conceptual model that is able to link an Islamic curriculum, value-based Islamic leadership, adoption of digital technology, and character-spirituality formation. This model is expected to become a theoretical foundation that enriches the literature on Islamic education while also providing conceptual direction for educational transformation in PTKIS. Thus, this study not only presents a literature review, but also produces a conceptual framework that is ready to be tested in further research.

The contribution of this study is divided into two aspects, namely theoretical and practical. Theoretically, this study reaffirms the relevance of the insan kamil concept as the main outcome of Islamic education in responding to Society 5.0. This approach distinguishes the study of Islamic education from global literature that tends to focus on technical and instrumental aspects. Practically, the resulting model can be used as guidance for PTKIS in formulating curricula, developing digitalization strategies, and strengthening adaptive Islamic leadership. In addition, the results of this study can provide orientation for national policy on digitalization of Islamic higher education that remains grounded in spirituality (OECD, 2021; Rohayati & Abdillah, 2024; UNESCO, 2019). Thus, this article is expected to make a real contribution in bridging the need between technological innovation and Islamic values.

2. Methods

2.1. *Research Design*

This study uses a conceptual design with a systematic literature review approach. The main focus of the study is not to conduct empirical testing on field data, but to synthesize various recent literature to build an integrative conceptual framework of Islamic education in the Society 5.0 era. With this approach, the study is directed toward identifying patterns, gaps, and integration across themes in the published literature (Snyder, 2019). A systematic literature review in a conceptual study functions to produce theoretical mapping that can serve as the basis for developing a new model (Snyder, 2019). Therefore, this study is situated within a conceptual analytical framework that emphasizes logical coherence, thematic integration, and theoretical contribution.

2.2. *Data Sources and Search Strategy*

The data sources of this study were obtained from academic articles accessed through several international and national databases, namely Scopus, Google Scholar, DOAJ, as well as accredited national journal portals. The publication range was limited to the period 2020 to 2025, considering that during this time the discourse on Society 5.0 and the digitalization of Islamic education became increasingly prominent in academic discussions. The keywords used in the search process include Islamic Education, Insan Kamil, Society 5.0, PTKIS, as well as other terms relevant to digital transformation in Islamic education. The search strategy was conducted using a combination of Boolean operators, year-range filters, and restrictions only to peer-reviewed publications. With this strategy, it is expected that the literature obtained is not only broad in scope, but also meets academic standards.

2.3. *Selection Criteria and Screening Process*

The literature selection process was carried out through three stages, namely initial screening, eligibility review, and determination of final inclusion. The established inclusion criteria include articles published in peer-reviewed journals, discussing Islamic education in relation to digital transformation or Society 5.0, and referring to aspects of *insan kamil* or Islamic values. Conversely, articles that were only opinions, book reviews, non-scholarly publications, or discussions of purely technology without linkage to Islam were excluded from the list. At the initial identification stage, 412 articles were obtained, which were then screened through title and abstract review so that the number decreased significantly. The eligibility process was conducted by reading the full text to assess methodological quality and substantive relevance, until finally 62 articles remained that were eligible to be analyzed. This process is in line with the transparency standards of literature reviews, similar to the PRISMA procedure although it is applied in conceptual research.

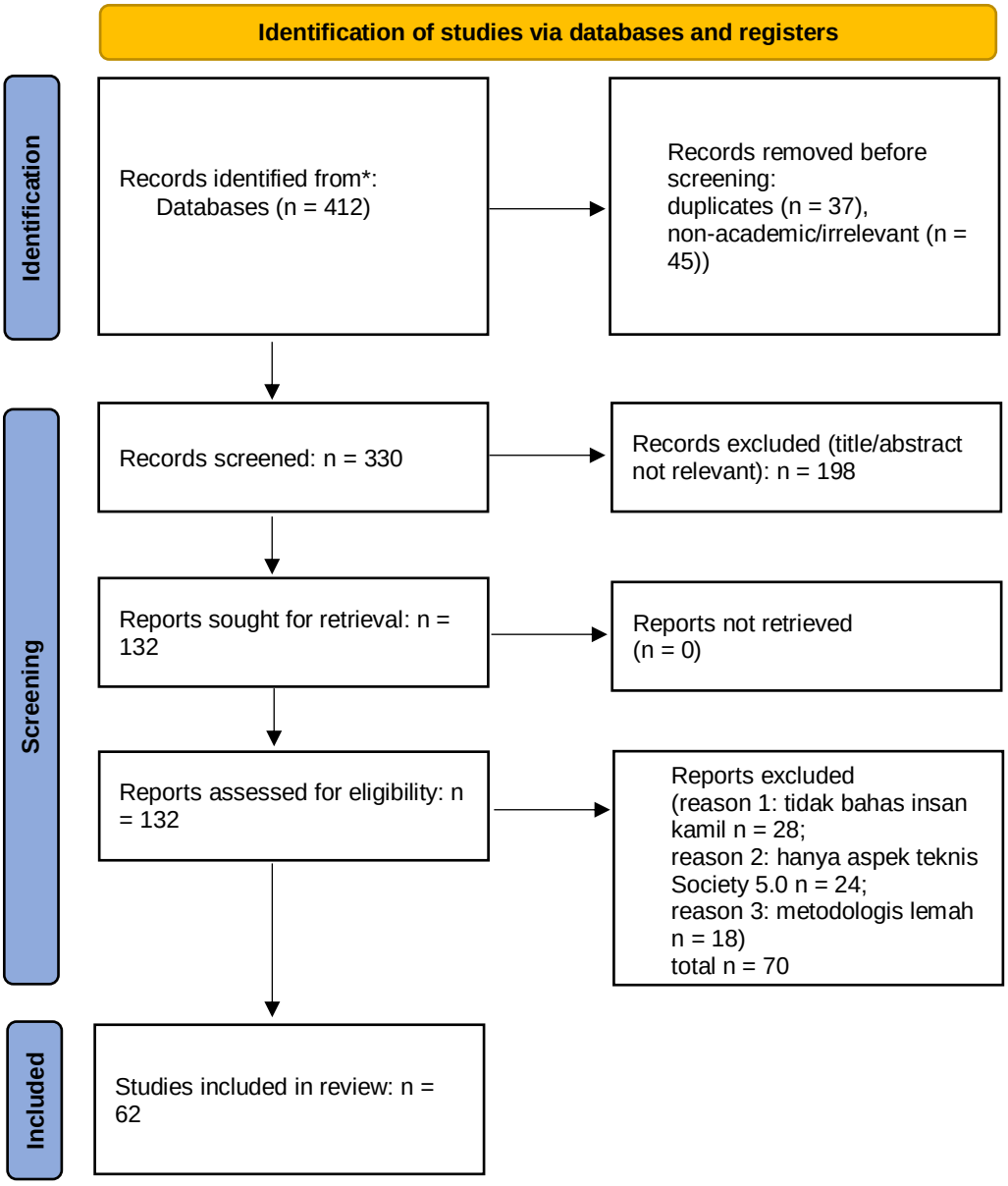

Figure 1. PRISMA

2.4. *Analysis Technique and Validity*

The analysis technique used was thematic analysis by grouping articles based on the main focus of their studies. From the mapping results, four dominant themes were obtained, namely the integration of an Islamic curriculum with technology, Islamic leadership and governance based on digital approaches, adoption of key technologies along with their ethical challenges, and character and spirituality formation in digital spaces. In addition, tabulation was conducted of research methods, keywords, and main findings to facilitate the synthesis process. The validity of the review was maintained through transparency of search procedures, triangulation of international and national literature sources, and limitation of the publication time range that ensures relevance to the current context. With these steps, the synthesis results are not only representative, but can

also be traced and replicated by other researchers. The final results of this analysis form the basis for the development of the integrative conceptual model offered in this study.

