

A Decade Analysis of Curriculum Implementation in Modern Islamic Boarding Schools

Syaharuddin¹, Alfira Mulya Astuti², Nurul Lailatul Khusniyah³

¹Management of Islamic Education, Universitas Islam Negeri Mataram, Indonesia ²Mathematics Education, Universitas Islam Negeri Mataram, Indonesia ³English Education, Universitas Islam Negeri Mataram, Indonesia 240403046.mhs@uinmataram.ac.id

Keywords:

Modern Era; Curriculum; Character Education; Islamic Boarding School.

ABSTRACT

The curriculum is one of the keys to the successful implementation of character education in Islamic educational institutions. Therefore, this research aims to systematically and deeply analyze curriculum management in Islamic boarding schools in the modern era. Related research results from Dimension and Scopus databases over the past 10 years are visualized, interpreted, and synthesized systematically. The selection data was visualized using VOSViewer and R-Studio software. The results show that research on curriculum management in modern boarding schools has been widely studied in various countries in Asia, especially in Islamic-based countries. Further analysis found that modern boarding schools play an important role in shaping character and religious and cultural values that become the foundation for the development of individuals who are noble and integrated in a multicultural society. Furthermore, a curriculum that focuses on the integration between religious education, science, and the role of technology will enrich the learning experience and be able to adapt to the needs of education in the modern era. Despite facing challenges such as the digital divide and limited infrastructure, the transformational approach of pesantren that prioritizes character education and community involvement contributes greatly to sustainable development and relevant education quality. These results can serve as a reference for the development of educational policies that are more responsive to the challenges of the times, as well as provide guidance for Islamic educational institutions in adapting traditional values to the demands of modern society.



Article History:

Received: 12-11-2024 Revised: 21-12-2024 Accepted: 23-12-2024 Online: 30-12-2024

This is an open access article under the CC-BY-SA license



https://doi.org/10.31764/ijeca.v7i3.28164

A. INTRODUCTION

Curriculum management is crucial in Islamic educational institutions as it directly affects the quality of education and character development of students. Effective curriculum management ensures that educational programs are aligned with Islamic values while meeting contemporary educational demands. This management includes planning, implementation and evaluation processes that contribute to overall educational goals. Rosmawati & Harahap (2023) say that curriculum management can (1) improve the quality of education by integrating Islamic teachings with academic content, encouraging intellectual and spiritual growth and (2) be able to promote efficient use of resources and ensure that educational institutions can provide effective learning experiences. In addition, Fatimah et al. (2023) also stated that curriculum management is very important in Islamic educational institutions because it ensures the development of high-quality

schools, facilitates effective learning programs, and promotes active student participation, prioritizing practical knowledge over theoretical understanding which ultimately aligns with institutional goals.

The process of integrating moral and religious teachings into the curriculum Pondok pesantren play an important role in character education in the modern era. These institutions emphasize student character development through structured programs and community involvement, and address the contemporary moral crisis among youth. Mau (2024) argued that Islamic boarding schools play an important role in character education by integrating Islamic values through curricular and extracurricular activities, improving student behavior, academic performance, and community ties, while overcoming challenges such as teacher development and goal alignment. In addition, Dian et al. (2024) asserted that the leadership of kiai (Islamic scholars) is crucial in shaping students' character by using democratic and transformational styles to motivate and guide them. Thus, boarding schools in the modern era are crucial in providing character education that combines religious teachings with modern values, preparing students to become noble and socially responsible individuals (Hastasari et al., 2022; Purwanto et al., 2020).

Islamic educational institutions in various countries such as Turkey, Egypt, Pakistan, India, Malaysia, including Indonesia are actively integrating modern educational practices with traditional religious teachings and addressing challenges related to accessibility, diversity, and technological advances, as well as focusing on professional development for teachers to ensure effective outcomes (Rohman et al., 2024). Curriculum integration, modernization and technology integration, challenges and innovations, and professional development are important points in developing and improving the quality of educational output in modern Islamic boarding schools (Assegaf et al., 2022; Sidik et al., 2024). Therefore, boarding schools in various parts of the world face challenges in balancing modern knowledge and religious traditions. This challenge is evident in case studies in Singapore and the UK, where Islamic schools strive to maintain their cultural heritage while meeting the demands of modern education (Tan, 2011). These efforts reflect the urgent need for comprehensive curriculum reforms, particularly in the madrasa system, to ensure that Islamic educational institutions can compete in the 21st century. These reforms include strengthening content knowledge, implementing effective pedagogy, and developing lifelong learning skills relevant to the evolving world. Thus, curriculum reform and improved teacher competencies will have an impact on schools' ability to better bridge religious values with the needs of the modern world of education.

Curriculum development and management in modern boarding schools face several challenges, including monotonous practices, limited resources, and the need for integration with global education standards. Furthermore, these challenges include lack of subject expertise, teacher absence and specialization, resource constraints, one-way management (Madonsela & Proches, 2021; Ritonga et al., 2020; Rose, 2022). On the other hand, Rose (2022) offers a solution to improve the professionalism of staff and teachers by developing short courses with a specialized focus can help expand the curriculum, although ensuring integration remains a challenge. Furthermore, Morales et al. (2021) explained that implementing training programs for education managers can significantly improve their competencies in planning, assessment and pedagogical support. On the other hand, Munifah et al. (2019) suggested that adopting new management strategies aligned with modern educational needs can help boarding schools improve quality and adapt to changing times. Finally, the act of incorporating e-learning skills into the curriculum can improve students' competitiveness and align them with the demands of modern education (Abidin, 2020).

