



RESEARCH ARTICLE

Managing Islamic religious education teacher development for students with disabilities using the design thinking six social evolution model

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ABSTRACT

The management of Islamic Religious Education (PAI) teacher development for students with disabilities is essential for effective inclusive education. This study explains the Management of Islamic Religious Education Teacher Development for Students with Disabilities through qualitative methods and a literature review, employing narrative data analysis in conjunction with the Design Thinking Six Social Evolution Model. The results underscore the importance of understanding teacher challenges and the diverse needs of students, implementing adaptive training using blended learning, and utilising contextual learning materials. Effective management is achieved through prototyping training programmes that address practical needs, supported by robust policy, intersectoral collaboration, continuous mentoring, and teacher competency monitoring. Technology integration and institutional strengthening are crucial to ensure the sustainability and growth of PAI teacher development programmes for students with disabilities. The research paves the way for innovative coaching models responsive to real teacher and student needs, providing a foundation for sustainable policy recommendations in Indonesia. However, this study is limited to a literature review and lacks empirical data. Future research employing mixed methods is recommended to evaluate the model's effectiveness, adapt it to various regions and disability types, and strengthen the comprehensive evidence base for broader implementation.

KEYWORDS

Management; teacher development; Islamic religious education; students with disabilities; social evolution model

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1. Introduction

Islamic education management plays a central role in designing and implementing teacher development programs that are adaptive and responsive to the needs of

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students with disabilities. The concept of Islamic education management encompasses not only administrative and technical aspects, but also emphasizes the dimensions of values, character, and social justice that form the basis for interaction and educational services for all students, including those with special needs. (Anwar, 2021; Hadi et al., 2025) Based on Islamic teachings that emphasize respect for differences and the empowerment of the poor, Islamic education management is expected to create an inclusive, transformative, and sustainable teacher development system.

In practice, teacher development management includes four main functions: planning, organizing, implementing, and supervising (Nurhikmah, 2024). Each of these functions must be integrated with innovative approaches to respond to dynamic challenges in the field, such as the diverse characteristics of students with disabilities, technological advancements, and changes in inclusive education regulations and policies. Planning is the basis for mapping training needs and developing visions and goals for inclusion-oriented teacher development. The organizing function regulates synergy between schools, families, communities, and professionals to create a conducive and adaptive learning environment. The implementation emphasizes continuous training, the use of technology-based learning media, and active mentoring for teachers. Meanwhile, supervision focuses on continuous evaluation and strategy adjustments, ensuring that the entire coaching process runs effectively and adaptively in response to changing needs. The integration of these four functions with innovation will strengthen teachers' capacity in actualizing Islamic religious education that is fair, inclusive, and relevant for all students (Nahdiyah & Imron, 2022).

Inclusive education is a global mandate that requires the involvement of all students without discrimination, including students with disabilities (Wilgosh, 1992). The management of Islamic religious education teachers plays a dual role as a teacher of religious values and character formation, so that teacher competency development is a key factor in the success of inclusive education in the realm of religion (Larosa et al., 2022). However, the development of PAI teachers in dealing with students with disabilities still faces obstacles such as a lack of inclusive methodology training, limited resources, and a lack of mentoring (Isroani, 2021; Amanda et al., 2024; Sukandar, 2023).

In the era of educational transformation and increasing complexity of learning needs, an innovative and structured teacher development management model is indispensable. Design Thinking: Six Social Evolution Models developed Moreira et al., (2020). It presents a conceptual framework that combines the principles of design thinking with the six stages of social evolution to facilitate sustainable innovation. This model facilitates the development of real-world needs-based solutions, multisectoral collaboration, and continuous iteration of improvements.

PAI teachers in Indonesia still face difficulties when adapting teaching materials and methods for students with special needs (Astuti et al., 2022; Warosari, 2025) . The lack of adaptive pedagogic training, the absence of inclusive learning media, and the limited understanding of teachers regarding disabilities are the primary obstacles. As a result, PAI learning for students with disabilities is often not optimal, and even risks causing covert discrimination (Barokatin et al., 2023; Alimni et al., 2022). Additionally, the coaching model applied thus far tends to be theoretical and less responsive to field dynamics. The need for sustainable, empathy-based coaching, along with the involvement of various related parties (Squirrel), is key to overcoming this gap.

