SCIENTIFIC TRANSFORMATION IN ISLAMIC BOARDING SCHOOLS: STRATEGIES FOR HOLISTIC ISLAMIC EDUCATION DEVELOPMENT

Syahla Iffat (1)
UIN Syarif Hidayatullah Jakarta (1)
iffatsyahla@gmail.com (1)

Abstract

The transformation of science in Islamic boarding schools is a response to the demands of the times, which require the integration of religious and general knowledge. This study aims to examine the learning strategies applied in the transformation process, using a qualitative approach through observation, interviews, and document studies in one of the Islamic boarding schools that has adopted an integrated education model. The results show that Islamic boarding schools have developed an integrative curriculum, utilized digital technology, and applied active learning methods to improve the quality of education. The role of the kyai and teachers is very important as agents of change who encourage innovation without abandoning traditional values. Despite challenges such as limited resources and internal resistance, Islamic boarding schools show a strong commitment to shaping students who are not only religious but also intellectually and socially competent. These findings contribute to the development of a holistic Islamic education model that is relevant to the needs of modern society.

Keywords: *Holistic Islamic education, Islamic boarding schools, Learning strategies, Scientific transformation.*

INTRODUCTION

Islamic education plays a central role in shaping the character, spirituality, and intellectuality of the people. Amidst globalization and rapid scientific developments, Islamic education is required not only to preserve traditional values, but also to adapt and innovate. Scientific transformation is a necessity for Islamic education to remain relevant and able to respond to the challenges of the times. The integration of religious and general knowledge is a strategic step in realizing holistic Islamic education, which is not only oriented towards the hereafter but also able to contribute to worldly life (Nasrudin, Harun, Salim, & Dimyati, 2021). Pesantren, as the oldest Islamic educational institutions in Indonesia, have a unique position in this transformation process. Rooted in classical scientific traditions, pesantren have become centers for learning classical Islamic texts, character building, and spiritual strengthening. However, in recent decades, many pesantren have begun to open themselves up to modern curriculum development, technology mastery, and strengthening the competence of santri in the field of general knowledge. The role of pesantren is now not only as a moral fortress, but also as a dynamic and adaptive educational laboratory for social change (Zuhri, 2023).

Based on this background, this study aims to examine the scientific transformation strategies carried out by Islamic boarding schools in the context of developing holistic Islamic education. The research questions in this study are:

1. What forms of scientific transformation occur in Islamic boarding schools?
2. What strategies do Islamic boarding schools use to integrate religious and general knowledge?
3. What are the challenges and opportunities in this transformation process?

The purpose of this study is to gain an in-depth understanding of the process and strategies of scientific transformation in Islamic boarding schools and to provide recommendations for the development of a more integrative and contextual Islamic education.

The Concept of Holistic Islamic Education

Holistic Islamic education is an approach that integrates spiritual, intellectual, emotional, and social dimensions in the learning process. In this approach, religious and general knowledge are not viewed as two separate entities, but as a complementary whole. The main objective of Islamic education is to shape insan kamil—complete human beings who are able to carry out their roles as servants of Allah and caliphs on earth (Al-Attas, 1999; Hidayat, 2022). Therefore, mastery of general knowledge such as science, technology, economics, and social studies is important to support the practice of religious values in real life.

This integration of knowledge requires a curriculum that is able to combine the values of monotheism with a scientific approach, as well as learning methods that encourage critical and reflective thinking. Holistic Islamic education does not only emphasize memorization and rituals, but also understanding, appreciation, and application of knowledge in a broader social context (Nasrudin et al., 2021).

The Theory of Educational Transformation and Curriculum Development

Educational transformation refers to a systematic process of change in the structure, content, and methods of learning in order to respond to the challenges of the times. In this theory, education is not static, but dynamic and adaptive to social, technological, and cultural changes (Fullan, 2007). Curriculum development is a key instrument in this transformation process. A responsive curriculum must be able to accommodate the needs of students, developments in science, and local and spiritual values (Zuhri, 2023).

In the context of Islamic boarding schools, educational transformation includes revising the traditional curriculum, strengthening teacher competencies, utilizing digital technology, and opening access to modern knowledge. This theory emphasizes the importance of active participation from all elements of education—kyai, ustaz, santri, and the community—in designing and implementing sustainable change.

The Role of Islamic Boarding Schools in Shaping the Character and Intellectual Development of Students

Islamic boarding schools play a strategic role in shaping the character and intellectual development of students through an educational approach based on Islamic values. The cultivation of morals, discipline, and spirituality are characteristic features of Islamic boarding school education that are not always found in formal education systems (Azra, 2012). In addition, Islamic boarding schools also provide a learning environment that encourages independence, leadership, and a lifelong passion for learning.