The gaps in curriculum management of modern pesantren lie in several key aspects. First, the limited professional development of teachers, especially in pedagogy, technology, and subject expertise, makes them less prepared for the needs of modern education. Second, the integration of religious values and modern knowledge in the curriculum is still limited, making it often less relevant to global education standards. Thirdly, limited resources and lack of learning technologies, such as e-learning, reduce students' competitiveness in the digital age. In addition, one-way curriculum management practices, without involving stakeholders, reduce the responsiveness of the curriculum to actual educational needs. Based on this information, the research aims to analyze more deeply and systematically about (1) the role of community and culture in the formation of Islamic character and values, (2) the planning, evaluation, and development of infrastructure in modern boarding schools; and (3) the challenges, transformation, and role of technology in modern boarding schools. The results of this study are expected to contribute to strengthening the curriculum of modern Islamic boarding schools as well as enriching curriculum management models that are more responsive and participatory in achieving global education standards without abandoning Islamic values.

B. METHODS

This research is a qualitative research with Systematic Literature Review (SLR) approach. This method is used to identify, evaluate, and interpret all relevant research results regarding modern boarding school curriculum management. This approach allows researchers to collect and analyze data from various relevant sources systematically, so as to provide a comprehensive understanding of the topic under study. The data in this study were sourced from the Dimensions database (https://app.dimensions.ai) and Scopus (https://www.scopus.com) with the latest 10-year interval publications to ensure that the data used is current and relevant to the development of modern boarding school curriculum management.

Data eligibility criteria in this study were established to ensure that only relevant and high-quality literature was analyzed. The criteria include (1) scientific articles published in reputable national and international journals; (2) studies that specifically address curriculum management in Islamic boarding schools or Islamic education institutions; (3) publications published in the last 10 years (2013–2024); (4) articles available in full text and in English or Indonesian. To ensure all selected articles met the eligibility criteria, a rigorous validation process was employed. This included a two-step review process. First, two independent reviewers screened the articles based on their titles and abstracts, ensuring alignment with the predefined criteria. Discrepancies between reviewers were resolved through discussion or by consulting a third reviewer as a tiebreaker. Second, for articles deemed eligible after the initial screening, a full-text review was conducted to verify compliance with all criteria. Inter-rater reliability was assessed using Cohen's Kappa statistic to ensure consistency in the selection process. The research procedure is as shown in Figure 1.

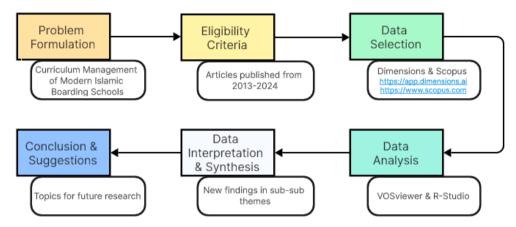


Figure 1. Research procedures

Figure 1 shows that this research was conducted in several stages, namely problem formulation, determining eligibility criteria, data selection, data analysis, data interpretation and synthesis, and drawing conclusions. The problem formulation stage is important to limit the topic discussed, namely the curriculum management of modern Islamic boarding schools. Eligibility criteria were determined to filter data that fit the topic with relevant keywords such as "curriculum management," "Islamic boarding school," and "modern pesantren". Next, data were selected from the Dimensions database and a filter was applied for data published in the last 10 years (2013-2024). Next, the collected data was imported into VOSviewer software to create a visualization of the relationship between keywords and themes in the study, and R-Studio was used for descriptive statistical analysis and deeper data exploration such as calculating the frequency of themes and conducting trend analysis. The results of data visualization and analysis from VOSviewer and R-Studio were interpreted to explain the key variables in curriculum management of modern Islamic boarding schools. These results were used to formulate key findings and theoretical and practical implications of curriculum management in modern pesantren. Finally, the researcher formulated conclusions and studies for further research topics in the future.

C. RESULT AND DISCUSSIONS

1. Results of Data Selection

The results of the search conducted in the indexer database found a total of 688 data according to the research topic. Then, the results of data selection found as many as 554 articles that are relevant and according to eligibility criteria. Of these, 542 journal articles and 12 proceedings articles were found. The distribution of data based on the year of publication can be seen in Figure 2 which shows the development of the number of studies related to curriculum management of modern Islamic boarding schools in the last 10 years.

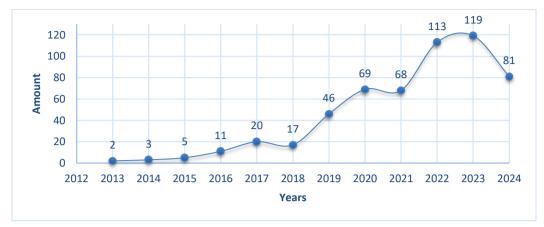


Figure 2. Publications in each year

Figure 2 shows the trend in the number of research publications on curriculum management of modern Islamic boarding schools over the past 10 years, from 2012 to 2024. Based on the data, it can be seen that in 2013 the number of publications was still very low, namely 2 articles. This number slowly increased every year, but remained in low numbers until 2016. In 2017, there was a significant increase with the number of publications reaching 20 articles. This trend continued to increase and reached 69 publications in 2020 indicating a growing interest in this topic. After a decline in 2021 with 68 publications, the number of publications again jumped sharply in 2022 with 113 publications and peaked in 2023 with a total of 119 publications. Finally, the year 2024 saw a downward publication trend to 81 publications.

2. Distribution of Research in Several Countries

In this stage the researchers investigated the distribution of publications in several countries. Figure 3 shows that the topic of modern boarding school curriculum management has been widely researched and collaborated in several countries around the world such as Sweden, United Kingdom, Germany, Turkey, Algeria, Egypt, Nigeria, China, India, Thailand, Japan, Malaysia, and Australia.



Figure 3. Countries' Collaboration World Map

Figure 3 also indicates that the high number of publications also determines the results of publications cited and reviewed more deeply by researchers in each country. The high number of publications in a country can increase the opportunity for these scientific works to be cited and reviewed more deeply which has an impact on increasing the contribution of research to science (Masic, 2022). Furthermore, Table 2 shows the ten countries with the highest number of citations related to research on "curriculum management of modern Islamic boarding schools". Indonesia has the highest number of citations with 331 total citations, although the average citations per article is relatively low at 2.40.