Previous research has examined the challenges faced by teachers in inclusive education, as revealed by Kriswanto et al. (2023) and Putra et al. (2021). However, studies that specifically integrate innovative design thinking-based frameworks in the development of Islamic Religious Education (PAI) teachers for students with disabilities are still minimal. Sar identified that the main obstacle for PAI teachers is the lack of special training and adaptive learning media. Putra et al. (2021), emphasizing the importance of continuous coaching with blended learning and mentoring methods, while Kriswanto et al., (2023) highlighting the need for technology integration and soft skills training in fostering inclusive PAI teachers Next Moreira et al., (2020) developed the Design Thinking Six Social Evolution model that offers an innovative and iterative approach in dealing with complex societal needs. However, its application in the context of PAI teacher development for students with disabilities is still rarely studied in depth.

There have been few empirical studies and literature reviews that combine the Design Thinking Six Social Evolution model in a structured manner for managing PAI teacher development in Indonesia, particularly for students with disabilities. This gap presents opportunities to adapt and review the model to enhance holistic teacher development and management innovations.

This research contributes both theoretically and practically by presenting a comprehensive integration between the management concept of inclusive Islamic Religious Education (PAI) teacher development and the social innovation principle of Design Thinking, specifically the Six Social Evolution. By prioritizing the real needs of teachers and students with disabilities, this research provides a new perspective in developing teacher development management that is oriented towards multisectoral collaboration and sustainability. In addition, the results of this study provide the conceptual and operational basis for policymakers, education practitioners, and program developers in designing innovative and socially responsive PAI teacher coaching.

This study aims to analyze the relevance of the Design Thinking Six Social Evolution Model in the context of Islamic Religious Education (PAI) teacher development management for students with disabilities and identify effective stages and strategies for PAI teacher development based on the model.

2. Literature review

2.1. Management of Islamic religious education teacher development for students with disabilities

Islamic education management has a very strategic position in designing and implementing Islamic Religious Education (PAI) teacher development programs that are adaptive and responsive to the special needs of students with disabilities. In this management framework, Islamic values such as justice, compassion, and respect for differences are used as the primary foundation so that all students get optimal and meaningful learning opportunities (Sofandi, 2019). Therefore, the management of Islamic education not only regulates the administrative aspect, but also manages the socio-cultural and spiritual aspects in inclusive education.

In addition, the implementation of Islamic education management must accommodate the unique characteristics of religious learning, as well as the diverse needs of students with disabilities who have physical, intellectual, and sensory limitations (Astuti et al., 2022). Therefore, managerial functions such as planning, organizing, implementing, and supervising need to be designed comprehensively and integrated with innovative approaches to create a friendly, inclusive, adaptive, and sustainable learning ecosystem (Suhendri, 2017).

2.1.1. Planning in inclusive PAI teacher development management

Planning is a very crucial initial stage in the management of PAI teacher development for students with disabilities (Zarnazi et al., 2024). At this stage, real problems faced in the field were identified, such as the lack of teacher training related to inclusive education, obstacles in the provision of special learning media, and social challenges that hinder the maximum involvement of students with disabilities (Safitri, 2024). In addition, the mapping of training needs is prepared by taking into account the various disabilities and characteristics of students so that the designed coaching program is relevant and on target.

Furthermore, planning also includes the development of the vision and mission of teacher development that prioritizes the principles of inclusivity and justice in education, based on Islamic values (Fitriya & Wahid, 2024). This vision serves as a

foundation for determining the strategy and goals of coaching, ensuring that every activity carried out supports the improvement of teachers' competence in teaching, guiding, and empowering students with disabilities effectively.

2.1.2. Organizing in the management of inclusive PAI teacher development

Organizing PAI teacher development for students with disabilities requires close and systematic cross-sector collaboration. The goal is to create an adaptive and inclusive learning environment by involving various parties, such as school management, students' families, educational support staff (psychologists, counselors), and the community (Anwar, 2021). This synergy provides a crucial foundation for a holistic and sustainable learning process.

In addition, organizing is also related to the management of human resources, budget allocation, and the provision of adequate supporting facilities. The organizing scheme must be flexible and responsive to changes in needs that arise during the coaching process, so that all elements involved can play an optimal role in the success of inclusive education based on Islamic Religious Education (Suhendri, 2017).

