



Research Article

Developing an Innovative Model of Curriculum and Instruction for Islamic Religious Education in Senior High Schools in Batam City

Juni Mahanis^{1*}, Nunung Witono², Alpizar³, Abu Bakar⁴

¹ Institut Agama Islam Hidayatullah Batam, Indonesia 1; e-mail : junimahanis1@gmail.com

² Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia 2; e-mail : nunungwitono1980@gmail.com

³ Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia 3; e-mail : comalpizarppsuinriau@gmail.com

⁴ Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia 4; e-mail : jambuair58@gmail.com

* Corresponding Author : Juni Mahanis

Abstract: The curriculum and learning of Islamic Religious Education (PAI) at the Senior High School (SMA) level face significant challenges in line with the dynamics of modern society, especially in strategic areas such as Batam City, which is multicultural and industry-oriented. Curriculum innovation is an urgent necessity to ensure that PAI learning can meet the demands of the times and strengthen students' character. This study aims to identify and develop a relevant and applicable model of curriculum and PAI learning innovation in SMA Batam City. The research method used is qualitative with a library research approach. Data were obtained through a literature review of academic books, scientific journals, and official documents relevant to the theme of curriculum and PAI learning innovation. The analysis was conducted descriptively and analytically on various existing curriculum models and innovation processes. The results of the study show that several innovation models can be adapted in the development of PAI curriculum and learning in high schools, including the R-D-D model (Research, Development, and Diffusion), the Organizational Development model, and the Configuration model. These three models provide a systematic approach to the educational innovation process, from design and implementation to diffusion and routinization within the school environment. In addition, the proposed innovation process follows the dynamic initiation and implementation stages based on the theories of Rogers and Zaltman. In conclusion, the development of curriculum and PAI learning innovation models in SMA Batam City needs to consider the local socio-cultural conditions, teacher readiness, and institutional support. The appropriate implementation of these models is believed to improve the quality of religious education to be more contextual, adaptive, and impactful on the formation of students' character.

Keywords: Curriculum Innovation; Educational Model; PAI Learning.

1. Introduction

Batam City, as a strategic region with rapid industrial growth and a multicultural population, presents distinct challenges in the implementation of Islamic Religious Education (PAI) at the Senior High School (SMA) level. Its heterogeneous social life and strong currents of globalization demand that PAI learning be not only normative but also contextual and adaptive to societal dynamics (Nurhayati Nurhayati, 2024). However, in reality, PAI learning still tends to be traditional and insufficiently responsive to local needs and the changing times (N Nurhayati et al., 2024).

This phenomenon is exacerbated by the challenges of the digital era and the Fourth Industrial Revolution, which have significantly transformed educational paradigms. PAI learning is faced with the need to integrate information technology, interactive teaching methods, and approaches that emphasize character development and 21st-century competencies. Unfortunately, many educational institutions are not yet prepared for these

Received: April 14, 2025

Revised: April 28, 2025

Accepted: May 13, 2025

Published: May 15, 2025

Curr. Ver.: May 15, 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

([https://creativecommons.org/li](https://creativecommons.org/licenses/by-sa/4.0/)

[censes/by-sa/4.0/](https://creativecommons.org/licenses/by-sa/4.0/))

changes in terms of curriculum, human resources, and supporting infrastructure (Nurhayati & Rosadi, 2022).

Several previous studies have identified various innovation models in PAI curriculum development. A study conducted by Juni Mahanis and Nunung Witono titled “Exploring the Values of Integration of Islamic and Science Education: A Qualitative Approach in Contemporary Learning at Riau Islands High School”, published in the *International Journal of Studies in International Education*, discussed the integration between PAI and science education at high schools in the Riau Islands. The study showed that despite challenges in infrastructure and human resources, this integrative approach has great potential to improve education quality and character building. They recommended a more flexible curriculum aligned with local needs, along with improved teacher training and better access to technology (Mahanis & Witono, 2025).

Another relevant study by Muhamad Restu Fauzi et al., titled “Islamic Religious Education Curriculum Innovation: Fethullah Gülen's Perspective”, explored Fethullah Gülen's views on innovation in the PAI curriculum. According to Gülen, an ideal PAI curriculum must include the development of individual character, the integration of classical religious texts with contemporary scientific knowledge, and the use of engaging and challenging instructional media and methods. Curriculum evaluation should also consider the quality of content, methods, and learning outcomes (Fauzi, Hamami, & Kim, 2024).

A further relevant study by Halim et al., titled “The Curriculum of Islamic Education in the Whirlwind of Independent Education and Its Implementation on Learning”, highlighted the challenges faced by the PAI curriculum in the era of independent learning. This study identified the need for the PAI curriculum to adapt to the development of science and technology as well as changes in educational regulations. They emphasized the importance of integrating social and cultural values and the demands of the Fourth Industrial Revolution into the PAI curriculum to keep it relevant and effective in character development (Halim, Jamil, Miswanto, & Nur Rochbani, 2023).