Table 2. Most Cited Countries

Table 3. Publications in Indonesia

Table 2: Most cited countries			Table 3. I abileations in madicisa	
Country	Total Citations	Average Article Citations	Years	Amount
Indonesia	331	2,40	2015	1
Egypt	17	17,00	2016	3
Algeria	14	14,00	2017	4
Australia	9	4,50	2018	10
India	8	8,00	2019	13
Malaysia	7	2,30	2020	38
Japan	3	3,00	2021	80
Turkey	1	1,00	2022	184
China	0	0,00	2023	309
Thailand	0	0,00	2024	380

Egypt and Algeria have high average citations per article of 17.00 and 14.00 respectively, indicating that articles from these two countries tend to get greater attention individually from researchers in the world (publication count distribution see Figure 4). This indicates that despite Indonesia's high publication productivity, the quality or relevance of articles from other countries such as Egypt and Algeria is considered more significant on average by the academic community. Furthermore, Table 3 shows the annual number of publications in Indonesia on the same topic from 2015 to 2024. There is a significant upward trend in the number of publications over the period, starting from only 1 publication in 2015 to a peak of 380 publications in 2024. The rapid growth in the number of publications especially after 2020 indicates an increased interest and attention to the topic of curriculum management of modern Islamic boarding schools in Indonesia. This increase may be due to shifts in education policy, increased awareness of the importance of pesantren education or an increase in the number of conferences and journals that facilitate publications in this field.

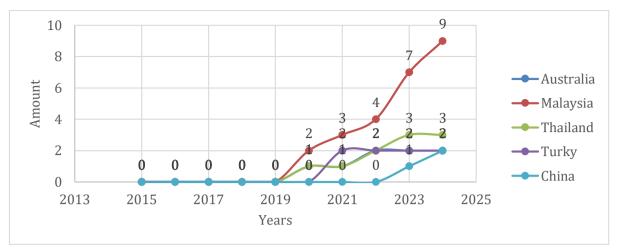


Figure 4. Countries' Production over Time

Figure 4 shows the trend of research publications in Australia, Malaysia, Thailand, Turkey and China over the past 10 years. Malaysia shows a significant increase in the number of publications from 2019 to 2024. This trend indicates a strong and growing interest in such research topics in Malaysia in recent years. On the other hand, Thailand and Turkey show a similar pattern with publications starting to appear in 2019 and tending to stabilize between two to three publications per year until 2024. This indicates a steady interest but no significant growth in both countries. Meanwhile, Australia recorded a very low number of publications and no significant increase with only one publication appearing in the years 2021, 2022, and 2024, indicating relatively little interest in this topic. Furthermore, Chinese researchers only started to engage in this research in 2023 with one publication and maintained the same number in 2024. Thus, it can be said that Malaysia has the most rapid development in interest in this topic, while other countries show a more stable or low interest in research on curriculum management of modern Islamic boarding schools.

3. Network Visualization of Data

Furthermore, researchers visualized all research results using VOSviewer to see the research variables and the relationship between variables. The visualization results are as shown in Figure 5.

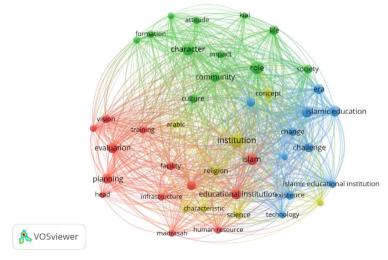


Figure 5. Network visualization of modern boarding school curriculum management.

Figure 5 is a network visualization of all variables studied over the past 10 years and depicts four different color clusters: green, red, yellow, and blue. The interpretation is as follows.

The green cluster in Figure 5 includes concepts that focus on character and values formation within the pesantren community. Keywords such as character, community, role, formation, attitude, impact, life, culture, concept, and practice highlight that education in pesantren aims to shape students' personalities in a solid community environment. Character and attitude describe aspects of moral and attitude formation that are internalized in the daily life of students in pesantren. Community and role emphasize the importance of the role of the pesantren community and its members such as kiai, teachers, and students in supporting a comprehensive and meaningful learning process. The terms formation and impact reflect that education in pesantren has a profound impact on the development of students' attitudes and mentality. On the other hand, life and culture show that life in pesantren, which is full of religious and social activities, also shapes the culture and personality of students. Finally, concept and practice illustrate that education in pesantren is not only based on theory but also real applications in daily life. Thus, this green cluster highlights that education in pesantren plays an important role in character and attitude building through the support of a strong pesantren community and culture with an approach that integrates concepts into daily practice.

The red cluster in Figure 5 focuses on managerial and structural aspects related to curriculum management in pesantren. The dominant keywords include vision and mission which indicate the main direction and purpose of education in the boarding school. In addition, the words **evaluation** and **planning** describe the efforts of the boarding school in evaluating and planning the curriculum to make it more effective and according to the needs of the times. The word **training** emphasizes the importance of training for teaching staff to support the improvement of the quality of education, while **infrastructure** and facility refer to the facilities and infrastructure that support the education process. The word **head** indicates the role of boarding school leaders, such as principals or kiai who have an important role in decision-making. The terms madrasah and pondok pesantren represent types of Islamic education institutions with human resources that indicate the importance of managing competent and qualified teachers and staff. Thus, this red cluster illustrates the importance of managerial aspects in managing the boarding school curriculum including vision, mission, planning, and evaluation, as well as infrastructure fulfillment and human resource training to ensure optimal education quality in boarding schools.

