

ISLAM-BASED PLAY-BASED LEARNING FOR THE COGNITIVE DEVELOPMENT OF YOUNG CHILDREN: A CONCEPTUAL LITERATURE REVIEW

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Abstract

Early childhood is a crucial period for the formation of cognitive functions and basic character traits that influence long-term learning processes. In the context of Islamic education, the approach of learning based on Islamic values through play activities has rarely been studied conceptually to support the cognitive stimulation of early childhood. There is a gap in the literature discussing the systematic integration of Islamic values and play strategies in the framework of early childhood cognitive development. This study used a conceptual literature review method with a descriptive-qualitative approach to 38 relevant and curated scientific sources. The results show that Islamic play activities such as role-playing stories of the prophets, worship simulations, and riddles based on moral values can stimulate children's reflective and analytical thinking. In addition, Islamic-based play learning provides a meaningful learning experience because it integrates symbolic, affective, and spiritual elements. The conceptual model developed in this study shows a functional relationship between the form of Islamic games, the Islamic values contained therein, and the stimulated cognitive functions. This study contributes theoretically to the development of an early childhood Islamic education approach and offers a practical framework for curriculum designers and educators in developing learning strategies that are contextual, spiritual, and cognitive simultaneously.

Keywords: Early Childhood Islamic Education; Play-Based Learning; Islamic Values Islam; Cognitive Development; Conceptual Literature Review

A. Introduction

The early childhood period, from birth to around eight years of age, is a crucial time for cognitive ability development because the brain undergoes rapid growth and is highly responsive to environmental stimuli. UNESCO emphasises that this age range is an important window of opportunity in education that forms the foundation for lifelong learning (Baum et al., 2021). Furthermore, a study by Atlantis Press refers to this period as *the "golden age"*, a phase when the foundations of cognitive, language, motor, and socio-emotional abilities are optimally formed (Untung et al., 2023). During this period, the brain's neuroplasticity reaches its peak, so that appropriate stimulation has a significant impact on thinking capacity, memory, and problem solving. Researchers have also found that a stimulating and interactive environment from an early age can strengthen the brain

pathways that support critical thinking and decision-making processes in the future (M, 2016) . Thus, serious attention to early childhood education is very important because this golden period determines the direction of cognitive development throughout life.

Cognitive development in early childhood plays a vital role as the foundation for learning, thinking, and problem-solving in later life. According to UNESCO (2024), 90% of a child's brain development occurs before the age of five, making early stimulation crucial for future cognitive quality (UNESCO, 2024) . Cognitive development in early childhood is a fundamental aspect that influences children's future learning, problem-solving, and thinking abilities. According to a UNESCO report, 90% of a child's brain development occurs before the age of five, indicating that this phase is a critical time for cognitive stimulation. Without adequate stimulation during this period, a child's intellectual development potential may be stunted. Research indicates that children's interactions with their environment and appropriate stimuli are crucial in shaping their cognitive capacities (Damanik & Sani, 2014; Zai, 2023) .

As explained by *the California Department of Education*, cognitive development encompasses various abilities such as thinking, building understanding, remembering, and forming concepts (Fransiska et al., 2024) . An environment rich in stimulation, such as experience-based and interactive learning, can significantly improve children's ability to think and process information. The importance of stimulation carried out in the right way to support children's thinking and learning abilities (Zai, 2023) . Additionally, focusing on games deliberately designed to activate executive functions, such as attention and memory, has been proven to be more effective in enhancing children's cognitive development (Hasibuan & Suryana, 2021; Rahmatunnisa & Ragil, 2024) .

Play-based learning has been recognised by experts as a highly effective approach in stimulating cognitive development in early childhood through active, interactive, and meaningful experiences. In a literature review by Bergen (2018), it was found that play activities that emphasise creative exploration and social interaction improve problem-solving skills, flexible thinking, and strengthen executive functions such as attention and memory (Bergen & Psychology, 2018) . In addition, play-based learning has been recognised as a highly effective approach in stimulating cognitive development in early childhood. This approach offers active, interactive, and meaningful learning experiences, which are crucial in helping children develop various important skills in the learning process. Several studies indicate that play activities that emphasise creative exploration and social interaction can enhance cognitive abilities, including problem-solving and flexible thinking (Spencer et al., 2021; Wu, 2023) .