In this context, there is a need for more in-depth and contextual research to develop an innovative curriculum and PAI learning model suited to the needs of SMA students in Batam City. This study aims to design a model that is not only theoretically innovative but also applicable and relevant to the actual conditions on the ground. Thus, it is expected to enhance the effectiveness of PAI learning and its contribution to shaping religious, tolerant, and adaptive student character.

This study presents original contributions to the development of an innovative curriculum and PAI learning model for senior high schools in Batam City using a contextual approach that integrates local values and the needs of a multicultural society. Unlike previous studies that were more theoretical or general, this study specifically adapts innovation models to the social, cultural, and educational challenges of Batam City.

Furthermore, this study also considers a multicultural approach to curriculum development, as discussed by Parnawi et al. in the context of Mantang housing in Batam. However, this study expands the scope by integrating that approach into a broader model of curriculum and PAI learning innovation at the high school level across Batam City (Parnawi, Idris, Zufriyatun, & Rafiqi, 2024). Thus, this research offers a new contribution to the development of a contextual, adaptive, and locally responsive PAI curriculum, which may serve as a model for other multicultural regions.

The benefits of this research are not limited to the advancement of academic knowledge in the field of Islamic education but also provide practical contributions for educators, policymakers, and educational institutions in designing and implementing a more responsive and contextual PAI curriculum. With a deep qualitative approach, this study is expected to offer new insights and concrete solutions to address the challenges of PAI learning in the modern era, particularly in the senior high school environment of Batam City.

2. Preliminaries or Related Work or Literature Review

Islamic Religious Education (PAI) at the Senior High School (SMA) level holds a strategic role in shaping students' character and moral values. However, in the context of Batam City—which is multicultural and dynamic—the conventional approach to PAI curriculum and learning often proves ineffective in addressing the challenges of the times. This situation calls for innovation in curriculum development that can integrate local values and the needs of the surrounding community.

Previous studies have highlighted the importance of innovation in the PAI curriculum. For instance, Wiyani emphasized the necessity of a character education-based approach in PAI learning at the high school level to shape students who are faithful and devout. However, this approach has not specifically accommodated the social and cultural context of Batam City (Novan Ardy Wiyani, 2016).

Meanwhile, research by Pratama et al. underlined the importance of instilling local wisdom values in PAI curriculum innovation. They argued that integrating local values can strengthen students' cultural identity and enhance the relevance of learning. Nevertheless, this study focused more on general contexts and did not delve into the specific needs of Batam City (Andy Riski Pratama, Yulius, Maysa Latifa, Syafrudin, 2024).

In the digital era, the use of technology in PAI learning is also a growing concern. Aulia et al. showed that integrating digital technology into PAI learning can increase students' interest and engagement. However, challenges such as limited infrastructure and resistance to change remain obstacles to its implementation (Naila Selvi Aulia, Rizki Ananda, Eti Hadiati, Sovia Mas Ayu, 2025).

Based on this literature review, there is a research gap regarding the development of a contextual and applicable model of innovation in the PAI curriculum and learning in Batam City's senior high schools. This study aims to address that gap by designing an innovative model that integrates local values, technology, and pedagogical approaches relevant to the needs of students in Batam City.

3. Proposed Method

This study employs a qualitative approach using the library research method, which aims to explore and examine in depth the innovative models in the development of the Islamic Religious Education (PAI) curriculum and learning at the Senior High School (SMA) level, particularly in the context of Batam City (Sugiyono, 2016).

The data used in this study are secondary data collected through a review of various scholarly literature and relevant academic documents (Arikunto, 2015). These include Islamic education textbooks, national and international academic journals that discuss educational and curriculum innovation, as well as official policy documents such as the national curriculum and implementation guidelines for PAI issued by the Ministry of Religious Affairs or the Ministry of Education.

Data collection techniques involve the identification, selection, and documentation of valid and relevant sources related to the research topic (Moleong, 2018). The researcher employed a purposive data selection strategy, choosing documents that specifically contain information on the concepts, theories, and practices of curriculum and PAI learning innovation that have been previously implemented or developed.

The data were analyzed using a descriptive-analytical method. This process involved identifying, classifying, and interpreting the literature data to reveal patterns, models, and innovative approaches suitable for the characteristics of senior high schools in multicultural areas such as Batam City (Lubis, 2018). These models were then reviewed for their relevance and potential adaptation in the development of a contextual, applicable, and character-oriented PAI curriculum. Using this method, the study aims to formulate a theoretical and conceptual synthesis in the form of a model for developing innovative PAI curricula that meet contemporary educational demands and the socio-cultural needs of Batam City.