The blue cluster in Figure 5 illustrates the challenges faced by Islamic education in the modern era with keywords such as Islamic education, era, challenge, change, technology, government, Islamic educational institution, existence, transformation, and science. Islamic education is the main theme in this cluster which illustrates that Islamic educational institutions, such as pesantren, are faced with various challenges arising from changing times and demands for change and transformation. The application of technology appears as part of modern adaptation that needs to be applied to improve the quality of education in pesantren. The government is also mentioned which indicates the importance of public policy support in maintaining the existence of Islamic educational institutions. The word science indicates that science needs to be integrated in the curriculum in line with educational goals that are more comprehensive and relevant to the

modern era. Thus, this blue cluster shows that Islamic education in pesantren needs to adapt to technology and transform to remain relevant in facing the challenges of the times, while still maintaining the Islamic values that underlie its existence. Government support and integration of science are also important elements in this modernization process.

The yellow cluster in Figure 5 highlights the main themes related to Islamic educational institutions that center on the relationship between institutions, Islam, and the unique characteristics of faith-based educational institutions. The main keywords such as institution and educational institution reflect the importance of Islamic boarding schools as institutions that have educational and religious functions. Islam and religion indicate that religious values are the main foundation in the management and implementation of the curriculum in pesantren. Meanwhile, characteristic emphasizes the existence of a distinctive or unique feature in Islamic education in pesantren, where religious aspects are integrated with teaching methods that include science. Thus, this cluster shows that education in modern boarding schools emphasizes the role of the institution as the main pillar in shaping the identity and characteristics of students while maintaining Islamic values as the foundation of the curriculum.

Based on the interpretation of each cluster, the researcher can formulate several important points as a synthesis of the curriculum management of modern Islamic boarding schools as follows:

a. The Role of Community and Culture in Character Building and Values in Modern Islamic Boarding Schools

Modern pesantren play an important role in integrating community and cultural values into character education. This integration is very important to foster individuals who have a good personality that embodies the values of religion and local culture. The role of society and culture in character and values building in modern pesantren is influenced by several key cultural elements, community involvement, and religious education. Figure 6 shows these key points.

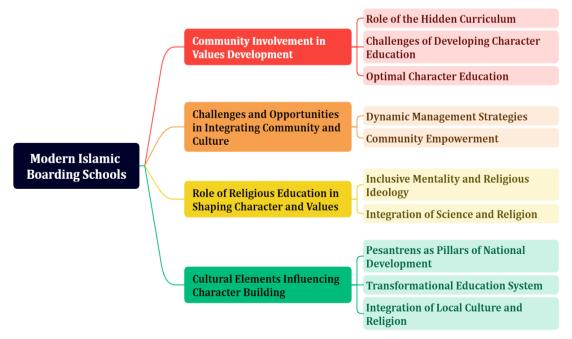


Figure 6. Key elements of culture, community engagement and religious education

Figure 6 shows that Islamic boarding schools play an important role in Indonesia's educational landscape, profoundly shaping the character and moral foundations of Muslim youth (Jubba et al., 2021). The transformative educational approach in Islamic educational institutions has guided students to move away from traditional and conservative values towards more modern, rational, disciplined, inclusive, independent, and responsible qualities (Jusubaidi et al., 2024). The combination of local cultural elements with Islamic teachings assists pesantren in modeling a unique character education, fostering an environment where Islamic values and local culture coexist and reinforce each other. Furthermore, this integration forms the core of character building practices in pesantren, making it a strategic force in cultivating well-rounded individuals who embody cultural and religious virtues (Nashuddin, 2020).

Community engagement in value development in pesantren is significantly influenced by the hidden curriculum, which plays an important role in fostering moderate character among students. The components of the hidden curriculum (1) help instill the core values of moderation, including balance, openness, tolerance, and harmonious coexistence in a diverse society, and (2) shape the santri to embody these principles in their daily interactions (Salim et al., 2024). Therefore, pesantren have a valuable position as character education agents that address issues such as juvenile delinquency by fostering good character and promoting an understanding of religion that embraces openness and tolerance (Purwanto et al., 2021). However, challenges remain, especially in integrating value-based education into academic subjects, which often depends on educators' ability to incorporate character values consistently, as well as ongoing support from relevant stakeholders (Muhajir, 2022). Thus, boarding schools play an important role in shaping moderate, tolerant, and well-rounded characters among students, although consistent support and skillful integration of character values are essential to fully achieve these

The role of religious education in shaping Islamic character and values is evident in its emphasis on developing an inclusive mentality in addition to religious ideology. Pesantren contribute to preparing students to live in a multicultural Indonesia by instilling the values of democracy, civil society awareness, and appreciation of cultural and religious diversity and tolerance (Raihani, 2012). This goal is further supported by the integration of science and religion, where pesantren adopt an adaptive and holistic approach. For example, pesantren in Madura and Islamic schools in Selangor have developed inclusive syllabi that combine scientific and religious knowledge (Hadi et al., 2024). Thus, pesantren play an important role in promoting a balanced and inclusive worldview that harmonizes scientific understanding with religious values to prepare students for the diverse context of society.

Integrating society and culture in pesantren presents both challenges and opportunities. These Islamic institutions adapt to the pressures of modernization by using dynamic management strategies, such as (1) integrating general and religious curricula, (2) offering diverse extracurricular programs, (3) initiating character-building initiatives, and (4) fostering partnerships with various stakeholders (Basori et al., 2023). In addition, pesantren also play a very important role as agents of change, empowering the community in economic, socio-cultural, psychological, and political dimensions, thus supporting sustainable development (Wibowo et al., 2021). Thus, through innovative management approaches and their role in community empowerment, pesantren contribute

430 | IJECA (International Journal of Education and Curriculum Application)

Vol. 7, No. 3, December 2024, pp. 420-437

significantly to sustainable development amidst the challenges of modernization. More clearly the relationship of each variable that has been discussed can be seen in Figure 7.