3. Results

3.1. *Reviewed Studies and Selection Flow*

The literature identification process in this study was conducted systematically by utilizing various international and national academic databases. The databases used included Google Scholar, Scopus, DOAJ, and accredited national journal portals. To ensure relevance to the latest context, the search time range was limited to the years 2020 to 2025, when the discourse on Society 5.0 and digital transformation in Islamic education became increasingly prominent. The keywords used included Islamic Education, Insan Kamil, Society 5.0, PTKIS, as well as terms related to digital transformation in Islamic higher education. This search strategy was designed so that the coverage of the literature obtained was sufficiently broad but remained focused on the issues examined.

At the initial identification stage, as many as 412 articles were found that matched the keywords and the specified year range. These articles were then reviewed administratively to remove duplicates as well as publications that did not meet scientific standards, such as opinion papers, book reviews, and non-peer-reviewed publications. After this initial process, the number of articles that could be retained for further screening decreased significantly. This reduction process is important so that the corpus of literature analyzed truly consists of accountable academic sources. Thus, the initial data that were still very broad began to be narrowed into a more focused and manageable set.

The next stage was the screening process conducted by reading the titles and abstracts of the remaining articles. In this stage, several inclusion criteria that had to be met were established, including discussing Islamic education in a digital context or Society 5.0, directly addressing discussions on character formation or *insan kamil*, and taking the form of verified scientific publications. Articles that did not meet these criteria were excluded from the list. As a result, the number of articles decreased again because most publications only discussed technological aspects or general education without addressing Islamic values or the concept of *insan kamil*. This stage functions as an initial conceptual screening that ensures the substantive alignment of the literature with the study focus.

After the screening process, the eligibility stage was carried out through full review of the articles that were still retained. At this stage, the analysis was conducted more strictly by assessing methodological quality, depth of analysis, as well as direct relevance to the themes of *insan kamil* and Society 5.0. Several articles had to be excluded because they did not explicitly address *insan kamil*, only highlighted the technical aspects of Society 5.0 without linking them to Islamic education, or had sufficiently serious methodological weaknesses. Thus, the eligibility stage becomes the final filter to ensure that only high-quality and truly relevant articles are included in the analysis. This process marks the transition from the collection of a broad body of literature toward a final corpus that is ready to be synthesized in depth.

The final stage produced as many as 62 articles that met the inclusion criteria and were ready to be further analyzed. These articles were then used as the basis for building the thematic analysis as well as the conceptual framework regarding Islamic education strategies in shaping *insan kamil* in the Society 5.0 era. This number is considered adequate because it provides a diversity of perspectives from various Islamic education contexts, both conceptual and empirical. In addition, these 62 articles are also sufficiently representative to capture recent trends and to

provide a strong theoretical basis in formulating the proposed integrative model. Thus, this literature corpus becomes the main foundation for the preparation of the research findings that will be presented in the following sub-section.

3.2. *Descriptive Mapping of the Literature*

The mapping of the 62 reviewed articles shows diverse methodological characteristics, although it is dominated by conceptual studies and literature studies. The analysis results indicate that most studies attempt to build a theoretical framework or propose normative ideas about Islamic education in the digital era, rather than conducting empirical field testing (Fauzi et al., 2025; Mukarom, Darmawan, et al., 2024). This phenomenon indicates that the discourse on *insan kamil* in the Society 5.0 era is still largely shaped by normative conceptual analysis, while empirical research that assesses the impact of Islamic education strategies in real contexts remains relatively limited.

The distribution of research methods from the reviewed literature can be seen in Table 1. Literature studies in their various forms (conceptual, narrative, descriptive) occupy the largest proportion, namely about 65% of total publications. Only a small portion uses mixed methods, statistical analysis, or quantitative surveys (Sutrisno, 2024; Troisi et al., 2024). The dominance of literature studies indicates that the discourse on *insan kamil* and Society 5.0 is still at an early stage of conceptualization, and has not been widely tested through broader empirical data collection.

Table 1. Distribution of Research Methods in the Reviewed Studies

Research Method	Number of Articles	Percentage (%)
Literature study (qualitative/descriptive/conceptual)	40	65%
Qualitative case study	6	10%
Mixed methods / PLS-SEM / cognitive mapping	3	5%
Systematic review / SLR	4	6%
Phenomenological interviews / observation	5	8%
Policy study / statistical analysis	2	3%
Total	62	100%

Beyond methodology, the focus of discussion in these articles shows recurring thematic patterns. Keyword analysis of the main focus shows four dominant clusters, namely technology integration in Islamic education, a digitally oriented Islamic curriculum, digital literacy and teacher competence, and Islamic ethics and leadership in responding to Society 5.0 (Azman et al., 2024; Jabbar et al., 2025; Qasthalani et al., 2025; Rahim, 2024). Teacher digital literacy is considered important as a strategy to maintain classical Islamic values in technology-based learning (Rahim, 2024). The need for an innovative curriculum aligned with technological developments is also a major concern (Qasthalani et al., 2025). The integration of Islamic values in the strategic management of Islamic education institutions is viewed as functioning to strengthen institutional identity amid competition in the digital era (Jabbar et al., 2025). In addition, adaptive Islamic leadership is needed to balance digital innovation with character education (Azman et al., 2024).

Table 2. Main Theme Clusters in the Reviewed Literature

Main Theme	Example Keywords	Number of Occurrences
Technology integration and digitalization	digital, technology, AI, IoT, VR	31+
Curriculum and Islamic values	curriculum, Islamic values, Islamic	24+
Digital literacy and teacher competence	literacy, teacher, learning	19+
Ethics, management, and leadership	ethics, management, leadership	10+
Society 5.0 context	society, social, collaboration	9+

This mapping shows that research on *insan kamil* in the Society 5.0 era not only emphasizes spiritual and moral dimensions, but also dimensions of digital competence, technology integration, and ethical Islamic leadership. Thus, it can be concluded that there is an urgent need to build a conceptual framework that is able to integrate these four clusters into a coherent model. This will become the basis for a deeper thematic synthesis in the following sub-section, where the relationships among themes will be analyzed to formulate a conceptual framework of Islamic education that is relevant to the challenges of Society 5.0 while remaining grounded in the vision of *insan kamil*.

3.3. *Thematic Synthesis*

The results of the literature mapping in the previous sub-section were then synthesized to identify deeper conceptual patterns. From the 62 reviewed articles, it is clearly seen that although the research contexts and approaches vary, thematically all studies can be grouped into four main themes, namely: (1) integration of Islamic curriculum and pedagogy with technology, (2) leadership, management, and digital Islamic governance, (3) adoption of key technologies along with their ethical challenges, and (4) character and spirituality formation in digital spaces. A summary of the main findings of each article and its thematic placement is presented in Table 3.