4. Results and Discussion

4.1. Concept of Curriculum Innovation

Curriculum innovation is a systematic effort to update educational components through changes in structure, content, strategies, and teaching approaches. This innovation is not a random alteration, but must be based on an analysis of students' needs and societal dynamics. In the context of Islamic Religious Education (PAI) at senior high schools in Batam City, curriculum innovation is essential to align learning with the characteristics of a multicultural society and contemporary developments.

According to Hafizon et al., curriculum in Islamic education refers to *manhaj*, a clear path taken by educators and students to develop their knowledge, skills, and attitudes. The Islamic education curriculum consists of Islamic educational materials delivered intentionally and systematically to students in order to achieve the goals of Islamic education (Hafizon, Mansur, & Bakar, 2022).

In the digital era, integrating technology into PAI learning is a necessity. Azhari et al. emphasize the importance of developing and innovating the PAI curriculum based on information technology to enhance the effectiveness of learning and student motivation (Azhari, Afif, & Kosim, 2023). However, implementing this innovation faces challenges such as limited technological infrastructure and teachers' readiness to adopt new technologies. Hadi et al. highlight that while PAI curriculum innovation must meet students' needs in the digital age, its implementation faces several issues, such as weak integration of technology and a decline in students' understanding and practice of Islamic values. This indicates the need to improve teachers' digital training to optimize the use of technology in Islamic education (Hadi, Islam, & Mataram, 2025).

Furthermore, a holistic approach to character and ethical education is one of the innovations that should be considered. This involves integrating Islamic values into all aspects of the curriculum, not only in religious studies but also in other subjects. In this way, students will better understand the relationship between religion and everyday life and be able to apply ethical values in their actions and decisions.

In the context of Batam City—a strategic area with rapid industrial growth and a diverse population—PAI curriculum innovation must take into account local values and the needs of the community. Integrating local wisdom into the PAI curriculum can strengthen students' cultural identity and increase the relevance of learning. This is consistent with research by Pratama et al. which emphasizes the importance of embedding local wisdom values in PAI curriculum innovation.

In addition, a multicultural approach in developing the PAI curriculum is crucial to creating inclusive learning that respects diversity. Zaki stresses that a multicultural-based PAI curriculum can be an important step toward building an inclusive and peaceful society (Ahmad Zaki, 2022). Therefore, the development of innovative models for PAI curriculum and learning in Batam City's senior high schools must integrate technology-based approaches, character education, local wisdom, and multiculturalism to create learning that is contextual, adaptive, and relevant to the needs of students and the local community.

4.2. Models of Islamic Religious Education (PAI) Curriculum

In an effort to develop an Islamic Religious Education (PAI) curriculum that is responsive to local needs and flexible to innovations, several curriculum development models have been studied. Each model has its own characteristics and advantages in responding to the educational dynamics in Batam City, which is multicultural and industrial-oriented.

4.3. Administrative Model (Top-Down)

This model is an approach to curriculum development carried out by a team or senior officials as policy holders. The curriculum development is done top-down, meaning that the government, as the policy maker, prepares a curriculum development team, while the educational units and teachers simply implement it in the teaching process. This model is suitable for centralized education systems that require national standardization (Muhammad Rouf, Akhmad Said, n.d.).

There are several terms used for the administrative model of curriculum development, such as the top-down approach and line staff procedure. These terms have the same meaning, which is an approach or procedure for curriculum development carried out by a team or senior officials as policy holders (Sukmadinata, 2020). The curriculum development process in this model is top-down, where the government, as the policy maker, prepares a curriculum development team, and the educational units and teachers simply implement it in teaching.

Operationally, the development of the administrative model curriculum is as follows: a) The curriculum development team starts by developing general concepts, foundations, references, and academic manuscript strategies. b) Needs analysis. c) The curriculum is then formulated comprehensively. d) The completed curriculum is validated through trials and careful review by expert advisory teams. e) Revisions based on feedback. f) Socialization and dissemination. g) Monitoring and evaluation (Dakir, 2019).

4.4. Grass-Root Model (Bottom-Up)

This model emphasizes the initiative of teachers and schools in developing a curriculum that suits local needs. Teachers are directly involved in formulating objectives, selecting materials, and determining evaluation methods. This approach is more often used for curriculum refinement, involving teachers directly in the goal formulation and curriculum

evaluation. The Grass-Root approach, also known as the bottom-up approach, is a process of curriculum development initiated from the bottom level, i.e., schools as educational units or teachers. This initiative is often driven by the experiences of schools or teachers who feel that the current curriculum has issues or is not suited to the needs and potential available in the field. For the implementation of this model, high levels of concern and professionalism from the school are necessary, such as: a) Schools or teachers must be critical in responding to the ongoing curriculum. b) Schools or teachers must have innovative ideas and take responsibility for developing the curriculum according to needs and potential. c) Schools or teachers must be continuously involved in the curriculum development process. d) Schools or teachers must be open and accommodating to receive input for curriculum development (Dakir, 2019).