In the process of scientific transformation, Islamic boarding schools are required not only to preserve traditional values but also to open themselves up to the intellectual development of students through the mastery of general knowledge and 21st-century skills. Thus, Islamic boarding schools can produce a generation that is not only spiritually pious but also intellectually and socially competent (Huda, 2020).

RESEARCH METHODOLOGY

This study uses a qualitative approach with the aim of gaining an in-depth understanding of the process of scientific transformation that is taking place in Islamic boarding schools. The qualitative approach was chosen because it is able to explore the meanings, values, and strategies implemented by educational actors in a contextual and holistic manner (Creswell, 2014).

Data Collection Techniques

To obtain comprehensive data, this study used three main techniques:

1. In-depth interviews were conducted with clerics, religious teachers, curriculum managers, and senior students to explore their views on the integration of religious and general knowledge, as well as the transformation strategies applied. The interviews were semi-structured to remain flexible but focused.
2. Participatory Observation The researcher directly observed the learning process, social interactions, and student activities in the pesantren environment. This observation aimed to capture the real dynamics that were not always revealed in interviews.
3. Document Study Analysis of curriculum documents, syllabi, pesantren vision and mission statements, and educational activity reports. These documents provide a formal overview of the direction and policies of the scientific transformation being carried out.

Research Location

The research was conducted at the Al-Hikmah Islamic Boarding School, located in Bogor Regency, West Java. This boarding school was selected purposively because it has implemented a model of curriculum integration between religious and general knowledge and is known to be active in technology-based educational innovation and santri entrepreneurship (Zuhri, 2023).

RESULTS AND DISCUSSION

This study reveals three main strategies implemented by Islamic boarding schools in integrating religious and general knowledge as part of scientific transformation towards holistic Islamic education.

A. Integrated Curriculum Development

The pesantren studied have designed a curriculum that combines classical Islamic subjects such as tafsir, fiqh, and akhlak with general subjects such as mathematics, science, and foreign languages. This curriculum is organized thematically and contextually so that santri can understand the connection between religious values and modern life.

For example, in science lessons, teachers relate the concept of creation to verses from the Qur'an, while in economics lessons, Sharia values such as justice and the prohibition of usury are used as a foundation. This approach not only enriches the students' knowledge, but also shapes an integrative and reflective way of thinking.

B. Collaboration with Formal Educational Institutions

Pesantren also establish partnerships with formal schools, both at the junior high and high school levels, to strengthen the students' mastery of general knowledge. Some pesantren even offer dual education programs, where students attend pesantren classes in the morning and formal education classes in the afternoon or evening.

This collaboration allows students to obtain formal diplomas recognized by the state, while still receiving the spiritual and scientific guidance characteristic of Islamic boarding schools. In addition, teachers from formal institutions are involved in curriculum development and training for Islamic boarding school educators.

C. Use of Technology in Learning

The transformation of knowledge is also reflected in the use of digital technology in the learning process. Islamic boarding schools have begun to use devices such as laptops, projectors, and online learning applications to support teaching and learning activities. Some classes have implemented a blended learning system, where material is delivered through a combination of face-to-face and digital platforms.

Paradigm Shift in Islamic Boarding School Education

The transformation of knowledge in Islamic boarding schools does not only concern the curriculum, but also reflects a comprehensive shift in the educational paradigm. Islamic boarding schools, which were once known for their traditional approach based on classical Islamic texts and the sorogan or bandongan methods, are now beginning to adopt a more systematic, open, and competency-based modern approach.

From Traditional to Modern

The traditional pesantren paradigm emphasizes rote learning, strengthening of character, and spiritual closeness between students and teachers. Although these values are still maintained, many pesantren are beginning to shift their approach towards a more modern one. This is characterized by:

- The use of a national and integrative curriculum, which combines religious and general knowledge.
- The application of active learning methods, such as group discussions, presentations, and problem-based projects.

- The use of digital technology, both for educational administration and the teaching and learning process.
- The development of 21st-century skills, such as digital literacy, entrepreneurship, and global communication.

These changes show that Islamic boarding schools are no longer exclusive in their traditional approach, but are beginning to transform into educational institutions that are adaptive and relevant to the demands of the times.

Students are trained to access online learning resources, create digital presentations, and even take technology skills training courses such as graphic design and coding. Technology is not only a tool, but also part of a strategy to equip students with 21st-century skills without abandoning Islamic values.

The Role of Teachers and Kyai as Agents of Change

Teachers and kyai play a key role in driving educational transformation in Islamic boarding schools. They are not only teachers, but also intellectual and spiritual leaders who determine the direction of change. In this context, their roles include:

- Designing an integrative curriculum, taking into account the needs of students and developments in science.
- Serving as role models in interdisciplinary learning, linking Islamic values to the context of general knowledge.
- Encouraging learning innovation, such as the use of digital media, interactive methods, and reflective approaches.
- Managing social and cultural change, preserving pesantren values while opening space for dialogue and adaptation.