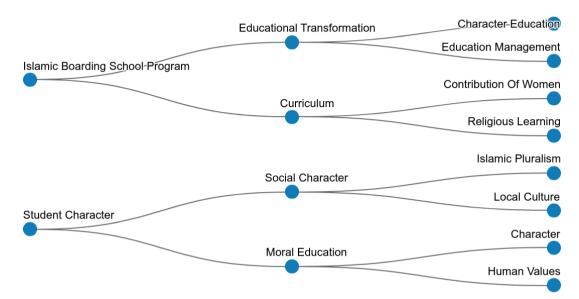


Figure 7. Indicators of the relationship between Islamic boarding school program and student charakter

b. Curriculum Management in Modern Islamic Boarding Schools: Planning, Evaluation, and Infrastructure Development

The vision and mission formulate long-term goals and achievement strategies to be the basis for curriculum development and help align educational activities with institutional values so that all parties understand their respective roles (Calder, 2014). In pesantren, the integration of character education in the curriculum is guided by the vision of the institution that encourages the multidimensional development of students (Halimatussa'diyah et al., 2024). Effective management strategies such as periodic curriculum evaluation in accordance with the vision and mission can ensure that educational practices remain relevant and impactful (Subekhan & Suryapermana, 2024). Furthermore, curriculum evaluation and human resource development in Pondok Pesantren are important to improve the quality of education and adapt it to today's needs. The integration of traditional Islamic education with modern pedagogical approaches is key in creating competent human resources. Curriculum evaluation involves planning, implementation, and supervision in line with the vision and mission of the pesantren (Daud et al., 2024). Evaluation methods, such as formative and summative assessments can be used to improve Islamic education in a sustainable manner (Yahya, 2021). In outline, curriculum management can be seen in Figure 8.

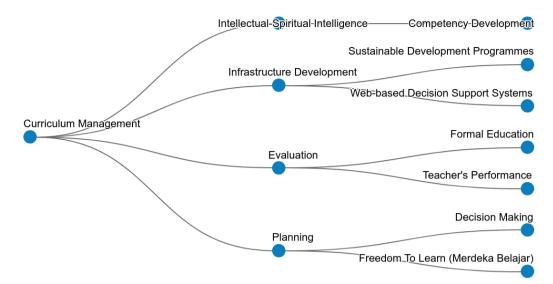


Figure 8. Concept map of curriculum management.

Figure 8 shows that in curriculum management in modern boarding schools, there are several important aspects related to planning, evaluation, and infrastructure development. In terms of planning, modern boarding schools are increasingly integrating general and religious education to meet contemporary needs. This step includes designing excellent educational programs as well as developing supporting infrastructure (Sirojuddin et al., 2022). Effective planning also involves analyzing the needs of students and the community, as applied at API ASRI Syubbanul Wathon Tegalrejo Islamic Boarding School through the process of student recruitment, selection, and orientation (Keswara & Wijayanti, 2021). Therefore, effective curriculum management in modern Islamic boarding schools includes the integration of excellent curriculum design and needs analysis to support the achievement of quality education.

Furthermore, continuous evaluation is essential to ensure the quality of education in modern pesantren. This evaluation process covers not only aspects of the curriculum, but also extracurricular activities. One crucial form of evaluation is the study of classical texts, such as the yellowIslamic classic books and the Qur'an, which are at the core of traditional Islamic education, but need to be continuously reviewed to ensure relevance and deep understanding. In addition, feedback mechanisms from various stakeholders, including students and teachers, also play an important role in refining the curriculum as well as the teaching methods applied (Rohmad et al., 2024). On the other hand, infrastructure development is also a determining factor in the progress of pesantren education. The integration of information and communication technology (ICT) is an important part of pesantren modernization efforts that aim to update learning objectives, resources, methods, and teaching media to align with contemporary educational demands (Ritonga et al., 2021). Improving e-learning skills among students is also a priority, so that they can compete in the digital era. For example, Pondok Pesantren Gontor 12 Tanjung Jabung Timur emphasizes the development of e-learning skills to improve students' competencies in facing the challenges of global education (Abidin, 2020).

c. Adaptation of Islamic Education in the Modern Era: Challenges, Transformation, and the Role of Technology in Islamic Boarding Schools

The digital age is having a major impact on boarding school education, providing both challenges and opportunities for transformation. As educational institutions adapt to technology, they face several challenges, such as the digital divide as many students do not have access to technology (Muzaffar, 2023), the need for continuous training for teachers to integrate technology into teaching, and the need for curriculum adaptation to include digital literacy and 21st century skills (Silaban et al., 2024). However, technological innovations present opportunities such as the emergence of "Online Pesantren," which enables distance religious education (Kardi et al., 2023), the use of interactive learning tools that increase student engagement (Kingston et al., 2024), and the implementation of character education through digital means to ensure students develop academically and morally (Ainur & Mohamad, 2023). While this digital transformation offers many benefits, concerns arise regarding privacy, security and the risk of increased inequality of access. Efforts to address these challenges are essential for the positive impact of technology in boarding school education to be maximized.

The integration of technology and science in the Islamic education curriculum is essential to improve the quality and relevance of education in the modern era. Information technology facilitates data collection and analysis that aids decision-making in curriculum development and creates an inclusive curriculum that is responsive to societal changes (Kodir & Suklani 2024). However, challenges such as limited infrastructure and resources in Islamic educational institutions hinder the effective integration of technology and concerns about the negative impacts of technology, such as misuse of information and loss of social interaction (Wafa, 2023). Nonetheless, technology also has great benefits in learning, such as increasing student engagement, comprehension and digital skills, especially in basic education, as well as supporting personalized learning experiences and access to diverse materials to prepare students for a globalized world (Jawaz et al., 2024).