Table 3. Summary of Main Findings and Themes of the Reviewed Articles

No	Reference	Main Findings	Main Theme
1	(Mukarom, Renawati, et al., 2024)	Curriculum innovation needs to combine technology (AI, VR, blockchain) with Islamic values; barriers: resistance and resources; opportunities to enrich learning and access.	Curriculum and Technology Integration
2	(Fauzi et al., 2025)	Integration of Islamic values and innovative methods increases interest and understanding; collaboration of the academic community and religious figures is crucial.	Curriculum and Technology Integration
3	(Mubiarto, 2024)	Access increases, but digital literacy and content filtering are needed to maintain *akhlak*.	Technology Adoption and Ethics
4	(Rahim, 2024)	Strengthening digital literacy and integrative strategies maintains classical values while adopting modern technology.	Technology Adoption and Ethics
5	(Kusnawan & Alijaya, 2025)	Strategic recommendations so that digital literacy aligns with spiritual strengthening; anticipates uncontrolled information penetration.	Technology Adoption and Ethics
6	(Jabbar et al., 2025)	Value integration strengthens institutional identity and adaptability through ethical technological innovation.	Technology Adoption and Ethics
7	(Djamalu et al., 2024)	A holistic approach fosters religious character as well as responsible digital literacy.	Technology Adoption and Ethics
8	(Azman et al., 2024)	Leadership needs to balance digital innovation and maintenance of core values through professional training and character education.	Digital Islamic Leadership and Management
9	(Wisuda & Fatimah, 2023)	Education and professional training prepare human resources to face Society 5.0 (problem-solving, collaboration, creativity).	Technology Adoption and Ethics
10	(Muslikh, 2024)	PAI must produce critical and creative learners; the need for technology-based facilities and infrastructure and innovative learning models.	Curriculum and Technology Integration
11	(Achruh et al., 2024)	AI has the potential to improve learning quality, but there are ethical issues, digital gaps, and the role of traditional teachers.	Curriculum and Technology Integration
12	(Apriyani et al., 2025)	Successful strategies: continuous training, Islamic digital content, collaborative networks.	Digital Islamic Leadership and Management

13	(Arif et al., 2024)	Technology expands global access to PAI, but strengthening values and infrastructure equity are needed.	Technology Adoption and Ethics
14	(Aulia & Yuliyanti, 2024)	Technology supports Islamic character formation through curriculum and community participation.	Curriculum and Technology Integration
15	(Diana et al., 2024)	The digital era requires integration of Islamic values in technology-based learning and international collaboration.	Curriculum and Technology Integration
16	(Qasthalani et al., 2025)	Solutions: improving teacher digital literacy, innovative curriculum based on Islamic values.	Curriculum and Technology Integration
17	(Rahmania & Numa, 2025)	Technology integration increases effectiveness and reach, but challenges: infrastructure and digital literacy.	Digital Islamic Leadership and Management
18	(Fontes et al., 2024)	HDT has the potential to support Society 5.0, but there are risks of ethics and dehumanization.	Technology Adoption and Ethics
19	(Juwairiyah & Fanani, 2025)	Integration of Islamic values and technology strengthens students' character and spirituality in the digital era.	Curriculum and Technology Integration
20	(Baizhuma et al., 2025)	Al-Farabi emphasizes human perfection through reason and morality; an ideal society is born from virtuous individuals.	Digital Character and Spirituality
21	(Maisah et al., 2025)	Technology increases efficiency and effectiveness, on the condition that Islamic identity is maintained.	Curriculum and Technology Integration
22	(Malizal, 2025)	Islamic education is globally adaptive, although there are bureaucratic and conservative barriers.	Curriculum and Technology Integration
23	(Rajib et al., 2024)	Human resources need digital literacy, a culture of continuous learning, and innovative leadership.	Digital Islamic Leadership and Management
24	(Suyitno et al., 2025)	Digital learning is effective, but is influenced by teacher readiness, infrastructure, and validity of Islamic content.	Curriculum and Technology Integration
25	(Widodo, 2025)	*Santri* master religion as well as digital skills (graphic design, web, social media).	Technology Adoption and Ethics
26	(Djamalu et al., 2024)	Technology strengthens learning efficiency without losing spiritual values.	Curriculum and Technology Integration
27	(Zahraini et al., 2025)	Digitalization increases access, but there are risks of value erosion and digital gaps.	Curriculum and Technology Integration
28	(Hajar, 2024)	Reform is successful if the curriculum is inclusive, integrative, and technology-based.	Curriculum and Technology Integration
29	(Siregar & Hasibuan, 2024)	PAI aims to form Islamic students (faith, obedience, noble character).	Technology Adoption and Ethics
30	(Rahim, 2024)	Technology increases access and interactivity, but there are risks of digital gaps and loss of traditional values.	Technology Adoption and Ethics
31	(Sutrisno, 2024)	Integration of Islamic values and technology improves madrasa quality and adaptability.	Digital Islamic Leadership and Management
32	(Restalia & Khasanah, 2025)	Opportunities: globalization of PAI through e-learning; challenges: low teacher literacy, digital divide.	Curriculum and Technology Integration
33	(Putra & Sayekti, 2025)	Teachers act as educators, role models, motivators; supporting factors: digital technology and family.	Technology Adoption and Ethics
34	(Qur Rohman et al., 2025)	Technology is widely adopted, but is constrained by teacher skills and infrastructure.	Digital Islamic Leadership and Management

35	(Muslim, 2024)	AR and AI improve the learning experience; risks: moral erosion, technology dependence.	Curriculum and Technology Integration
36	(Restu Permohonan Hasibuan et al., 2025)	Digital strategies are effective, but require teacher competence and infrastructure.	Technology Adoption and Ethics
37	(Silvi Ratnawulan et al., 2025)	Technology strengthens interaction and inclusivity, but is constrained by feedback and scalability.	Technology Adoption and Ethics
38	(Romandoni et al., 2024)	Visionary and adaptive leaders need to maintain Islamic values while innovating.	Digital Islamic Leadership and Management
39	(Rohayati & Abdillah, 2024)	Society 5.0 brings opportunities and risks (individualism, moral degradation, inequality).	Technology Adoption and Ethics
40	(Prahesti & Santosa, 2022)	MI teachers cultivate *insan kamil* through Islamic character, HOTS, and parent collaboration.	Digital Character and Spirituality
41	(Fukuda, 2020)	Japan needs an STI ecosystem based on value creation for productivity and resilience.	Technology Adoption and Ethics
42	(Sá et al., 2021)	Digitalization increases quality of life, but the risk of social inequality becomes wider.	Technology Adoption and Ethics
43	(Kasinathan et al., 2022)	Integration of Society 5.0 and Industry 5.0 supports the SDGs through smart cities and villages.	Technology Adoption and Ethics
44	(Adibah & Chasanah, 2023)	Modern Sufism helps Islamic education form adaptive and tolerant *insan kamil*.	Digital Character and Spirituality
45	(Çipi et al., 2023)	The model helps identify digital innovation-based business opportunities in Society 5.0.	Technology Adoption and Ethics
46	(Mourtzis et al., 2022)	Society 5.0 focuses on sustainability and human well-being, not merely efficiency.	Technology Adoption and Ethics
47	(Novriana & Soegoto, 2023)	Indonesia needs human resources with coding, language, data, and critical thinking.	Technology Adoption and Ethics
48	(Troisi et al., 2024)	Integration of technology and social and environmental aspects for sustainable innovation.	Technology Adoption and Ethics
49	(Iqbal & Olariu, 2020)	Smart communities become a transition pathway to Society 5.0 through a marketplace of services.	Technology Adoption and Ethics
50	(Akhmad Akromusyuhada et al., 2023)	IDBC integrates ICT to produce Qur'an and Hadith-based *technopreneur da'i*.	Digital Islamic Leadership and Management
51	(Fandir, 2024)	Islamic education needs transformation of curriculum, human resources, and spirituality to face the digital era.	Curriculum and Technology Integration
52	(Astra et al., 2024)	Islamic education leaders must be ethical and digitally literate to face ethical dilemmas.	Digital Islamic Leadership and Management
53	(Taufik, 2020)	PAI functions as value control and moral reinforcement for the golden generation.	Technology Adoption and Ethics
54	(Sauri et al., 2022)	*Pesantren* music is effective in forming the morals and spirituality of *santri* toward *insan kamil*.	Technology Adoption and Ethics
55	(Rasmuin & Widiani, 2021)	Character and 21st-century skills (critical, collaborative, creative) are key to facing Society 5.0.	Digital Character and Spirituality
56	(Beniiche et al., 2022)	Society 5.0 is based on CPSS and a token economy for human welfare.	Technology Adoption and Ethics
57	(Husni & Atoillah, 2022)	Alternative solutions: eliminate the dichotomy of knowledge, teacher professionalism, curriculum reorientation.	Curriculum and Technology Integration
58	(Sholeh, 2023)	Strategies: infrastructure, teacher training, Islamic digital content, government policy.	Curriculum and Technology Integration
59	(Musyafak & Subhi, 2023)	Integration of PAI and technology increases understanding of Islam and relevance in the digital era.	Curriculum and Technology Integration
60	(Narvaez Rojas et al., 2021)	Society 5.0 as a super smart society that balances economic progress and solving social problems.	Technology Adoption and Ethics
61	(Marsumi & Krowin, 2024)	Competence is improved through digital literacy, training, and strengthening soft skills.	Technology Adoption and Ethics