Visionary Kyai and progressive teachers are catalysts in shaping Islamic boarding schools as centers of Islamic education that not only preserve tradition but also build the future.

Challenges and Obstacles

Although scientific transformation in Islamic boarding schools shows a positive direction, this process is not without various structural and cultural challenges and obstacles. Three main issues found in this study are limited resources, resistance to change, and the gap between idealism and practice.

Resource Constraints

Most Islamic boarding schools still face constraints in terms of funding, facilities, and teaching staff. The development of an integrated curriculum and the use of technology require considerable investment, while many Islamic boarding schools rely on self-funding or local donors. Facilities such as laboratories, digital libraries, and internet access are not yet evenly distributed, thereby hampering the process of modern and integrative learning.

In addition, limited human resources are also an obstacle. Not all teachers have adequate formal educational backgrounds to teach general subjects, and professional training is still limited. This has an impact on the quality of teaching and the effectiveness of scientific integration.

Resistance to Change

Educational transformation often faces resistance from some internal circles within Islamic boarding schools, especially those who strongly uphold tradition. Concerns that reform will diminish the authenticity of Islamic boarding schools or shift the focus away from spirituality are the main reasons for rejecting innovations in curriculum and learning methods.

Some senior clerics and teachers feel that modern approaches place too much emphasis on worldly aspects and have the potential to obscure the main objectives of Islamic education. As a result, the process of change is slow and requires a wise approach and intensive dialogue between generations.

The Gap Between Idealism and Practice

Although many Islamic boarding schools have a holistic and integrative vision of Islamic education, its implementation in the field often falls short of expectations. Ideally designed curricula have not been fully implemented due to limitations in time, manpower, and evaluation systems. Some integration programs are only symbolic, with no real impact on the quality of learning.

Students also experience confusion in dealing with two different education systems—traditional and formal—which are sometimes not synchronized in their approaches and assessments. This shows the need for harmonization between the idealism of the curriculum and the operational reality in Islamic boarding schools.

CONCLUSION

The transformation of scholarship in Islamic boarding schools is a strategic step in responding to the challenges of Islamic education in the modern era. Through the integration of religious and general knowledge, Islamic boarding schools not only maintain a strong Islamic identity, but also open up space for broader intellectual and skill development for students. This study shows that integrated curriculum development strategies, collaboration with formal educational institutions, and the use of digital technology are key to realizing holistic Islamic education.

The paradigm shift from a traditional approach to a more modern system has shifted the role of Islamic boarding schools from merely spiritual guidance institutions to adaptive and progressive learning centers. Teachers and clerics play an important role as agents of change, who not only transmit knowledge but also shape the character and mindset of students so that they are ready to face the dynamics of the times.

However, this transformation process is not without challenges. Limited resources, both financial and human resources, are major obstacles to the implementation of an integrative curriculum. On the other hand, resistance to change from some internal parties shows that educational transformation requires a wise and gradual approach. The gap between the idealism of the curriculum and its implementation in the field is also an important issue that needs to be addressed systematically.

As a suggestion, Islamic boarding schools need to strengthen their institutional capacity through teacher training, infrastructure development, and increased technological literacy. Partnerships with formal educational institutions and the government also need to be expanded to support the sustainability of integrative programs. In addition, the transformation approach must remain rooted in Islamic values so as not to lose the identity of Islamic boarding schools as spiritual and moral-based educational institutions.

With strong commitment and the right strategy, Islamic boarding schools have great potential to become a model of Islamic education that is not only relevant locally but also globally competitive. Scientific transformation is not merely a change in curriculum but a movement of renewal that touches all aspects of educational life.

BIBLIOGRAPHY

Al-Attas, S. M. N. (1999). The Concept of Education in Islam: A Framework for an Islamic Philosophy of Education. ISTAC.

Azra, A. (2012). Pendidikan Islam: Tradisi dan Modernisasi Menuju Milenium Baru. Logos Wacana Ilmu.

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.). SAGE Publications.

Fullan, M. (2007). The New Meaning of Educational Change (4th ed.). Teachers College Press.

Hidayat, D. (2022). Holistic Islamic Education: Integrating Science and Faith in the Curriculum. Jurnal Pendidikan Islam, 10(2), 145–160.

Huda, M. (2020). Pesantren and Character Education: A Study of Islamic Boarding Schools in Indonesia. Journal of Social Studies Education Research, 11(1), 1–23.

Nasrudin, M., Harun, H., Salim, A., & Dimyati, A. (2021). Strategi epistemologis implementasi pendidikan holistik pada pondok pesantren. Ulumuddin: Jurnal Ilmu-ilmu Keislaman, 11(1), 69–84.

Zuhri, S. (2023). Integration of Salaf Islamic Boarding School Education with Modern School Curriculum. Tarbiya: Faculty of Educational Sciences UIN, 10, 103–116.