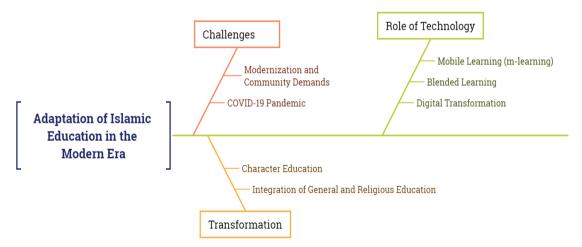


Figure 9. Key themes emerge: challenges, transformation, and the role of technology

Figure 9 shows that the process of adapting Islamic education in the modern era, especially in pesantren, there are several main keys that need to be considered, namely challenges, transformation, and the role of technology. One of the main challenges faced by pesantren is integrating modern educational practices while maintaining religious

principles. In addition, the demands of the community on educational institutions are also getting higher, because pesantren are expected to meet the growing needs of society, including preparing students to face the complexity of the modern world. Some pesantren have used a transformative approach, especially through the integration of general and religious education. By integrating both aspects, these institutions have enhanced the educational experience and equipped students with the necessary knowledge and skills to face contemporary challenges without compromising their religious values (Budiharso et al., 2023)). In addition, character education has become a major focus of transformation in pesantren. These schools aim to cultivate students' personalities to be more rational, disciplined, and inclusive, moving away from insular traditional values. This shift reflects a broader educational philosophy that seeks to produce well-rounded individuals who can navigate the modern world while upholding Islamic principles (Jusubaidi et al., 2024).

The role of technology in enhancing Islamic education has become increasingly prominent with various methods contributing to the modernization and accessibility of sacred knowledge. One significant development is the integration of mobile learning (m-learning) which has shown its potential to make Islamic teachings more accessible and engaging for santri. By utilizing mobile devices, santri can access educational content anytime and anywhere and bridge the gap between traditional knowledge and modern innovations (Ahmad et al., 2025). In addition, blended learning, which combines face-to-face teaching with online learning methods, has been well received by students. The laboratory rotation model, for example, has been proven effective in motivating students and improving their understanding of the material by providing a more flexible and interactive learning environment (Adiwisastra et al., 2020). In addition, the ongoing digital transformation in education underscores the importance of integrating information technology in learning activities. This shift is crucial in adapting to disruptive innovations and ensuring educational continuity, especially during crises such as the COVID-19 pandemic, where technology plays a crucial role in maintaining access to learning despite physical restrictions (Ridwan et al., 2019). Thus, the adoption of various technological tools such as m-learning, blended learning, and digital transformation has significantly enriched Islamic education by making it more accessible, engaging, and adaptable to the challenges of the modern world.

D. CONCLUSION AND SUGGESTIONS

Boarding school education plays a central role in character building and curriculum management. It emphasizes character formation, attitudes, and values in a pluralistic community through a practical approach that integrates moral and social concepts into students' daily lives. Managerial management of the pesantren curriculum involves critical components such as planning, evaluation, teacher training, and the provision of facilities and infrastructure. Research findings highlight the success of pesantren in fostering tolerance and moral values through integrated religious and social education programs. For example, studies have demonstrated that pesantren with well-structured curricula and consistent teacher training programs produce graduates with strong ethical values and social adaptability. Furthermore, the application of modern technology in curriculum delivery has been shown to enhance learning outcomes and ensure relevance in the digital era. However, pesantren face challenges such as limited resources and the need for continuous adaptation to technological advancements to maintain the relevance of Islamic education in contemporary society. Based on these findings, some research topics that need to be researched in the future include: (1) curriculum management based on vision and

mission towards the quality of education in Islamic boarding schools, (2) transformation of Islamic education in Islamic boarding schools in the face of social and technological changes, (3) development of professional training models for pesantren educators to face the challenges of education modernization, and (4) the relationship between the unique characteristics of Islamic boarding schools and the achievement of success in Islamic values-based education. These research recommendations are important as they provide a foundation for understanding how curriculum management, educational transformation, and professional training can enhance the competitiveness of Islamic boarding schools in addressing the challenges of educational modernization and social changes.

REFERENCES

- Abdul, Kodir., S. (2024). Peran Teknologi Informasi Dalam Manajemen Pendidikan Islam. *El-Idare: Journal of Islamic Education Management, 10*(1), 151–158. https://doi.org/doi: 10.19109/elidare.v10i1.21023
- Abidin, Z. (2020). Educational Management of Pesantren in Digital Era 4.0. *Jurnal Pendidikan Agama Islam*, *17*(2), 203–216. https://doi.org/10.14421/jpai.2020.172-07
- Adiwisastra, M. F., Mulyani, Y. S., Alawiyah, T., Wibisono, T., Iskandar, I. D., & Purnia, D. S. (2020). Implementation of the Lab Rotation Model in Blended Learning Based on Student Perspectives. *Journal of Physics: Conference Series*. 1641. https://doi.org/10.1088/1742-6596/1641/1/012038
- Ahmad, K. A., Asni, F., Hasbulah, M. H., Hashom, H., Mustafa, W. A., Noor, A. M., Tambak, S., & Nasir, K. (2025). Mobile Learning of Islamic Studies: A Comprehensive Review. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 48(2), 211–224. https://doi.org/10.37934/araset.48.2.211224
- Ainur, R., & Mohamad, K. (2023). Education in the Digital Age: Navigating Challenges and Cultivating Character Values for the Next Generation. *Indonesian Journal of Education and Social Studies*. 1(2), 63-74. https://doi.org/10.33650/ijess.v1i2.7083
- Ali Wafa. (2023). Integration of Religious Knowledge with Science and Technology in Islamic Education. *Maklumat: Journal of Da'wah and Islamic Studies.* 1(1), 11-20. https://doi.org/10.61166/maklumat.v1i1.2
- Assegaf, A. R., Zainiyah, H. S., & Fahmi, M. (2022). Curriculum Innovation for the Internationalization of Islamic Education Study Program at Higher Education Institutions in Surabaya, Indonesia. *Millah: Journal of Religious Studies*, *21*(3), 671–706. https://doi.org/10.20885/millah.vol21.iss3.art3
- Basori, R., Raharjo, T. J., Prihatin, T., & Yulianto, A. (2023). Maintaining Salafi Values Through Innovative Management Practices At Pesantren. *Jurnal Pendidikan Islam*, 9(2), 145–156. https://doi.org/10.15575/jpi.v9i2.25376
- Budiharso, T., Bakri, S., & Sujito. (2023). Transformation of Education System of the Pesantren in Indonesia from the Dutch Colony to Democratic Era. *Journal of Social Studies Education Research*, 14(4), 179–206.
- Calder, W. B. (2014). Achieving an Institution's Values, Vision, and Mission. College Quarterly.
- Darmawan, Daud., Muhammad, Nasir., Moh., S. (2024). Manajemen Pengembangan Kurikulum Pesantren Mu'Adalah (Studi Kasus Pada Satuan Pendidikan Mu'allimin Pondok Pesantren Trubus Iman Tanah Grogot). *Journal on Education*, 6(4), 20732–20747. https://doi.org/doi: 10.31004/joe.v6i4.6187
- Dian, D., Hidayatulloh, R., Riyanti, T., & Aripin, J. (2024). The Role of Kiai Leadership in Developing Students' Character at Islamic Boarding School. *AL-ISHLAH: Jurnal Pendidikan*, *16*(1), 234–246. https://doi.org/10.35445/alishlah.v16i1.4378
- Fatimah, E. S., Sahal, Y. F. D., & Khusni, K. (2023). Curriculum Management and Implementation Management at Madrasah Ibtidaiyah (Islamic Elementary School) Al Mukhlisin, Bandung. *EDUTEC: Journal of Education And Technology*, 6(3), 801–812.