62	(Haleem et al., 2022)	Digital technology strengthens learning (broad access, personalization, inclusivity), but there are challenges of gaps and adoption.	Curriculum and Technology Integration

The first theme is the integration of an Islamic curriculum and pedagogy with technology. Many articles highlight the urgency of developing a curriculum that is responsive to digital transformation without losing its roots in Islamic values (Kusnawan & Alijaya, 2025; Mukarom, Renawati, et al., 2024; Qasthalani et al., 2025). The PAI curriculum needs to combine technological sophistication such as artificial intelligence and virtual reality with Islamic values so that learning remains adaptive as well as humanistic (Mukarom, Renawati, et al., 2024). Islamic education in a digital society not only emphasizes digital competence but also spiritual literacy (Kusnawan & Alijaya, 2025). The strategy of adapting an Islamic curriculum based on strengthening teachers' digital literacy is important so that the integration of Islamic values and digital skills can proceed in parallel (Qasthalani et al., 2025). The synthesis of this literature shows that a technology-based Islamic curriculum is not merely an instrument for knowledge transfer, but a vehicle for forming *insan kamil* who are able to master science while maintaining ethics.

The second theme is leadership, management, and digital Islamic governance. Several studies highlight how Islamic values can be integrated into the management of educational institutions in responding to the Society 5.0 era (Azman et al., 2024; Jabbar et al., 2025; Sutrisno, 2024). The application of the values of *amanah*, *adil*, and *ihsan* in strategic management strengthens institutional competitiveness while maintaining Islamic identity amid the current of digitalization (Jabbar et al., 2025). Adaptive Islamic leadership is needed to balance digital innovation with character education (Azman et al., 2024). A madrasa leadership model based on spiritual *e-leadership* can improve institutional quality while maintaining the spirituality dimension (Sutrisno, 2024). The synthesis of this theme shows that digitally oriented Islamic leadership is not only a supporting factor, but also a key that mediates the integration of technology and values in Islamic education practice.

The third theme is the adoption of key technologies and ethical challenges. Several studies highlight the potential of advanced technologies such as AI, IoT, VR, smart campuses, and digital twins in improving learning effectiveness (Achruh et al., 2024; Fontes et al., 2024; Muslim, 2024). AI has significant opportunities for personalizing Islamic learning in higher education, but it also raises ethical issues and digital inequality (Achruh et al., 2024). Technologies such as AR and AI can enrich learning experiences, but they risk causing moral erosion and technology dependence (Muslim, 2024). The concept of human digital twins in Society 5.0 has the potential to support intelligent education systems, but it has implications for dehumanization if it is not ethically supervised (Fontes et al., 2024). Thus, the synthesis of this theme shows a dialectic between the potential of technology as an enabler of Islamic learning and ethical threats that can weaken the goal of forming *insan kamil*.

The fourth theme is character and spirituality formation in digital spaces. Many articles continue to emphasize the dimensions of character and spirituality even though technology becomes a main keyword (Adibah & Chasanah, 2023; Baizhuma et al., 2025; Djamalu et al., 2024). The combination of *e-learning*, worship habituation, teacher role modeling, and parent collaboration can foster religious character while also developing responsible digital literacy (Djamalu et al., 2024). The actualization of modern Sufism can become a basis for forming *insan kamil* who are adaptive and tolerant amid technological disruption (Adibah & Chasanah, 2023). The legacy of Al-Farabi's thought emphasizes human perfection through reason and morality as the foundation of an ideal society (Baizhuma et al., 2025). The synthesis of this theme shows that although Society 5.0 emphasizes digitalization, the spirit of spirituality remains the core that guides

the direction of Islamic education transformation so that it culminates in the emergence of *insan kamil*.

These four themes complement each other in forming a comprehensive picture of Islamic education strategies in realizing *insan kamil* in the Society 5.0 era. The integration of a technology-based curriculum can only succeed if it is supported by strong Islamic leadership. Technology can enrich learning, but it requires an ethical framework so that it does not lead to dehumanization. Meanwhile, character and spirituality formation functions as the foundation that ensures that all innovations remain aligned with the vision of *insan kamil*. Thus, this thematic synthesis becomes a foundation for compiling the integrative conceptual framework that will be presented in the following sub-section.

3.4. *Integrative Conceptual Model*

This section presents an integrative conceptual model as the result of the synthesis of sixty-two reviewed articles. This model was developed to summarize the linkages among Islamic values, technology, leadership, and curriculum in Islamic education strategies at Islamic Religious Higher Education Institutions (PTKIS) in the Society 5.0 context. Unlike empirical models based on statistical testing, this conceptual framework emphasizes logical coherence and theoretical integration, with the aim of providing conceptual direction for the development of Islamic education. The foundation of the model is Islamic values and spirituality that become the basis of all strategies, while the components of curriculum, technology, leadership, and human resource competencies function as input factors that drive the educational transformation process.

This model is arranged in a hybrid format that combines a hierarchical Input-Process-Output-Outcome flow with a foundational layer of Islamic values and spirituality. At the input level, four main components are identified, namely: (1) Islamic curriculum and pedagogy (Kusnawan & Alijaya, 2025; Mukarom, Renawati, et al., 2024), (2) digital technologies such as AI, IoT, and *e-learning* (Achruh et al., 2024; Muslim, 2024), (3) Islamic leadership and governance based on the values of *amanah*, *adil*, and *ihsan* (Jabbar et al., 2025; Sutrisno, 2024), and (4) human resource competencies that include digital literacy and mastery of ethics (Apriyani et al., 2025; Wisuda & Fatimah, 2023). These four components complement each other, because a curriculum without technological support will lose its relevance, while technology without Islamic leadership will lose its normative direction.

The next stage is the integration process, which is divided into four key strategies. First, integration of the curriculum with Islamic technology, namely the use of digital technology to enrich learning without eroding Islamic values (Qasthalani et al., 2025; Rahim, 2024). Second, value-based digital transformation, which emphasizes that digitalization must always be accompanied by the internalization of *akhlak* and spirituality (Kusnawan & Alijaya, 2025; Rahim, 2024). Third, governance of AI ethics and digital literacy, namely a strategy to prevent dehumanization and moral degradation due to technology (Fontes et al., 2024; Muslim, 2024). Fourth, collaboration of the educational ecosystem, in which PTKIS needs to cooperate with families, communities, and the halal industry so that educational strategies are not isolated from the social context (Apriyani et al., 2025; Djamalu et al., 2024).