Operationally, the development of the Grass-Root model can be carried out through comprehensive curriculum development or by focusing on specific aspects. For example, development could be for a single subject or a group of subjects, development of methods and learning strategies, or developing visions, missions, and objectives.

4.5. Demonstration Model

This model involves teachers conducting experiments and independently developing the curriculum. Its advantage is that the resulting curriculum is more practical and real, and small-scale changes make implementation easier. However, the disadvantage is that it may cause conflict among teachers who are not involved in the process (University-pasuruan, 2023). The Demonstration model is essentially a grass-roots approach, coming from the bottom. It is initiated by a group of teachers or a group of schools, working with experts to make improvements to the curriculum. This model is usually small-scale, involving one or a few schools, one curriculum component, or covering all curriculum components. a) A group of teachers from one school or several schools is designated to conduct an experiment on curriculum development. b) The results are then disseminated to nearby schools (Nihl Asli, 2024).

4.6. Beauchamp Model

This model, developed by Beauchamp, presents five steps in curriculum development: identifying the area or scope for curriculum changes, determining who will be involved, establishing development procedures, implementing, and evaluating the curriculum. This model emphasizes systematic and participatory planning.

The development of curriculum using the Beauchamp method includes five decision-making steps: a) Deciding the area or scope of curriculum development, which defines the scope of the development effort (a curriculum development idea that has been implemented in the classroom is expanded to schools in certain areas, regionally or nationally, called the arena). b) Identifying the personnel or curriculum expert team, which specifies who will be involved in curriculum development. c) The team formulates teaching objectives and curriculum implementation processes, with the curriculum council serving as the coordinator and evaluator. d) Implementing the curriculum, which involves applying the curriculum as decided within the scope of development.

4.7. Rogers' Interpersonal Relationship Model

This model focuses on positive interpersonal relationships among educational components in curriculum development, such as administrators, teachers, and students. This model involves them in discussion groups to improve attitudes and accept changes. There are four stages of curriculum development: choosing target systems, intensive group experience, developing group experiences, and implementation. Carl Rogers, a psychologist, believed that humans have the capacity and potential for self-development, but they need others to help accelerate that change.

Rogers' Interpersonal Relationship Model involves four steps: a) Forming a group to establish an international relationship in a non-busy space to select educational target systems. b) Providing intensive group experiences for teachers, where participants exchange experiences under the guidance of teaching staff. c) Then, holding meetings with a broader community within the school, so that interpersonal relationships are further enhanced between teachers and students. d) Finally, holding broader meetings with the community, where individuals engage deeply, thus facilitating quicker problem-solving in schools (Saban, 2021).

4.8. Action Research Model

This model is based on the assumption that curriculum development is a social change. It involves teachers in action research to understand and improve practical curricula. This process allows teachers to identify problems, design solutions, and evaluate the impact of actions taken directly in the classroom. The Action Research model, also known as the "action research model," assumes that curriculum development is a social change. In terms of process, this model involves all educational components, including students, parents, teachers, and the school system. The curriculum is developed to meet the needs of stakeholders, including parents, the community, and others. Curriculum development follows the procedures of action research (Sukmadinata, 2020).

In this model, there are two steps in curriculum preparation: a) Conducting a study on the data collected as the basis for curriculum development. The data should be valid and reliable so that it can be used as a solid foundation for decision-making. Weak data will lead to erroneous decisions. Based on this decision, a comprehensive plan is developed to address existing problems. b) Implementing the decisions made in the first step. From this process, new data is collected, which will then be used to evaluate issues arising in the field and help modify or improve the curriculum.

Each model of curriculum development has its own strengths and challenges. The Administrative Model is ideal for national standardization but lacks flexibility for local needs. The Grass-Root Model provides flexibility and local relevance but requires high teacher capacity. The Demonstration Model is effective for small-scale experiments but may create resistance. The Beauchamp Model offers a systematic and participatory approach. Rogers' Interpersonal Relationship Model focuses on attitude changes and positive relationships. The Action Research Model allows teachers to become change agents through action research.

In the context of Batam City's SMA, which has multicultural characteristics and is industry-oriented, a blended approach that combines the strengths of several models may be the most effective solution. For example, adopting the structure of the Administrative Model for standardization while allowing for local initiatives through the Grass-Root and Demonstration Models. Additionally, the participatory approach of the Beauchamp Model and the focus on interpersonal relationships in Rogers' Model can strengthen the implementation of an adaptive and contextual curriculum.