2.1.3. Implementation in the management of inclusive PAI teacher development

The implementation of the PAI teacher development program for students with disabilities requires continuous training, enabling teachers to improve their competencies in a real and sustainable manner. This training should integrate a blended learning approach that combines face-to-face and online learning methods to reach teachers in various regions effectively (Darmawati et al., 2019). In addition, active mentoring and direct assistance by experts are important elements to ensure the application of training knowledge in the field.

In addition, the implementation must also be supported by the integration of learning media and technology that is tailored to the needs of teachers and the characteristics of students with disabilities. The use of adaptive educational technology not only simplifies the learning process but also provides an inclusive and engaging learning environment, thereby increasing the participation and learning motivation of students with disabilities (Nurhayati et al., 2023).

2.1.4. Supervision and evaluation in the management of inclusive PAI teacher development

The supervision and evaluation stage is an integral part of managing the PAI teacher development program so that it runs effectively and sustainably. Supervision is carried out periodically to monitor the implementation of the program and identify obstacles

that arise (Arif et al., 2025). With an Islamic value-based management approach, the assessment focuses not only on the output, but also on the process and the long-term impact on the development of teachers and students (Rinaldho et al., 2024).

The evaluation was conducted to refine and enhance the coaching strategy in response to the evolving dynamics of inclusive education needs. Evaluation data is the basis for future managerial decision-making, ensuring that teacher development programs can continue to improve their quality and can make a real contribution to creating fair, inclusive, and quality education for students with disabilities (Rusdin et al., 2022).

2.2. Inclusive education and the needs of students with disabilities

Inclusive education aims to provide equal opportunities for students with disabilities through the adaptation of teaching policies and practices that are responsive to their individual needs (Ebersold & Meijer, 2016). This approach emphasizes the importance of reducing barriers to learning and participation in a regular school setting, so that students with a variety of disability characteristics can learn alongside their peers without facing discrimination. The inclusive education model focuses on transforming the education system and classroom structure to be more adaptive and inclusive, ensuring that every student receives the appropriate support to develop optimally (Coleman & Glover, 2010; Schuelka & Lapham, 2019; Faizefu, 2018).

In addition to adaptive policies and structures, teachers' understanding of disability characteristics is crucial so that learning can occur effectively and non-discriminatorily. Gunawan et al., (2023) emphasizing that teachers must recognize the type and level of disability that students have, so that they can implement appropriate teaching strategies, such as differentiation of instruction and the use of varied learning media. Teachers' mastery of inclusive pedagogical aspects contributes to creating a learning environment that respects differences and encourages the active participation of all students.

Furthermore, the success of inclusive education is highly dependent on collaboration among various stakeholders, including teachers, parents, support staff, and the school community. Close cooperation allows for the development of integrated learning programs and social support that strengthens the involvement of students with disabilities in the educational process (Singh et al., 2020; Ahsan, 2014). Thus, inclusive education is not just physical integration in the classroom, but an educational paradigm that prioritizes justice, equality, and respect for the diversity of students

2.3. Construction of Islamic religious education teachers

Islamic Religious Education (PAI) teachers play a strategic role in education, not only as conveyors of religious material, but also as a means of strengthening students' character and spirituality. Nun et al. (2025) emphasized that PAI teachers are tasked with guiding and shaping students' moral personalities through a comprehensive and in-depth religious approach. This role is crucial in the context of inclusive education, where teachers must be able to meet the diverse needs of all students, including those with various limitations and disabilities. The function of coaching PAI teachers should include strengthening their pedagogical, emotional, and spiritual competencies to create a conducive and inclusive learning environment (Leifler, 2020; Budiarti & Sugito, 2018).

However, as expressed by Dharma & Hermanto (2021), the development of PAI teachers in dealing with the diverse learning needs of students with disabilities is still not optimal. Various obstacles, including a lack of specialized training, inadequate adaptive learning materials, and limited resources, hinder teachers from performing their functions optimally. In addition, there is still a lack of ongoing mentoring and a lack of sensitivity to the psychosocial needs of students with disabilities, which impacts learning effectiveness and inclusion (Wilson et al., 2019; Muskania, 2022). This requires increasing the capacity of teachers through a more structured, comprehensive, and social innovation-based coaching model.

In line with that, the literature also emphasizes the need for PAI teacher development covering technical and non-technical aspects, such as soft skills development, the use of inclusive learning technology, and multisectoral collaboration to address the challenges of inclusive education (Saputra & Fauzi, 2022; Clark et al., 2023). Holistic coaching must be oriented towards understanding the characteristics of students with special needs and the development of responsive learning methods so that teachers can organize fair, effective, and empowering learning for every student without exception. This approach is in line with the global inclusive education paradigm that emphasizes the right to education and respect for diversity (Mariyono, 2024; Aina & Bipath, 2020).