- https://doi.org/10.29062/edu.v6i3.532
- Hadi, S., Affani, S., & Al-Akiti, M. A. (2024). The Challenge of Integrating Science and Religion in Indonesia and Malaysia. Teosofi: Jurnal Tasawuf Dan Pemikiran Islam, 14(1), 96-122. https://doi.org/10.15642/teosofi.2024.14.1.96-122
- Halimatussa'diyah, Halimatussa'diyah., Aslamiah, Aslamiah., Ahmad, S. (2024). Boarding School-Based Character Education Management (Case Study at MAN Insan Cendekia Tanah Laut). International Journal of Social Science and Human Research, 7(7), 4982-4990. https://doi.org/doi: 10.47191/ijsshr/v7-i07-45
- Hastasari, C., Setiawan, B., & Aw, S. (2022). Students' communication patterns of islamic boarding schools: the case of Students in Muallimin Muhammadiyah Yogyakarta. Heliyon, 8(1), e08824. https://doi.org/10.1016/j.heliyon.2022.e08824
- Jubba, H., Pabbajah, M., Abdullah, I., & Juhansar. (2021). Reorienting Moral Education for Millennial Muslims: The Changing Role of Islamic Boarding Schools in Indonesia. *Islamic* Quarterly, 65(3), 423-441.
- Jusubaidi, Lindgren, T., Mujahidin, A., & Rofiq, A. C. (2024). A Model of Transformative Religious Education: Teaching and Learning Islam in Pondok Modern Darussalam Gontor, Indonesia. Millah: Religious Studies, 171-212. *Journal* of 23(1), https://doi.org/10.20885/millah.vol23.iss1.art6
- Kardi, K., Basri, H., Suhartini, A., & Meliani, F. (2023). Challenges of Online Boarding Schools In The Digital Era. At-Tadzkir: Islamic Education Iournal. 2(1), 37-51. https://doi.org/10.59373/attadzkir.v2i1.11
- Keswara, I., & Wijayanti, W. (2021). Management of Students Islamic Boarding School at Magelang **ACM** International Conference **Proceeding** https://doi.org/10.1145/3516875.3516998
- Kiki, A, S., Grace, A, S., Lois, Z, P, B., Masly, S., Maria, I, S., Novia, M., Jopita, A, L, T. (2024). Transformasi Pendidikan di Amerika: Tantangan dan Inovasi di Era Digital. Polyscopia, 1(3), 142–146. https://doi.org/doi: 10.57251/polyscopia.v1i3.1349
- Madonsela, B. Z., & Proches, C. G. (2021). Challenges faced by Heads of Departments (HODs) in driving quality curriculum management in a secondary school in Durban, South Africa. In Provision of Psychosocial Support and Education of Vulnerable Children. 185-206. https://doi.org/10.4018/978-1-7998-8896-3.ch009
- Masic, I. (2022). Scientometrics: The Imperative for Scientific Validity of the Scientific Publications Content. Science, Art and Religion, 1(1), 56-80. https://doi.org/10.5005/jp-journals-11005-0017
- Mau, F. A. (2024). Integrating Character Education in Al-Syifa Islamic Boarding Schools: A Case Study Approach. Edu Spectrum: Journal of Multidimensional Education, 1(1), 1–14. https://mabadiiqtishada.org/index.php/EduSpectrum
- Moch, Subekhan., Nana, S. (2024). Curriculum Development Management in Islamic Boarding Schools: Effective Strategies in Countering Radicalism. Tarbwai, 10(1), 125-134. https://doi.org/doi: 10.32678/tarbawi.v10i01.8294
- Morales, J. N. S., Rivera-Zamudio, J., Fernández-Collazos, L., & Núñez-Lira, L. A. (2021). Generating Leaders for Curriculum Management in Times of Pandemic. International Journal of Early Childhood Special Education, 13(2), 468-479. https://doi.org/10.9756/INT-JECSE/V13I2.211083
- Muhajir, A. (2022). Inclusion of pluralism character education in the Islamic modern boarding schools during the pandemic era. Journal of Social Studies Education Research, 13(2), 196-
- Munifah, Huda, S., Hamida, U. D., Subandi, Syazali, M., & Umam, R. (2019). The use of management strategies to attract the public's interest in pesantren: A new model for pesantren dynamics study. *International Journal of Innovation, Creativity and Change*, 8(8), 363–383.
- Muzaffar, D. (2023). Digital Challenges in Education. *Ujldp*, *2*(2), 1-4. https://doi.org/doi: 10.59022/ujldp.127
- Nashuddin. (2020). Islamic values and sasak local wisdoms: The pattern of educational character