From the integration process, outputs are produced in the form of four main competencies of PTKIS graduates. First, spiritual-moral competence, which includes faith, worship, and noble character (Qur Rohman et al., 2025; Siregar & Hasibuan, 2024). Second, critical-intellectual competence, which requires the ability to think critically, creatively, and analytically (Muslikh, 2024; Prahesti & Santosa, 2022). Third, digital-technological competence, which emphasizes digital literacy, understanding of AI, and 21st-century skills (Wisuda & Fatimah, 2023). Fourth, social-

collaborative competence, namely the ability to collaborate across cultures, maintain religious moderation, and contribute to society (Diana et al., 2024; Fauzi et al., 2025). These four competencies are a concrete manifestation of the integration of Islamic values and technology in Islamic education, which is directed toward producing *insan kamil*.

At the outcome level, this model places *insan kamil* as the main result as well as the central actor who then contributes to the formation of a human-centered Society 5.0. *Insan kamil* is understood as a complete individual who has spiritual, moral, intellectual, social, and digital balance (Baizhuma et al., 2025; Husni & Atoillah, 2022). Through *insan kamil*, PTKIS is expected to be able to respond to the demands of Society 5.0, namely building a society that is just, inclusive, and sustainable with technology as an instrument, not an end goal (Narvaez Rojas et al., 2021; Rohayati & Abdillah, 2024). Thus, the outcome of this model not only reaffirms the orientation of Islamic education toward the formation of individuals, but also its role in building a social order based on justice.

This framework has several conceptual implications. For PTKIS, this model can be used as a framework in formulating curricula, digitalization strategies, and leadership policies based on Islamic values. For researchers, this framework opens space for further empirical testing, for example through structural equation modeling to measure the relative contribution of each variable. For policymakers, this model provides the orientation that the transformation of Islamic education toward Society 5.0 cannot be separated from the foundation of spirituality. Thus, this model is not only a conceptual outcome, but also a practical guide that can be applied at the institutional level and in national policy.

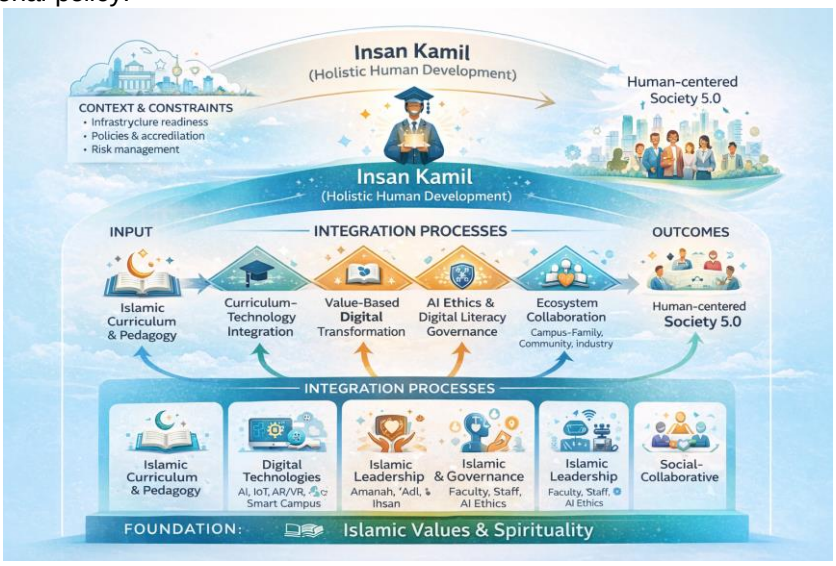

Figure 2. Integrative conceptual model of Islamic education to realize insan kamil in the Society 5.0 era at PTKIS.

4. Discussion

The results of the literature synthesis show that the discourse on Islamic education in the Society 5.0 context is still dominated by conceptual studies and literature studies, namely about 65 percent of total publications. This dominance indicates that research on *insan kamil* in the digital era is still at an early stage of conceptualization, so it has not produced much empirical evidence that can be statistically tested (Sutrisno, 2024; Troisi et al., 2024). This phenomenon is in line with the characteristics of new research in developing fields, where the exploration of ideas and normative frameworks becomes an initial foundation before being tested more systematically (Snyder, 2019). Thus, it can be said that the

existing studies function more as a conceptual foundation than as applicable empirical evidence. This also opens opportunities to expand research with quantitative approaches and more measurable field studies.

When compared with global literature, the research focus in Indonesia has a strong distinctive characteristic in the dimension of spirituality and the concept of *insan kamil* (Fukuda, 2020; Mourtzis et al., 2022; Narvaez Rojas et al., 2021). International literature emphasizes technical aspects, digital innovation, and technology-based societal development, while studies in the Indonesian context tend to emphasize integration between digital technology and Islamic values as a strategy to produce *insan kamil* (Nakazato et al., 2020). This contribution shows a distinctive epistemological differentiation, in which Islamic education does not merely adopt technology, but integrates it with a spiritual and moral vision. Thus, local literature can provide an alternative perspective to the discourse on human-centered Society 5.0 at the global level.

One important finding is the existence of a significant empirical gap. Although much of the literature emphasizes the importance of a technology-based Islamic curriculum, there are not many studies that truly test its impact on improving student competencies in PTKIS (Qasthalani et al., 2025; Rahim, 2024). The majority of publications remain normative reviews that are not accompanied by field data that can serve as the basis for evidence-based policy. This condition differs from the direction of global developments that increasingly emphasize evidence-based education (Levin, 2013; Slavin, 2002). Therefore, the future research agenda needs to be directed toward empirical testing, whether through quantitative surveys, statistical analysis, or longitudinal methods.

The adoption of advanced technologies such as AI, IoT, AR/VR, and digital twins also presents serious ethical dilemmas. Several studies show that technology can enrich learning experiences and increase personalization, but at the same time carries risks of dehumanization, moral erosion, and digital inequality (Achruh et al., 2024; Fontes et al., 2024; Muslim, 2024). In the context of Islamic education, these ethical issues cannot be viewed as merely technical problems, but are closely related to the values of spirituality and *akhlak* (Floridi, 2013). Thus, the discourse on *insan kamil* emphasizes that the dimension of spirituality remains the main foundation in responding to digital transformation.

From a theoretical perspective, the integrative conceptual model formulated in this study makes an important contribution to the literature on Islamic education. The model shows the linkages among curriculum, Islamic leadership, technology, and human resource competencies within the Society 5.0 framework. This approach is in line with the idea of integrating faith and knowledge as the foundation of the epistemology of Islamic education (Al-Attas, 1993; Nasr, 2007). By positioning *insan kamil* as the main outcome, this model provides significant differentiation from global frameworks that are more oriented toward productivity alone (Husni & Atoillah, 2022; Rohayati & Abdillah, 2024). This strengthens the position of PTKIS as an institution that not only prepares digital competencies, but also forms complete individuals with Islamic character.

Practically, this model has direct implications for policy and practice in PTKIS. The curriculum needs to be designed integratively so that it is able to combine digital literacy with spiritual literacy (Apriyani et al., 2025; Qasthalani et al., 2025). In addition, adaptive Islamic leadership based on *e-leadership* is key in mediating digital transformation so that it remains rooted in the values of *amanah*, *adil*, and *ihsan* (Sutrisno, 2024). This implication is also relevant at the national policy level, because it aligns with recommendations that digital transformation of higher education must be accompanied by a value framework (OECD, 2021; UNESCO, 2019). Thus, the results of this study can be used as strategic guidance for PTKIS in developing an educational vision that aligns with Society 5.0 while remaining grounded in Islamic spirituality.