2.4. Design thinking and the six social evolution model

Design Thinking is an innovation approach that focuses on a deep understanding of users through empathetic processes, cross-disciplinary collaboration, and prototype

iteration as a solution to complex problems (Gunawan et al., 2023). This approach puts people at the center of innovation, encouraging creative and practical solutions by prioritizing an understanding of the real needs of users. In the context of inclusive education, design thinking enables teachers and program developers to create learning strategies that are adaptive and responsive to the diverse needs of students, including people with disabilities (Saputra et al., 2022; Koh et al., 2015).

The Six Social Evolution Model, developed by Moreira et al., (2020), complementing the design thinking approach by structuring the social innovation process into six stages: Empathy, Exploration, Elaboration, Exposure, Execution, and Expansion. This model aims to produce social innovations that are sustainable, participatory, and capable of addressing complex societal challenges systemically (see Figure 1).



Figure 1.Six social evolution model. Source: (Moreira et al., 2020)

By applying this model, teacher development management can be designed iteratively, from an in-depth understanding of problems to testing and implementing solutions that meet the needs of students with disabilities, and broadening their impact through multisectoral collaboration.

The implementation of Design Thinking and the Six Social Evolution Model in the development of Islamic Religious Education (PAI) teachers for students with disabilities allows for a more human-centered and innovative learning process. This approach not

only strengthens teachers' technical skills through adaptive training and prototyping, but also prioritizes social sustainability and cross-stakeholder collaboration to maintain the sustainability of coaching programs (Muller, 2010; Pieniazek, 2016). Thus, the use of this model aligns with the needs of the times in creating inclusive education that is effective, holistic, and oriented towards empowering teachers and students.

Methods

This study employs a qualitative method to gain an in-depth understanding of the phenomenon of Islamic Religious Education (PAI) teacher development management for students with disabilities within the context of inclusive education. Qualitative research is oriented towards interpreting meaning, understanding processes, and finding patterns from non-numerical data by digging into various sources naturally, as well as contextually (Mays & Pope, 2020). The qualitative approach also allows researchers to provide a comprehensive meaning to the issues studied through reflection, interpretation, and critical analysis of the information collected (Sitorus, 2021).

One of the main approaches in this study is a literature review. Literature review is carried out systematically by examining and criticizing various literature such as books, accredited scientific journals, articles, government regulations, official documents of educational institutions, and relevant research reports (Mestika, 2025). The literature reviewed focuses on the topics of inclusive education, PAI teacher development, and the Design Thinking Six Social Evolution social innovation model.

The data sources in this study are derived from credible secondary literature and have been vetted through a peer-review process or legitimate institutional sources related to inclusive education and PAI. Data were collected through library browsing activities, document identification, and information extraction, all of which were consistent with the research theme (Taherdoost, 2021). Data collection techniques involve classifying, grouping, and filtering information from relevant sources based on keywords and sub-themes, such as teacher development management, social innovation design, and PAI-based inclusive education practices.

Data analysis employs a descriptive narrative approach, where the results of the literature review are analyzed by systematically describing patterns, the frequency of theme occurrence, and relationships between main concepts. Narrative analysis enables researchers to provide an in-depth interpretation of the data obtained, as well as explore the significance of the findings in the practical context of inclusive teacher development. The primary analysis technique utilizes a framework based on Design Thinking and the Six Social Evolution Model (Moreira et al., 2020). This model is

applied to group and assess findings according to six stages of social evolution: empathy, exploration, elaboration, exposure, execution, and expansion.

4. Results

4.1. The most authors public policy in Islamic education

The findings presented in Table 1 demonstrate that the Six Social Evolution Models provide a comprehensive framework for managing the professional development of Islamic Religious Education (PAI) teachers for students with disabilities. Each stage in the model—ranging from identifying teacher challenges and student diversity, through adapting blended learning-based training and contextual media, to strengthening multisectoral collaboration and policy support—addresses specific needs within inclusive education settings. This evolutionary approach emphasises the iterative prototyping of training programmes that are responsive to practical classroom conditions, underpinned by ongoing mentoring, competence monitoring, and the strategic integration of technology. Collectively, these elements contribute to the sustainability and scalability of PAI teacher development, ensuring that educational services are effectively tailored to the varied needs of students with disabilities and aligned with inclusive educational goals.