4.9. Models of Curriculum and PAI Learning Innovation

Innovation is often associated with change, and to achieve the desired educational goals, continuous renewal or innovation is necessary according to the needs of the times. Innovation will continuously develop along with human development if there is an understanding that change will occur in education for the better. The curriculum is a crucial aspect in education. The curriculum must be dynamic and adaptive to changes occurring in society, both in the business world and the workforce. Implementing innovation requires diffusion and dissemination. Diffusion is the process of communicating innovation through channels and over a certain period between members of a social system, whereas dissemination refers to the planned, directed, and managed process of spreading innovation.

The curriculum innovation model refers to a pattern or example of a curriculum that will serve as a guideline for the implementation of education or learning. Innovation models are created as a framework for understanding how innovation happens and how one can be innovative, adaptive, and capable of diffusing a particular innovation. Initially, these models were used in the business world, but over time, they have been adopted in the field of education. The strong will of education experts and the awareness of all relevant stakeholders have led to the development of educational change models or innovation models in education.

The emergence of various innovations is explained by Hamalik, stating that: 1) innovation developed to address relevance issues, such as local content programs in primary and secondary school curricula, 2) innovations aimed at addressing the challenge of educational equity, such as Open Universities, SMP Terbuka (Open Junior High School), and Paket B Program in non-formal education, 3) innovations focusing on overcoming the problem of insufficient graduate quality, such as KBK (Competency-Based Curriculum), modular systems, 4) innovations aimed at improving the efficiency of education, such as advanced sustainable systems and small school systems.

In creating a competitive advantage in various fields of education, innovations that become a priority in educational sector development are needed. Innovation refers to ideas,

practices, or objects considered new by an individual or group of other recipients ((Muntaha & Amin, 2023).

There are two main elements in the innovation process. First, innovation is viewed as an idea or concept that is considered new. Based on this, innovation is often regarded as a step for renewal that involves the recipient's perspective acting flexibly, either to adopt or not adopt the innovation. Second, the innovator is an individual or group who is the first to discover the idea, and the innovator must possess broad knowledge and relationships (Saidah, Trianutami, & Amani, 2022).

With the strong will of educational experts and the awareness of all stakeholders involved, three educational innovation models have been developed as follows:

a. R-D-D Model (Research, Development, and Diffusion)

This innovation model is based on the idea that everyone needs change, and the core elements of change are research, development, and diffusion. To accurately understand the problems faced and the required needs, the first step in educational change is conducting educational research. However, the results of research cannot immediately be utilized by users, as they need to be further developed into a more operational form to be easier to apply. For example, research on child development cannot directly be used by teachers to improve their teaching methods.

b. Organization Development Model

This model is more oriented toward organizations than social systems. It focuses on schools or educational systems. The Organization Development Model differs from the Research, Development, and Diffusion Model. The Research, Development, and Diffusion Model is more suitable for spreading innovation at the regional or national level, as educational research is more appropriate when done at the regional or national level. Meanwhile, the Organization Development Model is better for spreading innovation within a specific school, as a school is an organization. Both models are tools used to address different issues and solve different problems in educational renewal.

c. Configuration Model

The Configuration Model (or CLER Model) is a comprehensive approach to developing innovation strategies (educational changes) in different situations. This model is general and comprehensive because it allows classification or grouping of the situations of change. It emphasizes the limits of various change situations at certain times.

Some individual-oriented innovation models include (M Kristiawan et al., 2017):

- a) Lavidge and Steiner: Awareness, knowledge, liking, choosing, believing, buying.
- b) Colley: Unaware, aware, understanding, believing, taking action.
- c) Rogers: Awareness, attention, evaluation, trial, acceptance.
- d) Robertson: Perception of the problem, awareness, understanding, responding, authorizing, trying, accepting, dissonance.

According to Zaltman, Duncan, and Holbek, the innovation process in organizations consists of two stages: the initiation stage and the implementation stage. These stages will be explained as follows:

1) Initiation Stage

Knowledge and Awareness Step: The innovation process begins with the knowledge held by the recipient of the innovation. From the knowledge obtained, awareness of the innovation arises. When related to an organization, individuals within the organization see a gap in the organization. **Attitude Formation Step:** At this stage, organizational members form attitudes toward the innovation. There are two dimensions of attitude towards innovation: openness to innovation and the perception of the potential of innovation, marked by observations indicating the innovation's potential. This is indicated by the ability to use innovations that have successfully been used in the past. A commitment/willingness to work and use the innovation and a willingness to face challenges arising in the implementation of the innovation. **Decision-making Step:** At this step, the recipient of the innovation decides whether to accept or reject the innovation being implemented, so that no harm is caused.