Future research directions need to focus on empirical testing of the conceptual model that has been formulated. This can be conducted through comparative studies between PTKIS and general

higher education institutions, as well as between Islamic institutions in Indonesia and other countries. In addition, the development of quantitative instruments to measure the integration of Islamic values in digital literacy is an urgent agenda that needs to be carried out (Diana et al., 2024; Restalia & Khasanah, 2025; Wisuda & Fatimah, 2023). Longitudinal research is also important to examine the long-term impact of Islamic technology integration on the formation of *insan kamil* (Selwyn, 2020). Thus, future research can enrich theoretical understanding while also strengthening the practical relevance of this integrative model.

5. Conclusion

Based on the results of the literature review, this study concludes that Islamic education strategies in the Society 5.0 era can be mapped into four main themes, namely the integration of an Islamic curriculum with technology, digital-based Islamic leadership and governance, adoption of key technologies along with their ethical challenges, and character and spirituality formation in digital spaces. These four themes form an integrative conceptual framework that positions *insan kamil* as the main outcome as well as the central actor in the development of a human-centered society. This model confirms that digital technology can only function optimally if it is rooted in spirituality and Islamic values, so that the epistemological differentiation of Islamic education in PTKIS remains maintained amid the current of globalization.

The contribution of this study lies in the effort to enrich the conceptual literature on Islamic education by positioning *insan kamil* as the main orientation of digital transformation. For PTKIS, this model can serve as guidance in designing curricula, digitalization strategies, strengthening human resource competencies, and adaptive Islamic leadership. At the national policy level, these findings confirm that the digitalization of Islamic higher education must remain grounded in the foundation of spirituality so that it does not become trapped in a merely technical orientation. Nevertheless, this conceptual framework still requires empirical verification through quantitative, qualitative, or mixed methods studies. Future research can be directed toward developing specific instruments to measure the integration of Islamic values in digital literacy as well as cross-context comparative studies that can strengthen the practical and theoretical relevance of this model.

Declarations

Author contribution statement

Muhammad Rizal initiated and conceptualized the study, defined the research focus, conducted data collection, performed the initial analysis, and drafted the first version of the manuscript. Muhammad Hidayat Ginanjar provided supervision, validated the methodological design and procedures, developed the theoretical framework, and carried out further analyses to strengthen the interpretation of the findings. Abdul Kodir Nurhasan edited the manuscript, integrated relevant literature, compiled the reference list, and finalized the article for publication. Muhamad Rifan Dainuri contributed to refining the discussion, strengthening conceptual coherence, and reviewing and approving the final version of the manuscript. All authors reviewed and approved the final version of the manuscript.

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Data availability statement

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of Interest's statement

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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References

Achruh, A., Rapi, M., Rusdi, M., & Idris, R. (2024). Challenges and Opportunities of Artificial Intelligence Adoption in Islamic Education in Indonesian Higher Education Institutions. *International Journal of Learning, Teaching and Educational Research*, *23*(11). https://www.ijlter.org/index.php/ijlter/article/view/11682

Adibah, I. Z., & Chasanah, U. (2023). Aktualisasi Sufisme dan Masa Depan Pendidikan Islam Modern Era Society 5.0. *Al-Fikri: Jurnal Studi Dan Penelitian Pendidikan Islam*, *6*(2), 119. https://doi.org/10.30659/jspi.v6i2.35054

Akhmad Akromusyuhada, Adi Fachrudin, Andriyani Andriyani, Masyitoh, & Saiful Bahri. (2023). Integration of Information and Communication Technology in Islamic Education Management Overview of Smart Learning and Smart Building Study at Islamic Digital Boarding College (IDBC) Sukoharjo. *International Journal of Integrative Sciences*, *2*(10), 1515–1536. https://doi.org/10.55927/ijis.v2i10.6295

Al-Attas, S. M. N. (1993). *Islam and Secularism*. International Institute of Islamic Thought and Civilization (ISTAC).

Apriyani, H., Yanti, Y., Muzzeki, M., Ajir, I. C., Anwar, C., Anwar, S., & Dacholfany, M. I. (2025). Strategi Manajemen Guru PAI dalam Menghadapi Transformasi Digital: Tantangan dan Sistem Pendidikan Islam di Indonesia. *DIMAR: Jurnal Pendidikan Islam*, *6*(2), 183–187. https://doi.org/10.58577/dimar.v6i2.395

Arif, M., Saro'i, M., Asfahani, A., Mariana, M., & Arifudin, O. (2024). Tantangan dan Peluang dalam Inovasi Pembelajaran Islam di Era Digital. *Global Education Journal*, *2*(1), 73–80. https://doi.org/10.59525/gej.v2i1.322

Astra, N. P. B., Hendrawati, T., & Andriyana, D. (2024). Leadership in Islamic Education: Integrating Ethical Values in the Digital Age. *International Journal of Social and Human*, *1*(2), 136–143. https://doi.org/10.59613/ecwa6z62

Aulia, A., & Yuliyanti, Y. (2024). The Strategic Role of Islamic Education Management in Integrating Islamic Value-Based Character Education in the Digital and Technology Era. *IJoIS: Indonesian Journal of Islamic Studies*, *5*(2), 13–18. https://doi.org/10.59525/ijois.v5i2.548

Azman, Z., Supriadi, S., & Arikarani, Y. (2024). Reformulation Of Islamic Educational Leadership In The Era Of Disruption. *El-Ghiroh : Jurnal Studi Keislaman*, *22*(2), 221–239. https://doi.org/10.37092/el-ghiroh.v22i2.896

Baizhuma, S., Bishmanov, K., Meirbayev, B., Baitenova, N., Mukan, N., & Alikbayeva, M. (2025). The Contribution of Abu Nasr Al-Farabi'S Spiritual Heritage Throughout the Virtuous Personal Development. *Journal of Posthumanism*, *5*(5), 998–1011. https://doi.org/10.63332/joph.v5i5.1417

Beniiche, A., Rostami, S., & Maier, M. (2022). Society 5.0: Internet as if People Mattered. *IEEE Wireless Communications*, *29*(6), 160–168. https://doi.org/10.1109/MWC.009.2100570

Çipi, A., Fernandes, A. C. R. D., Ferreira, F. A. F., Ferreira, N. C. M. Q. F., & Meidutė-Kavaliauskienė, I. (2023). Detecting and developing new business opportunities in society 5.0 contexts: A sociotechnical approach. *Technology in Society*, *73*, 102243. https://doi.org/10.1016/j.techsoc.2023.102243

Diana, A., Azani, M. Z., & M, M. (2024). THE CONCEPT AND CONTEXT OF ISLAMIC EDUCATION LEARNING IN THE DIGITAL ERA: RELEVANCE AND INTEGRATIVE STUDIES. *Profetika: Jurnal Studi Islam*, *25*(01), 33–44. https://doi.org/10.23917/profetika.v25i01.4239

Djamalu, Y., Djafar, R., Umela, S., & Salim, A. R. (2024). Pengaruh Perubahan Terminal Temperatur Difference (Ttd) Dan Darin Cooler (Dca) Feed Water Heater Terhadap Performa Pltu Menggunakan Simulasi Cycle Tempo 5.1. *Journal of Energy and Mechanical Engineering*, 27–32. https://doi.org/10.62299/jeme.vi.9