Table 1. Six social evolution models in the management of Islamic religious education teacher development for students with disabilities

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Model Stage	Research Results	Main Type/Focus
Empathy	In-depth understanding of the needs of teachers and students with disabilities. Identify key challenges such as training limitations and social stigma that still exist.	Qualitative: Understanding Needs and Challenges
Exploration	The development of innovative training modules, adaptive learning media, and multisectoral collaboration is the primary strategy.	Innovation and Development Strategy
Elaboration	Preparation of blended learning-based coaching programs (a combination of online and face-to-face). Initial trials and evaluations provide feedback to improve the effectiveness of the material.	Program Design and Initial Evaluation
Exposure	Socialization of coaching programs and expansion of policy support through intensive collaboration with the government, schools, and communities.	Stakeholder Policy and Collaboration
Execution	The implementation of a sustainable coaching program is complemented by mentoring, active mentoring, and periodic monitoring of teacher competence.	Implementation, Mentoring, and Monitoring
Expansion	Widespread and sustainable replication and expansion	Program Scalability and

Model Stage	Research Results	Main Type/Focus			
	of coaching models supported by institutional	Sustainability			
	strengthening and integration of digital technologies to improve scale and quality.				

Resource: Data research

The most authors of Majzadeh, R as many as 4 documents. Majzadeh, Reza comes from the University of Essex, Colhester, United Kingdom. Majzadeh's writing, which received the most citations, was titled So Near, So Far: Four Decades of Health Policy Reforms in Iran, Achievements and Challenges with 51 citations. Other authors produce 2 documents and 1 document on average. The second position with two (2) documents that have the most citations Dialmy, A who wrote Sexuality in contemporary Arab society as many as 28 citations. Dialmy is from the Faculte des Lettres t des Sciences Humaines de Rabat, Morocco. The third position by Ebrahimi, S.A produced two (2) documents with his writing entitled The investigation of the strategic think tank in Islamic Azad University of Gaemshahr. If so, it can be said that on average, each author produces two (2) documents related to public policy in Islamic education.

5. Discussion

5.1. Empathy

The empathy stage is the primary foundation in the development of PAI teachers for students with disabilities, as it puts human needs and experiences at the center of attention. Empathy allows for a deep identification of the barriers that teachers experience, such as the lack of inclusive methodology training and the social stigma that hinders the participation of students with disabilities in religious learning (Dewi, 2024). By building human-centered relationships, coaching programs can be personalized to address teacher and student-specific challenges effectively.

The threshold needs to be done with in-depth interviews and focus group discussions with PAI teachers and students with disabilities to understand the learning barriers faced, such as the lack of teacher training in inclusive methods and the stigma that arises in the school environment. This helps build human-centered relationships that prioritize the real experiences and needs of teachers and students.

Further, inclusive learning requires teachers who are sensitive to the individual characteristics of students to design non-discriminatory teaching strategies (Sharma et al., 2019). Empathy requires direct engagement in dialogue with teachers and students with disabilities to understand their real needs, as well as the social contexts that affect

their learning experiences. This provides the basis for designing a coaching program that is relevant, adaptive, and effective.

The competency strengthening study through the design thinking approach also emphasizes the importance of empathy in changing the teaching paradigm of teachers to be more responsive and inclusive (Aisy & Aprilia, 2025). In the context of PAI teacher coaching, empathy not only identifies practical obstacles but also social-emotional aspects related to stigma and social isolation, so coaching strategies can build teachers' confidence and motivation to teach students with disabilities with high commitment (Deroncele-Acosta & Ellis, 2024).

5.2. Exploration

The exploration phase involves multisectoral participation to formulate innovative solutions that suit the real needs of PAI teachers and students with disabilities. Engaging a wide range of stakeholders—including educational psychologists, inclusion experts, parents, and learning media developers—fosters the birth of rich, contextual ideas (Putra et al., 2021). This collaborative approach ensures that the solutions developed reflect the complexity of the challenges and the diversity of existing needs.

Steps need to be taken to involve various stakeholders, including inclusive education experts, psychologists, the disability community, and educational technologists, in jointly designing adaptive training modules and PAI special learning media that cater to the specific needs of students with disabilities. This ensures that solutions are developed in a contextually and practically applicable manner.