2) Implementation Stage

In this stage, the activities carried out are those to use or apply the innovation. There are two steps in applying the innovation: the initial application step and the subsequent implementation support step. **Initial Step of Trying Out the Innovation:** For example, a lecturer is asked to use transparency in every lecture he delivers. However, at the beginning, the lecturer applies it to only one subject, which will eventually be applied to all subjects. **Follow-up Step of Supporting the Implementation:** If the initial implementation is successful, members understand and experience the innovation, and they can continue and sustain its application. These stages of innovation can be applied in elementary schools, where integrated curriculum has been applied. This curriculum covers several subjects during learning activities.

Innovation development is driven by the motivation to innovate in education itself. The motivation is based on two factors: the willingness of the school or institution to respond to societal change challenges and the effort to use the school in solving the problems it faces (Muhammad Kristiawan, Suryanti, Muntazir, Ribuwati, & AJ, 2018)

In the innovation process within an organization, according to the Rogers Innovation Process Model, the following stages are as follows:

I. Initiation Stage

- a. **Agenda Setting:** All general organizational problems are formulated to determine the need for innovation, and an environmental study is conducted to determine the innovation's potential value to the organization.
- b. **Matching Step:** Adjusting the organization's problems to the innovation to be used, then planning and creating an innovation application design suitable for the problems at hand.

II. Implementation Stage

- a. **Re-definition/Re-structuring Step:** The innovation is modified, and the re-invention is adapted to the organization's situation and issues. The organizational structure is adjusted to support the modified innovation.
- b. **Clarification of Relationships Between Innovation and Organization:** This is clearly formulated so that the innovation can be applied as expected.
- c. **Routine Step:** The innovation may lose some of its identity and become part of the organization's routine activities (it loses its novelty).

The adoption stages are:

- a. **Awareness:** The target begins to become aware of the innovation offered.
- b. **Interest:** Interest develops, often marked by the desire to ask or learn more about the innovation.
- c. **Evaluation:** Evaluating the advantages and disadvantages of the innovation based on more complete information.
- d. **Trial:** Trying out the innovation on a small scale to be more convinced before applying it more widely.
- e. **Adoption:** Accepting or applying the innovation confidently based on evaluation and (Nasucha, 2021).

Innovation is often associated with change, and to achieve the desired educational goals, continuous renewal is necessary. The stages of the curriculum innovation process include: First, the decision-making process of innovation, which is the process from the moment an individual receives initial information until they accept or reject the innovation. There are five steps in the innovation decision process: 1) knowledge about the innovation, 2) persuasion or appeal, 3) decision or choice, 4) implementation, and 5) confirmation (Markee, 1997).

Second, sensitivity to innovation. Not everyone in a social system accepts innovation at the same time. They adopt innovation in a sequence, meaning some adopt it earlier, while others later. Third, the speed of innovation adoption refers to how quickly innovation is accepted by society. The speed of innovation is measured based on the time it takes to reach a certain percentage of people within the society who have accepted the innovation.

5. Comparison

Comparison of Islamic Religious Education (PAI) Curriculum Models Relevant for the Development of Innovative Curriculum and PAI Learning in Senior High Schools in Batam City:

- Administrative Model (Top-Down) vs. Grass-Root Model (Bottom-Up)

The Administrative Model (Top-Down) is developed by central authorities, such as the government or national educational institutions, and is applied uniformly across educational institutions. The advantage of this model is the standardization of the curriculum, which facilitates evaluation and monitoring. However, this model lacks flexibility in adapting to local needs. In contrast, the Grass-Root Model (Bottom-Up) is developed by teachers and the school community based on local needs and context. This model allows for a curriculum adaptation that is more relevant to the surrounding environment, but it may face challenges in terms of consistency and standardization.

- Demonstration Model vs. Beauchamp Model

The Demonstration Model involves experimenting with the curriculum on a small scale before it is widely applied. This model allows for testing the effectiveness of the curriculum in real contexts, but it may require additional resources for implementation and evaluation. The Beauchamp Model emphasizes systematic and participatory planning in curriculum development. This model involves various stakeholders in the planning, implementation, and evaluation processes, thus resulting in a more comprehensive and sustainable curriculum (Eka, Dewi, Nopitasari, Fatmawati, & Bengkulu, 2024)

- Rogers' Interpersonal Relationship Model vs. Action Research Model

Rogers' Interpersonal Relationship Model focuses on positive interpersonal relationships between teachers, students, and administrators in the curriculum development process. This model emphasizes the importance of communication and collaboration to create a supportive learning environment. The Action Research Model involves teachers in action research to understand and improve practical curriculum. This model allows teachers to identify problems, design solutions, and assess the impact of actions taken directly in the classroom.