Fandir, A. (2024). Transformation of Islamic Education: Implementation of Technological Innovation in Education Management. *Jurnal Ilmiah Mandala Education*, *10*(1), 187. https://doi.org/10.58258/jime.v10i1.6625

Fauzi, M. H., Salsabila, S., Diniyati, A. I., Pebriani, A. R., Fithriya, R. A. I., & Suresman, E. (2025). Integrasi Nilai Islam dan Inovasi Pembelajaran dalam Pendidikan Agama Islam di Perguruan Tinggi dalam Perspektif Akademik dan Keagamaan. *Reflection : Islamic Education Journal*, *2*(2), 186–196. https://doi.org/10.61132/reflection.v2i2.771

Floridi, L. (2013). *The Ethics of Information*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199641321.001.0001

Fontes, C., Carpentras, D., & Mahajan, S. (2024). Human digital twins unlocking Society 5.0? Approaches, emerging risks and disruptions. *Ethics and Information Technology*, *26*(3), 54. https://doi.org/10.1007/s10676-024-09787-1

Fukuda, K. (2020). Science, technology and innovation ecosystem transformation toward society 5.0. *International Journal of Production Economics*, *220*, 107460. https://doi.org/10.1016/j.ijpe.2019.07.033

Hajar, A. (2024). Navigating Globalization: Reforming Islamic Education for the 21st Century. *Sinergi International Journal of Islamic Studies*, *2*(1), 53–65. https://doi.org/10.61194/ijis.v2i1.599

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, *3*, 275–285. https://doi.org/10.1016/j.susoc.2022.05.004

Husni, H., & Atoillah, A. N. (2022). Islamic Education, Insan Kamil, and the Challenges of the Era of Society 5.0: A Literature Review. *Jurnal Penelitian Pendidikan Islam*, *10*(1), 67. https://doi.org/10.36667/jppi.v10i1.1005

Iqbal, A., & Olariu, S. (2020). A Survey of Enabling Technologies for Smart Communities. *Smart Cities*, *4*(1), 54–77. https://doi.org/10.3390/smartcities4010004

Jabbar, M. R. A. A., Chotimah, C., & Sulistyorini, S. (2025). Integrasi Nilai Keislaman Dalam Manajemen Strategik Untuk Membangun Keunggulan Kompetitif Lembaga Pendidikan Islam Di Era Globalisasi Digital. *CENDEKIA: Jurnal Ilmu Pengetahuan*, *5*(1), 185–192. https://doi.org/10.51878/cendekia.v5i1.4153

Juwairiyah, J., & Fanani, Z. (2025). Integration of Islamic Values in Learning Methods: Building Character and Spirituality in the Digital Era. *AL-WIJDÃN Journal of Islamic Education Studies*, *10*(1), 113–130. https://doi.org/10.58788/alwijdn.v10i1.6215

Kasinathan, P., Pugazhendhi, R., Elavarasan, R. M., Ramachandaramurthy, V. K., Ramanathan, V., Subramanian, S., Kumar, S., Nandhagopal, K., Raghavan, R. R. V., Rangasamy, S., Devendiran, R., & Alsharif, M. H. (2022). Realization of Sustainable Development Goals with Disruptive Technologies by Integrating Industry 5.0, Society 5.0, Smart Cities and Villages. *Sustainability*, *14*(22), 15258. https://doi.org/10.3390/su142215258

Kusnawan, & Alijaya, A. (2025). Formulation of Islamic Education in Digital Society. *International Journal of Contemporary Sciences (IJCS)*, *2*(3), 349–356. https://doi.org/10.55927/ijcs.v2i3.13599

Levin, B. (2013). To know is not enough: Research knowledge and its use. *Review of Education*, *1*(1), 2–31. https://doi.org/10.1002/rev3.3001

Maisah, M., Nasution, F. H., My, M., & Junaidi, R. (2025). Informatization and Paradigm Change in Islamic Higher Education. *Nidhomiyyah: Jurnal Manajemen Pendidikan Islam*, *6*(1), 26–36. https://doi.org/10.38073/nidhomiyyah.v6i1.2112

Malizal, Z. Z. (2025). Islamic Education and Globalization: Curriculum, Identity, and Digital Integration. *Sinergi International Journal of Islamic Studies*, *3*(2), 70–82. https://doi.org/10.61194/ijis.v3i2.711

Marsumi, M., & Krowin, M. M. (2024). Peningkatan Kompetensi di Era Society 5.0. *Prosiding Seminar Nasional Forum Manajemen Indonesia - e-ISSN 3026-4499*, *2*, 1725–1730. https://doi.org/10.47747/snfmi.v2i1.2425

Mourtzis, D., Angelopoulos, J., & Panopoulos, N. (2022). A Literature Review of the Challenges and Opportunities of the Transition from Industry 4.0 to Society 5.0. *Energies*, *15*(17), 6276. https://doi.org/10.3390/en15176276

Mubiarto, A. N. (2024). Challenges And Opportunities For Islamic Education In The Digital Age. *Jurnal Multidisiplin*, *1*(2), 123–128. https://doi.org/10.70963/jm.v1i2.166

Mukarom, Z., Darmawan, D., Agustin, M., Dwijantie, J. S., & Samadi, M. R. (2024). Islamic Education Curriculum Innovation in the Digital Era: Challenges and Opportunities. *International Education Trend Issues*, *2*(2), 317–328. https://doi.org/10.56442/ieti.v2i2.874

Mukarom, Z., Renawati, P., Nurishlah, L., Suhara, D., & Setiawan, B. (2024). A Multicultural Approach in Islamic Education to Increase Tolerance. *International Education Trend Issues*. https://doi.org/10.56442/ieti.v2i2.851

Muslikh, M. (2024). Tantangan Pendidikan Islam Di Era Society 5.0. *Al-Mau'izhoh: Jurnal Pendidikan Agama Islam*, *6*(2), 997–1009. https://doi.org/10.31949/am.v6i2.11885

Muslim, M. (2024). Internalising Digital Technology in Islamic Education. *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme*, *6*(3). https://doi.org/10.37680/scaffolding.v6i3.6309

Musyafak, M., & Subhi, M. R. (2023). Strategi Pembelajaran Pendidikan Agama Islam dalam Menghadapi Tantangan di Era Revolusi Industri 5.0. *Asian Journal of Islamic Studies and Da'wah*, *1*(2), 373–398. https://doi.org/10.58578/ajisd.v1i2.2109

Nakazato, H., Nishimura, J., & Takezawa, J. (2020). Japan Country Note. In A. Koslowski, S. Blum, G. Kaufman, & P. Moss (Eds.), *International Review of Leave Policies and Research 2020*. http://www.leavenetwork.org/lp_and_r_reports/

Narvaez Rojas, C., Alomia Peñafiel, G. A., Loaiza Buitrago, D. F., & Tavera Romero, C. A. (2021). Society 5.0: A Japanese Concept for a Superintelligent Society. *Sustainability*, *13*(12), 6567. https://doi.org/10.3390/su13126567

Nasr, S. H. (2007). *Religion and the Order of Nature*. Oxford University Press.