The literature confirms that cross-sector collaboration improves the relevance and quality of training programs by combining professional perspectives from different disciplines, so that the resulting training modules and learning media are not only theoretical but applicable and easy to implement in the field (Chastanti et al., 2017; Stuart O'Neill, 2025). Participatory exploration also opens up space for technological innovation that can be integrated to increase the effectiveness of inclusive learning.

Furthermore, exploration serves as a stage to test assumptions and map opportunities, which will in turn influence the design of prototype teacher development programs. The design thinking model teaches the importance of seeking a holistic and iterative understanding, so that each idea that arises is tested by a variety of perspectives and tailored to the unique needs of PAI teachers in an inclusive context (Gunawan et al., 2023).

5.3. Elaboration (trial and refinement)

The elaboration stage is the process of perfecting the coaching program through a pilot project and collecting feedback from the teachers participating in the training. In the context of PAI teacher development for students with disabilities, prototype testing of blended learning training programs—which combine online and face-to-face sessions—has been shown to increase teacher engagement and understanding of inclusive learning materials (Putra et al., 2021; Fadillah et al., 2025).

Efforts should be made to organize a trial blended learning training program that combines face-to-face and online sessions for PAI teachers. This program is tested for one semester and receives direct feedback from participants to improve content, teaching methods, and learning materials, making them more relevant, effective, and accepted by teachers.

An initial evaluation is crucial for identifying the program's strengths and weaknesses, allowing for revisions to ensure its feasibility, effectiveness, and teacher acceptance. The development of this adaptive material must pay attention to the various unique needs of students with disabilities so that it can be widely applied in the context of madrasas or inclusive schools (Wijaya et al., 2020). This iterative process enhances the quality of training and increases teachers' readiness to address realworld challenges in the field.

Additionally, the elaboration process involves the transfer of knowledge and practical skills that teachers in Islamic religious education can directly apply. This approach supports the transformation of teachers from mere material presenters to creative, innovative, and responsive facilitators to diverse student needs (Tetler & Baltzer, 2011). Thus, elaboration ensures that teacher development is dynamic and sustainable.

5.4. Exposure (socialization and policy support)

The exposure stage focuses on disseminating information and socializing the PAI teacher development model to various stakeholders, including education offices, madrasas, parents, and inclusive communities. This socialization is important to build solid policy support and collective awareness of the importance of quality, inclusive education (Hadi et al., 2025). Coaching programs cannot stand on their own without a broad support network and legitimacy from the authorities.

This effort involves holding seminars and socialization workshops to educate offices, madrasas, and related communities, expanding knowledge about this coaching model and building policy support and active participation from various parties in the program's implementation on a broader and more sustainable scale.

The literature emphasizes that the successful implementation and sustainability of teacher training is highly dependent on policy commitment and cross-sectoral coordination. For example, collaboration with education offices and religious institutions strengthens the legitimacy of the program while expanding its reach to various regions (Putra et al., 2021; Saputra & Fauzi, 2022) . The exposure also serves as a platform to gather active participation and resources from various parties.

Practically, adequate socialization using various communication media and open discussion forums provides space for dialogue and capacity building for all parties involved. This is important so that the development of PAI teachers for students with disabilities gets a strategic priority in the national and local education agenda (Lubis et al., 2021).

5.5. Execution (implementation and monitoring)

The implementation of inclusive PAI teacher development programs requires a flexible approach and continuous supervision. Implementation must be responsive to dynamics in the field, such as variations in teacher readiness levels, school conditions, and the specific needs of students with disabilities (Indrianto & Nurdin, 2024). Regular mentoring and ongoing mentoring are key to ensuring knowledge transfer and consistent use of inclusive learning methods.

The efforts are carried out by implementing complete coaching programs in several inclusive madrasas with periodic monitoring. The implementation team conducts flexible supervision and adjusts learning techniques based on field dynamics, ensuring coaching remains responsive to the changing needs of teachers and students.

Monitoring allows for real-time evaluation of the coaching process by collecting data from various indicators of teacher competency development. The design thinking-based coaching model encourages continuous adjustments and updates based on participant feedback and real conditions in the madrasah (Putra et al., 2021). This is important so that coaching remains relevant and practical, not just theoretical, but has a systemic impact.

Additionally, execution supported by mentors and facilitators with specialized expertise can strengthen teachers' motivation and provide solutions to the obstacles they face during the implementation of inclusive learning. This approach makes the coaching process a collective learning space, which significantly improves the quality of teaching and engagement of students with disabilities (Harfiani, 2019).