- Curriculum 2013 vs. Merdeka Curriculum

Curriculum 2013 emphasizes the development of basic competencies and factual knowledge. This model provides a clear framework for teachers in designing lessons but tends to be less flexible in adapting to local needs. The Merdeka Curriculum provides flexibility for schools and teachers to develop the curriculum according to the characteristics and needs of students. This model promotes more contextual and relevant learning, but it requires a high capacity from teachers in designing and implementing the curriculum (Wahyuningsih, Roohmadani, & ..., 2024).

Each curriculum model has its own strengths and challenges. In the context of SMA in Batam City, which is multicultural and industry-oriented, an approach that combines the strengths of several models may provide an effective solution. For example, adopting the structure of the Administrative Model for standardization, while allowing for local initiatives through the Grass-Root Model and Demonstration Model. Additionally, the participatory approach from the Beauchamp Model and the focus on interpersonal relationships from the Rogers Model can strengthen the implementation of an adaptive and contextual curriculum.

6. Conclusions

The conclusion of this study shows that the development of an innovation model for the Islamic Religious Education (PAI) curriculum and learning in Batam City Senior High Schools needs to be carried out systematically by considering the dynamics of multicultural society, the needs of students, and the development of technology and local values. Various models such as administrative, grass-roots, demonstration, Beauchamp, Rogers' interpersonal relationships, and action research have their own advantages that can be integrated adaptively in the local context. Therefore, it is recommended that the development of the PAI curriculum is not only oriented towards national standards, but also provides space for teachers and schools to innovate according to the characteristics of students. Continuous teacher training, collaboration between stakeholders, and periodic curriculum evaluation are the keys to the successful implementation of this innovative model in order to achieve contextual, transformative religious e.