Novriana, & Soegoto, D. S. (2023). Human Resource Quality Strategies of Fulfilling the Needs for Digital Talent in Society 5.0. *Proceeding of International Conference on Business, Economics, Social Sciences, and Humanities*, *6*, 126–133. https://doi.org/10.34010/icobest.v4i.360

OECD. (2021). *Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots*. OECD Publishing. https://doi.org/10.1787/589b283f-en

Prahesti, V. D., & Santosa, S. (2022). The Challenge Of Educating On The Character Of Students In Facing The Society Era 5.0. *Fenomena*, *21*(2), 247–254. https://doi.org/10.35719/fenomena.v21i2.102

Putra, B. A. P., & Sayekti, S. (2025). Peran Guru PAI dalam Menanamkan Ketakwaan dan Moral Pelajar pada Era Society di SDN 2 Tamanasri. *YASIN*, *5*(3), 1810–1830. https://doi.org/10.58578/yasin.v5i3.5451

Qasthalani, F. M., Hafidz, Ibrahim 'Aliyuddin, M., Fahrezy, A. D., Prihasti, A. A., Sandera, F. A. A., Muriska, A. Q., & Sucifirdiasti, S. (2025). Adaptation and Innovation Strategies for Islamic Education Curriculum in the Digital Era 4.0. *Bulletin of Islamic Research*, *3*(1), 103–110. https://doi.org/10.69526/bir.v3i1.174

Qur Rohman, Agus Fawait, & Ahmadi Pramuja. (2025). Islamic Education Management In The Society 5.0 Era: Building A Educational System That Is Responsive To Technological And Social Changes. *Journal of International Multidisciplinary Research*, *3*(1), 107–111. https://doi.org/10.62504/jimr1159

Rahim, M. K. (2024). Internalisasi Nilai-Nilai Agama Islam dalam Pembentukan Karakter Peserta Didik di Sekolah Dasar Negeri 116 Buton Kabupaten Buton. *Ta'rim: Jurnal Pendidikan Dan Anak Usia Dini*. https://doi.org/10.59059/tarim.v5i3.1512

Rahmania, F. A., & Numa, A. M. (2025). Kolaborasi Pendidikan Islam dan Teknologi dalam Manajemen Pendidikan Modern. *Reslaj: Religion Education Social Laa Roiba Journal*, *7*(5), 1482–1496. https://doi.org/10.47467/reslaj.v7i5.7366

Rajib, M. H., Khuzaini, K., & Shaddiq, S. (2024). Optimizing Human Resources Behavior in Facing the Era of Society 5.0. *At-Tadbir : Jurnal Ilmiah Manajemen*. https://doi.org/10.31602/piuk.v0i0.15806

Rasmuin, & Widiani, D. (2021). *Strategy and Implementation of Character Education in Era of Society 5.0:* International Conference on Engineering, Technology and Social Science (ICONETOS 2020), Malang, East Java, Indonesia. https://doi.org/10.2991/assehr.k.210421.084

Restalia, W., & Khasanah, N. (2025). Transformation of Islamic education in the digital age: Challenges and opportunities. *Tadibia Islamika*, *4*(2), 85–92. https://doi.org/10.28918/tadibia.v4i2.8964

Restu Permohonan Hasibuan, Makruf Makruf, & Gusmaneli Gusmaneli. (2025). Strategi Pembelajaran PAI Berbasis Teknologi Digital untuk Meningkatkan Literasi Keagamaan. *AL-MUSTAQBAL: Jurnal Agama Islam*, *2*(2), 01–12. https://doi.org/10.59841/al-mustaqbal.v2i2.90

Rohayati, Y., & Abdillah, A. (2024). Digital Transformation for Era Society 5.0 and Resilience: Urgent Issues from Indonesia. *Societies*, *14*(12), 266. https://doi.org/10.3390/soc14120266

Romandoni, I. Y., Sulistyorini, & Nur Efendi. (2024). Transformasi Kepemimpinan Pendidikan Islam: Tantangan Dan Peluang Di Era Digital. *Tadbir: Jurnal Manajemen Pendidikan Islam*, *12*(2), 194–209. https://doi.org/10.30603/tjmpi.v12i2.4932

Sá, M. J., Santos, A. I., Serpa, S., & Ferreira, C. M. (2021). Digital Literacy in Digital Society 5.0: Some Challenges. *Academic Journal of Interdisciplinary Studies*, *10*(2), 1. https://doi.org/10.36941/ajis-2021-0033

Sauri, S., Gunara, S., & Cipta, F. (2022). Establishing the identity of insan kamil generation through music learning activities in pesantren. *Heliyon*, *8*(7), e09958. https://doi.org/10.1016/j.heliyon.2022.e09958

Selwyn, N. (2020). *Should Robots Replace Teachers? AI and the Future of Education*. Polity Press.

Sholeh, M. I. (2023). Pengakuan dan Reward dalam Manajemen SDM Untuk Meningkatkan Motivasi Guru. *COMPETITIVE: Journal of Education*, *2*(4).

Silvi Ratnawulan, Nurhayati, S., Taufikin, Fatima Zahra Lotfi, & Olugbade, D. (2025). Leveraging Digital Technology to Strengthen Adult Education and Engagement in Islamic Study Group (Majlis Ta'lim). *Journal of Education Research*, *6*(1), 79–89. https://doi.org/10.37985/jer.v6i1.2280

Siregar, H. D., & Hasibuan, Z. E. (2024). Pendidikan Agama Islam: Pengertian, Tujuan, Dasar, dan Fungsi. *Intellektika : Jurnal Ilmiah Mahasiswa*, *2*(5), 125–136. https://doi.org/10.59841/intellektika.v2i5.1520

Slavin, R. E. (2002). Evidence-based education policies: Transforming educational practice and research. *Educational Researcher*, *31*(7), 15–21. https://doi.org/10.3102/0013189X031007015

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Sutrisno, S. (2024). Islamic Spiritual E-Leadership Integration Model for Education Quality Improvement in The Digital Era. *Didaktika Religia*, *12*(1), 45–64. https://doi.org/10.30762/didaktika.v12i1.3477

Suyitno, M., Komarudin, N., Ilyas, I., & Hasanah, I. (2025). Strategies for Digital-Based Islamic Education Learning to Enhance Students' Islamic Literacy in the Era of the Industrial Revolution 4.0. *Journal of the American Institute*, *2*(2), 278–287. https://doi.org/10.71364/4nq7tx82

Taufik, M. (2020). Strategic Role Of Islamic Religious Education In Strengthening Character Education In The Era Of Industrial Revolution 4.0. *Jurnal Ilmiah Islam Futura*, *20*(1), 86. https://doi.org/10.22373/jiif.v20i1.5797

Troisi, O., Visvizi, A., & Grimaldi, M. (2024). Rethinking innovation through industry and society 5.0 paradigms: A multileveled approach for management and policy-making. *European Journal of Innovation Management*, *27*(9), 22–51. https://doi.org/10.1108/EJIM-08-2023-0659

UNESCO. (2019). *Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development*. UNESCO Publishing.

Widodo, W. (2025). Collaborative Management Of Islamic Education and Technology For Improving The Competence Of Students In The Digital Era. *Darul Ilmi: Jurnal Ilmu Kependidikan Dan Keislaman*, *12*(2), 229–243. https://doi.org/10.24952/di.v12i2.14927

Wisuda, A. H., & Fatimah, S. (2023). Towards the Era of Society 5.0: Human Resources Management in Integrated Islamic Schools. *Al-Tanzim: Jurnal Manajemen Pendidikan Islam*, *7*(2), 521–536. https://doi.org/10.33650/al-tanzim.v7i2.5432

Zahraini, Z., Akib, A., Rosidin, R., & Sulaeman, O. (2025). Islamic Education Reform in the Digital Age: Challenges and Opportunities for a Modern Curriculum. *Journal of Noesantara Islamic Studies*, *2*(1), 1–11. https://doi.org/10.70177/jnis.v2i1.1841