5.6. Expansion (replication and sustainability)

The expansion of the PAI teacher development program for students with disabilities must be supported by adequate government policies, consistent resource allocation, and continuous innovation to have a long-term impact (Mardiyanti & Rasid, 2018). The scalability of the program can be enhanced by integrating digital technologies, such as online learning platforms, which expand access to training in various regions, particularly remote areas.

Efforts are made to develop and replicate this coaching model in other provinces, with the support of local government policies, increased education budgets, and the integration of digital innovations, such as online learning platforms. This approach ensures that inclusive PAI teacher coaching can be sustainable and have a long-term impact.

Table 2. Six social evolution models in managing Islamic religious education teacher development for students with disabilities

Model Stage	Core Focus	Key Findings	The Essence of the Discussion
Empathy	Understand the real needs of PAI teachers and students with disabilities	A deep understanding of teacher challenges and the diversity of student needs is needed	Empathy is essential to building human-centered relationships, identifying real obstacles such as a lack of training and social stigma
Exploration	Exploring and generating innovative solution ideas	Development of adaptive training ideas, learning media, and multisectoral collaboration	Exploration involves various parties to design solutions that are tailored to their needs and contextual needs
Elaboration	Improvement of the prototype of the construction program	Blended learning and prototyping of training programs that meet practical needs	Initial testing and refinement of the program is important to guarantee the relevance, effectiveness, and acceptance of the program
Exposure	Widespread socialization and increased awareness	Policy support and cross- stakeholder collaboration are crucial	Dissemination of information and gathering support to ensure the implementation of the program widely and sustainably
Execution	Program implementation and monitoring of results	Continuous mentoring, teacher ability monitoring	Execution requires flexibility and constant supervision to adapt to the field's dynamics.
Expansion	Replication, program expansion, and sustainability	Technology integration and institutional strengthening for program sustainability	Expansion needs to be supported by sustainable policies, resources, and innovation to have a long-term impact

Successful expansion also requires institutional strengthening through cross-sectoral cooperation, such as partnerships between the government, educational institutions, the business world, and the social community. This collaborative approach supports knowledge transfer, financial sustainability, and capacity building in a sustainable manner (Amka & Mirnawati, 2020).

Furthermore, social innovation, as outlined in the Six Social Evolution model, emphasizes the need for continuous evaluation and program adaptation in response to the changing needs and conditions of the inclusive education world. Thus, the expansion is not only about doubling the program, but also improving the quality and relevance to the needs of teachers and students with disabilities (Panjwani, 2020).

The application of the Design Thinking Six Social Evolution model enables a more adaptive, participatory, and sustainable approach to managing PAI teacher development (see Table 2). This approach provides a dynamic framework that can accommodate the complex challenges of inclusive education, focusing on human needs and sustainable innovation (Gunawan et al., 2023; Saputra et al., 2022).

6. Conclusion

The Design Thinking Six Social Evolution model provides a practical, strategic, and operational framework for managing Islamic Religious Education teacher development among students with disabilities. By going through six stages that accommodate real social needs and foster continuous innovation, this model enables the improvement of inclusive learning methodologies and teacher empowerment in a sustainable manner. In-depth understanding of teacher challenges and diverse student needs, development of adaptive training based on blended learning, contextual learning media, and close multisectoral collaboration. This coaching model is effective when applied to prototyping training programs tailored to the practical needs of teachers. The success of coaching programs is highly dependent on strong policy support, cross-stakeholder collaboration, and ongoing mentoring and teacher competency monitoring. In addition, the integration of technology and institutional strengthening are key factors to ensure the sustainability and expansion of inclusive PAI teacher development programs.

The implications of the research should be supported by the development of modules that are easily accessible and applied in a variety of inclusive education contexts. Governments and educational institutions must provide sufficient resources for the ongoing training and mentoring of teachers, ensuring their competencies continue to develop. In addition, cross-sector collaboration is essential to enrich the

content of training and expand the reach of coaching programs, thereby creating practical, inclusive, and adaptive learning that meets the complex needs of teachers and students with disabilities. It is recommended that further research employ a mixed-methods approach, incorporating empirical case studies in inclusive schools, the measurement of the success of this model-based coaching, as well as innovations in the involvement of digital technology and community engagement.

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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