References

- [1] A. Zaki, "Inovasi Kurikulum PAI Berbasis Multikultural untuk Sekolah Menengah," *Mitra Pilar: Jurnal Pendidikan, Inovasi, Dan Terapan Teknologi*, vol. 2, no. 1, pp. 31–36, 2022, doi: 10.58797/pilar.0201.04.
- [2] A. R. Pratama, Yulius, M. Latifa, and Syafrudin, "Inovasi Kurikulum Pendidikan Agama Islam (PAI) dalam Mendorong Penanaman Nilai-Nilai Kearifan Lokal," *An-Nabdlab: Jurnal Pendidikan Islam*, vol. 4, no. 1, pp. 145–152, 2024.
- [3] S. Arikunto, *Metode Penelitian*. Jakarta: Rineka Cipta, 2015.
- [4] D. S. Azhari, Z. Afif, and M. Kosim, "Konsep Pengembangan & Inovasi Kurikulum Dalam Pembelajaran Pendidikan Agama Islam (PAI) Berbasis Teknologi Informasi," *Innovative*, vol. 3, pp. 1241–1250, 2023.
- [5] H. Dakir, *Perencanaan dan Pengembangan Kurikulum*, 2019.
- [6] D. Eka, C. Dewi, M. Nopitasari, U. Fatmawati, and S. Bengkulu, "Desain Pengembang Kurikulum PAI di Sekolah Menengah Atas (SMA)," *Ghaisa Islamic Education Journal*, vol. 5, no. 2, pp. 183–189, 2024. [Online]. Available: <https://siducat.org/index.php/ghaisa>
- [7] M. R. Fauzi, T. Hamami, and H. J. Kim, "Islamic Religious Education Curriculum Innovation: Fethullah Gülen's Perspective," *Jurnal Pendidikan Agama Islam*, vol. 21, no. 1, pp. 186–200, 2024, doi: 10.14421/jpai.v21i1.7089.
- [8] H. Hadi, U. Islam, and N. Mataram, "Inovasi Kurikulum PAI: Harapan dan Realita di Era Digital pada Sekolah Menengah," vol. 12, pp. 217–229, 2025.
- [9] A. Hafizon, A. Mansur, and A. Bakar, "Konsep Inovasi Kurikulum Dan Pembelajaran Pendidikan Agama Islam," *Jurnal Penelitian Ilmu Pendidikan Indonesia*, vol. 1, no. 2, pp. 310–317, 2022, doi: 10.31004/jpion.v1i2.63.
- [10] A. Halim, H. Jamil, M. Miswanto, and I. T. Nur Rochbani, "The Curriculum of Islamic Religious Education in the Whirlwind of Independent Education and Its Implementation on Learning," *Progresiva: Jurnal Pemikiran Dan Pendidikan Islam*, vol. 12, no. 02, pp. 261–274, 2023, doi: 10.22219/progresiva.v12i02.29415.
- [11] M. Kristiawan et al., *Inovasi Pendidikan*. Jawa Timur: Wade Group National Publishing, 2018.
- [12] M. Lubis, *Metodologi Penelitian*. Sleman: Deepublish, 2018.
- [13] J. Mahanis and N. Witono, "Exploring the Values of Integration of Islamic and Science Education: A Qualitative Approach in Contemporary Learning at Riau Islands High School," *International Journal of Studies*, 2025.
- [14] N. Markee, *Managing Curricular Innovation*, vol. 198. Cambridge: Cambridge University Press, 1997.
- [15] L. J. Moleong, *Metodologi Penelitian Kualitatif*. Bandung: PT Remaja Rosdakarya, 2018.
- [16] M. Rouf, A. Said, and D. E. R. H., "Pengembangan Kurikulum Sekolah: Konsep, Model dan Implementasi," 2020.
- [17] N. G. Muntaha and A. Amin, "Difusi inovasi, diseminasi inovasi, serta elemen difusi inovasi," *Jurnal Pendidikan dan Konseling (JPDK)*, vol. 5, no. 2, pp. 2548–2554, 2023.
- [18] N. S. Aulia et al., "Model Inovasi Pengembangan Kurikulum dan Pembelajaran Pendidikan Agama Islam Era 4.0 Sekolah Dasar," *Al-Madrasah: Jurnal Ilmiah Pendidikan Madrasah Ibtidaiyah*, vol. 9, no. 2, pp. 810–825, 2025, doi: 10.35931/am.v9i2.4390.
- [19] J. A. Nasucha, "Difusi dan Desiminasi Inovasi Pendidikan," *INTIZAM: Jurnal Manajemen Pendidikan Islam*, vol. 4, no. 2, pp. 1–10, 2021.
- [20] D. E. C. D. Nihi Asli, "Desain Pengembangan Kurikulum Pendidikan Agama Islam di SD Ditinjau dari Faktor Teknologi," *Jurnal Pendidikan Tematik*, vol. 5, no. 1, pp. 33–45, 2024.
- [21] N. A. Wiyani, *Inovasi Kurikulum dan Pembelajaran: PAI SMA Berbasis Pendidikan Karakter*, 2016.
- [22] N. Nurhayati, M. Latif, and K. Anwar, "The Influence of Organizational Culture, Career Expectations, and Leadership Beliefs on Achievement Motivation in Integrated Islamic Primary Schools Riau Islands," *Dinasti International Journal*, vol. 5, no. 5, pp. 1150–1168, 2024. [Online]. Available: <https://dinastipub.org/DIJEMSS/article/view/2700>
- [23] N. Nurhayati, "Pengaruh Komunikasi Interpersonal, Budaya Organisasi dan Komitmen Organisasi Guru di Sekolah Dasar Islam Terpadu Kepulauan Riau," *Jurnal Literasiologi*, vol. 11, no. 1, 2024.
- [24] N. Nurhayati and K. I. Rosadi, "Determinan Manajemen Pendidikan Islam: Sistem Pendidikan, Pengelolaan Pendidikan, dan Tenaga Pendidikan," *Jurnal Manajemen Pendidikan dan Ilmu Sosial*, vol. 3, no. 1, pp. 451–464, 2022.
- [25] A. Parnawi, A. Idris, Z. Zufriyatun, and R. Rafiqi, "Innovation in the Development of Islamic Religious Education with a Multicultural Approach," *Journal of Human and Education (JAHÉ)*, vol. 4, no. 1, pp. 231–241, 2024, doi: 10.31004/jh.v4i1.589.
- [26] A. Saban, "Curriculum Development Through Action Research: A Model Proposal for Practitioners," *Pegem Eğitim ve Öğretim Dergisi*, vol. 11, no. 1, pp. 299–354, 2021, doi: 10.14527/PEGEGOG.2021.009.
- [27] M. Saidah, H. Trianutami, and F. S. Amani, "Difusi Inovasi Program Digital Payment di Desa Kanekes Baduy," *Jurnal Ilmu Komunikasi Jurnal Communicology*, vol. 10, no. 2, pp. 138–153, 2022.
- [28] Sugiyono, *Metode Penelitian Kuantitatif Kualitatif dan R&D*, Bandung: CV. Alfabeta, 2016.
- [29] N. S. Sukmadinata, *Pengembangan Kurikulum Teori dan Praktik*. Bandung: Rosda, 2020.
- [30] F. Y. University-Pasuruan, "Syamil Through Religious Moderation: Insights," vol. 11, no. 2, 2023, doi: 10.61815/alibrah.v6i2.176.1.
- [31] S. Wahyuningsih, S. Roohmadani, and others, "Perbedaan Perencanaan Pembelajaran PAI pada Kurikulum Merdeka di SMP dan SMA," *Jurnal Kajian Islam*, vol. 2, no. 1, pp. 60–63, 2024. [Online]. Available: <https://jurnal.ittc.web.id/index.php/jkis/article/view/1306>