- at nw selaparang pesantren, lombok. *Ulumuna*, *24*(1), 155–182. https://doi.org/10.20414/ujis.v24i1.392
- Purwanto, M. R., Mukharrom, T., Chotimah, C., & Sanaky, H. A. (2020). Role of education shaping in professors of islamic boarding schools in indonesia. *Utopia y Praxis Latinoamericana*, 25(Extra10), 514–521. https://doi.org/10.5281/zenodo.4155801
- Purwanto, M. R., Mukharrom, T., Supriadi, & Rahmah, P. J. (2021). Optimization of Student Character Education through the Pesantren Program at the Islamic Boarding School of the Universitas Islam Indonesia. *Review of International Geographical Education Online*. 11(5), https://doi.org/10.48047/rigeo.11.05.179
- Raihani. (2012). Report on multicultural education in pesantren. *Compare: A Journal of Comparative and International Education*, 42(2), 585–605. https://doi.org/https://doi.org/10.1080/03057925.2012.672255
- Ridwan, T., Ibrahim, N., & Sumantri, M. S. (2019). Islamic boarding school learning organization: Analysis of learning dynamic, organizational transformation and application of technology. *International Journal of Engineering and Advanced Technology*, 8(5), 1054–1056. https://doi.org/10.35940/ijeat.E1149.0585C19
- Ritonga, M., Lahmi, A., Bambang, Ayu, S., Firdaus, Asmaret, D., & Afdhal, S. (2020). Curriculum development strategy management for student mental health in COVID-19 pandemic. *International Journal of Pharmaceutical Research*, 12(December), 4489–4494. https://doi.org/10.31838/ijpr/2020.SP2.562
- Ritonga, M., Purnamasari, S., Budiarti, M., Lahmi, A., Nurdianto, T., & Zulfida, S. (2021). The management of arabic language and the yellow book curriculum planning at islamic boarding schools in respond to the freedom to learn education system. *Journal of Management Information and Decision Sciences*, 24(Special Issue 1), 1–10.
- Rohmad, A., Muawanah, E., Ju'subaidi, Hidayah, N., & Ikhwan, A. (2024). The Role of Curriculum Implementation and Principal Leadership to Enhance Academic Performance in Islamic Boarding Schools. *Journal of Social Studies Education Research*, 15(4), 338–373.
- Rohman, A., Meraj, G., Isna, A., Taruna, M. M., Rachmadhani, A., Atmanto, N. E., & Nasikhin. (2024). Challenges in Islamic Education Curriculum Development: A Comparative Study of Indonesia, Pakistan, and India. *International Journal of Learning, Teaching and Educational Research*, 23(6), 504–523. https://doi.org/10.26803/ijlter.23.6.23
- Rose, R. (2022). A Modular Approach to the Curriculum for Pupils with Learning Difficulties. In *Implementing the Whole Curriculum for Pupils with Learning Difficulties*. https://doi.org/10.4324/9781003307976-5
- Rosmawati, R., & Harahap, N. (2023). The Urgency of Educational Management in Developing Islamic Educational Institutions. *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme*, *5*(3), 813–830. https://doi.org/10.37680/scaffolding.v5i3.3929
- Salim, N. A., Zaini, M., Wahib, A., Fauzi, I., & Asnawan. (2024). Fostering Moderate Character of Santri: Effective Hidden Curriculum Strategy in Islamic Boarding Schools. *Nazhruna: Jurnal Pendidikan Islam, 7*(2), 357–372. https://doi.org/10.31538/nzh.v7i2.4676
- Sidik, M. F., Vachruddin, V. P., Rusydiyah, E. F., Pertiwi, A. S., & Darmawan, M. A. (2024). Conceptualization of the Integrated Islamic Religious Education Curriculum: A Literature Study at Imam Hatip Schools Turkey and MAN Insan Cendekia Indonesia. *Jurnal Pendidikan Agama Islam*, 21(1), 111–130. https://doi.org/10.14421/jpai.v21i1.7617
- Sirojuddin, A., Ashlahuddin, A., & Aprilianto, A. (2022). Manajemen Kurikulum Terpadu Berbasis Multiple Intellegences di Pondok Pesantren. *Munaddhomah: Jurnal Manajemen Pendidikan Islam, 3*(1), 35–42. https://doi.org/10.31538/munaddhomah.v3i1.143
- Tan, C. (2011). Where tradition and "modern" knowledge meet: Exploring two Islamic schools in Singapore and Britain. *Intercultural Education*, 22(1), 55–68. https://doi.org/10.1080/14675986.2011.549645
- Wibowo, A., Muhammad, D. R. A., Lestari, E., & Karsidi, R. (2021). Community empowerment based on religious ecology leading to sustainable agricultural development (A case study of Isy Karima Islamic boarding school in Karanganyar, Central Java). *IOP Conference Series: Earth*

- and Environmental Science. https://doi.org/10.1088/1755-1315/905/1/012035
- Yahya, F. A. (2021). The Transformational Paradigm of The Pesantren Curriculum Innovation. Cendekia: Jurnal Kependidikan Dan Kemasyarakatan. 109-125. 19(1), https://doi.org/10.21154/cendekia.v1i1.2975
- Yazid, Abdul, Qadir, Jawaz, Mr., Muh., H. (2024). Integrasi Teknologi dalam Pembelajaran PAI Untuk Meningkatkan Kualitas Pembelajaran di Sdn 1 Kecila. Tarbiatuna, 4(2), 710-722. https://doi.org/doi: 10.47467/tarbiatuna.v4i2.6930