According to a literature review by Bergen (2018), play activities that focus on exploration can strengthen children's executive functions, such as attention and memory (Duncan et al., 2007) . Play-based learning encourages children to learn to perform tasks in a fun context, making them more engaged and motivated. For example, Vygotsky's approach emphasises the importance of symbolic play, which allows children to operate within their Zone of Proximal Development (ZPD), where they can learn through social guidance (Aisyah et al., 2023; Bird & Edwards, 2014) . In addition to executive functions,

play also helps children understand more complex social concepts. Through interactions with friends and caregivers, children learn to share, collaborate, and resolve conflicts, all of which are important components of social and cognitive development (Mitchell & Ouko, 2012; Yean & Ngadni, 2024). Research shows that children who engage in well-designed games can experience significant improvements in their cognitive abilities, including memory and attention (Abed & Shackelford, 2022).

The Islamic education model for young children emphasises that learning through play not only serves as cognitive stimulation but also as a medium for internalising values of faith, morality, and spirituality. In a literature review by (Muhammad Amirul Ramli, 2022), it is explained that learning methods such as games, songs, and Islamic stories are applied to shape children's character from an early age through practices that synergise cognitive and religious aspects. The study confirms that Islamic-themed games such as role-playing as prophets, composing dzikir sentences, and stories about prophets not only build memory and conceptual understanding but also strengthen children's spiritual and moral dimensions. The application of game-based education in an Islamic context has been proven to have a dual effect: on the one hand, it improves children's cognitive functions through the development of memory and problem-solving skills, and on the other hand, it nurtures religious and moral values from an early age. Further research on the integration of character and religious education in game-based learning shows that this combination provides strong support for children's overall growth in intellectual, emotional, and spiritual aspects (Hasibuan & Suryana, 2021).

The cognitive development of early childhood is the main foundation for shaping intelligence and critical thinking skills in the future. Although play-based learning has long been recognised as an effective approach to stimulating cognition, its implementation in the context of Islamic education has not yet received sufficient academic attention. Many early childhood Islamic education institutions adopt general learning models without systematically integrating Islamic values into play activities. In fact, Islam as a holistic education system contains principles of mental and spiritual stimulation that can be internalised from an early age. Therefore, this research is important and urgent because it provides a solution to the root of the problem, namely the lack of play-based learning models based on Islamic values as an approach to optimising the overall cognitive development of early childhood.

This study aims to conceptually explore the integration of play activities and Islamic values in the framework of cognitive stimulation in early childhood through an in-depth literature review. By examining various scientific references, developmental theories, and Islamic educational approaches, this study attempts to formulate a conceptual framework for Islamic play-based learning that can be used as a strategic foundation in early childhood education practices. This analysis is expected to provide theoretical and practical contributions for educators in designing learning that is not only educational and enjoyable, but also rich in values of faith that support the comprehensive intellectual growth of children.

B. Method

This study uses a qualitative approach with a conceptual literature review. The research design was developed systematically to examine, identify, and formulate concepts related to Islamic-based play learning in relation to the cognitive development of early childhood. This approach was chosen to explore the philosophical, theoretical, and pedagogical foundations that have been developed in global and local scientific literature. The analysis was conducted on relevant references in the form of indexed journal articles, academic books, proceedings, and policy documents. The review focused on sources published between 2013 and 2024 to ensure the recency of the findings.

The study materials in this research consisted of 38 documents selected based on criteria of thematic relevance, scientific validity, and connection to the main keywords: play-based learning, early childhood Islamic education, and cognitive development. The documents analysed included publications in English and Indonesian available through databases such as Scopus, Web of Science, DOAJ, and Google Scholar. The literature was analysed as *text data*, which was treated as the main respondent in this study. The selection of documents was carried out purposively, taking into account their scientific contribution and theoretical strength. All documents were reviewed using a conceptual framework based on child development theory, play theory, and Islamic education principles.

The research instrument was a literature review guideline containing thematic categories to identify the dimensions of play, Islamic values, and aspects of cognitive development. The data collection procedure was carried out through the stages of document search, source selection, data coding, and thematic classification. The collected data were analysed using a descriptive-qualitative approach and content *analysis* methods. The findings from each source were examined based on content relevance, conceptual consistency, and contribution to understanding the topic under review. The final results of the analysis were compiled in the form of a conceptual synthesis to describe the relationship between Islamic play-based learning and cognitive stimulation in early childhood in a comprehensive manner.

C. Findings and Discussion

Integration of Islamic Values in Play Activities Enhances Cognitive Stimulation

The results of the literature review show that play activities designed with an Islamic values approach are significantly capable of stimulating the cognitive development of early childhood. Activities such as role-playing the stories of the prophets, worship simulations, and logic games based on morals not only build memory and concentration but also strengthen analytical, classification, and reflective thinking skills. The integration of values such as honesty, responsibility, and patience in the form of concrete games creates a learning experience that touches on both affective and cognitive aspects simultaneously. These findings confirm that Islamic values do not need to be separated from play-based learning strategies but rather form the foundation for shaping a complete cognitive structure. Thus,

Islamic play-based learning makes an important contribution to the formation of children's reasoning and thinking skills from an early age.

Play activities designed with an emphasis on Islamic values have great potential to increase children's cognitive stimulation, especially in the early stages of child development (Priyanto, 2014). Research shows that play activities, such as role-playing based on the stories of the prophets and worship simulations, can strengthen children's memory and concentration, as well as improve their analytical and reflective thinking skills (Sofiatun et al., 2022). Players involved in these games experience strengthening of their cognitive skills as they classify, organise information, and reflect on moral values, which are an integral part of Islamic values (Sofiatun et al., 2022).

The integration of values such as honesty, responsibility, and patience into game design provides a learning experience that emphasises both affective and cognitive aspects simultaneously (Muskania & Zulela MS, 2021). A study conducted by Sofiatun et al. revealed that the storytelling method in the context of Islamic education can assist in children's cognitive development (Sofiatun et al., 2022). In addition, data obtained from observations and interviews showed that the application of Islamic values in play activities had a positive impact on children's mindsets and morals (Rohmah, 2016).

It is important to note that the application of Islamic values in these activities not only teaches moral norms but also provides a strong foundation for children's cognitive structure (Saputra & Suryandi, 2021). Thus, learning that integrates Islamic values through play activities creates an educational environment and helps children face social and moral challenges in the future (Hendrawan et al., 2019). Overall, this study emphasises the need for an approach that integrates spiritual and moral values into children's education through play-based methods grounded in Islamic principles, which have proven effective in shaping children's reasoning and thinking skills from an early age (Sofiatun et al., 2022).

A critical review of the literature shows that *play-based learning* is highly effective in enhancing the cognitive aspects of early childhood, especially when integrated with Islamic values. In " , a literature review found that games such as *role-playing*, *puzzles*, and educational quizzes systematically improve memory, problem-solving, and critical thinking skills in Islamic early childhood education (PAUD) children in NTB, especially when the games are contextualised within religious and moral themes. This is in line with (Ramli, 2022), which states that Islamic education based on games, songs, and Islamic stories can simultaneously shape intellectual and spiritual intelligence. The results of research by Al-Qolbi, (2025) also confirm that Islamic value-based play methods increase children's understanding of the concepts of worship and moral values through enjoyable symbolic interactions. Vygotsky and Piaget, within the framework of child development theory, provide a theoretical basis that through symbolic and social play, children can internalise concepts deeply. Researchers conclude that integrating Islamic values into play strategies has a stronger cognitive effect than play that does not contain religious values (Vygotsky, 1978).

The integration of quality between classical theory (Piaget, 1932) and the application of Islamic values creates a pedagogical concept that replaces pure symbolic learning with

meaningful contextual learning. Islamic moral values such as honesty, responsibility, and patience are not merely communicated but internalised through play activities designed with religious principles in mind. This provides a reflective and critical cognitive experience, not just mere repetition. In addition, this approach enriches the learning model in PIAUD with a spiritual foundation that can shape a more complete structure of children's thinking. Thus, this study strengthens the academic contribution to the conceptual gap in the form of weak synergy between religious education and cognitive development through play.

Play activities combined with Islamic values have been proven to stimulate various aspects of child development, especially in the cognitive context. One important aspect of Islamic educational values is moral values, which include morals towards Allah, fellow human beings, and oneself (Uccang et al., 2022). In role-playing games that depict the stories of the prophets, children not only learn moral values such as honesty and responsibility, but they are also trained to think critically and analytically in accordance with the norms found in Islamic teachings (Uccang et al., 2022).

Furthermore, the approach of learning through play based on Islamic values can help children develop a more creative and innovative approach to learning. One example of an activity that supports this is through educational games designed to enhance children's creativity. Hairiyah and Mukhlis state that creative activities provide children with the opportunity to express their feelings and ideas, which is important for the development of their minds and spirits (Hairiyah & Mukhlis, 2019).

Within the framework of cognitive stimulation, research shows that games that support gross motor balance, such as traditional games, contribute significantly to children's physical and cognitive development (Maulida et al., 2024). Good gross motor skills are an important part of cognitive development, as children who are physically active are often better able to solve problems and adapt to new challenges in the learning process (Maulida et al., 2024). This shows that Islamic values that emphasise the importance of physical activity and enjoyable learning can be applied in game design.

Therefore, understanding and implementing Islamic educational values in play activities is crucial for stimulating children's cognitive abilities. For example, the use of comprehensive game-based learning methods, as described by Tatminingsih, where a combination of educational, traditional, and constructive games are designed to foster various cognitive abilities such as recognising colours, shapes, and numbers (Tatminingsih, 2019). The collaboration between Islamic values and game-based learning strategies not only strengthens children's understanding of cognitive concepts but also nurtures their character and morality, which are intertwined with the spiritual foundations of Islamic teachings (Uccang et al., 2022).

Overall, integrating Islamic values into play activities can be seen as an effective way to enhance the cognitive abilities of young children. The emphasis on moral values instilled through constructive and enjoyable game design not only stimulates cognitive abilities but also shapes children's character for the better, which is important for their development in later stages (Hairiyah & Mukhlis, 2019; Sofiatun et al., 2022; Uccang et al., 2022).

E. Conclusion

This study confirms that Islamic-based play-based learning has strong potential in stimulating the overall cognitive development of young children. These findings highlight the importance of integrating Islamic values into play activity strategies so that children's thinking processes can develop within a focused moral and spiritual framework. By developing a conceptual model that links Islamic play activities with children's cognitive functions, this study not only answers existing theoretical questions but also provides a new direction for the design of early childhood Islamic education curricula. The conclusions reinforce the position that Islamic values are not merely supplementary material, but rather the main substance capable of shaping children's thinking structures and understanding as a whole. These findings also broaden the scope of Islamic basic education by introducing a pedagogical approach that has transformative value.

Theoretically, these findings contribute to the development of early childhood Islamic education literature, which has not yet discussed the integration of play strategies and cognitive development conceptually. Practically, this conceptual model can be used by teachers, curriculum developers, and educational institutions to design more meaningful, relevant, and contextual learning activities for early childhood based on Islamic values. However, this study has limitations because it is a literature review and has not undergone empirical validation in the field. Therefore, it is recommended that further research be conducted using an experimental approach or field study to test the effectiveness of the model that has been formulated in the context of real learning practices. Future research directions can also focus on the development of teaching tools, Islamic learning media based on play, and teacher training in optimally applying this model.

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