



INTEGRATION OF SCIENCE, KNOWLEDGE, AND RELIGION IN LEARNING CALISTUNG: A CASE STUDY AT BERKAH AMANAH PRIVATE TUTORING CALISTUNG

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Abstract

This research investigates the practice of integrating knowledge, science, and religion in early childhood education, specifically at the 'Berkah Amanah' Private Calistung Tutoring Center. In light of the prevailing tendency to separate science and religious education, this study seeks to explore how these two domains are harmoniously integrated in the teaching of reading, writing, and arithmetic (calistung). Employing a qualitative case study approach, this research employs observation, interviews, and document analysis to uncover two primary practices that facilitate this integration. Firstly, a visual-thematic learning method is employed, which combines cognitive science principles with religious content. Second, the cultivation of learning etiquette (adab) serves as a foundational element for cognitive readiness. Through an analysis using Ian G. Barbour's typology, it is evident that the practices at this institution align with the Dialogue and Integration models. This suggests that the unification of science and religion can be effectively implemented within the context of primary education. This study explores the practice of integrating science, knowledge, and religion in early childhood education, by taking a case study at Berkah Amanah Private Tutoring Center. Amidst the tendency of dichotomy between science and religion education, this study aims to identify how the two domains are synthesized in learning to read, write, and count (calistung). This study uses a qualitative case study approach, involving observation, interviews, and document analysis. The results show that integration is realized through two main practices: (1) a visual-thematic learning method that combines cognitive science principles with religious content, and (2) instilling learning etiquette as a foundation for cognitive readiness. Analysis using Ian G. Barbour's typology shows that the practice at this institution represents the Dialogue and Integration model, proving that the integration of science and religion can be implemented effectively in the context of elementary education.

Keywords: Integration of Science, Early Childhood Education, Reading, Writing, Arithmetic, Cognitive Science, Religious Education.

Introduction

Educational discourse in the modern era often confronts a dichotomy between knowledge (science), which is considered objective and rational, and spiritual values (religion), which are viewed as subjective and dogmatic. This tendency, rooted in the history of Western thought, has the potential to steer the educational process toward secularism, where knowledge is considered neutral and separate from belief. However, in the context of Islamic education, this view is problematic. Islamic educational philosophy views knowledge (science) as essentially inseparable from the framework of values and the purpose of creation. (Hidayat, 2019), because both come from God (Hidayat, 2019).

Therefore, instilling religious values from an early age is crucial. This character education serves as a strong foundation (worldview) that will guide children in understanding and applying knowledge wisely in the future. In early childhood education, particularly in learning to read, write, and count (calistung), this momentum is crucial. Reading, writing, and arithmetic skills are the primary gateway for children to learn more. Integrating values into this stage means building the foundation for children's thinking about knowledge itself.

In response to this challenge, various educational initiatives are attempting to reconcile knowledge and values. One interesting practice observed at Berkah Amanah Private Tutoring Center is how the institution positions itself not only as a provider of reading, writing, and arithmetic instruction but also as a holistic educational environment. This phenomenon makes it a relevant and important case study.

To analyze existing integration models, this study uses a typological framework developed by Ian G. Barbour, a physicist and theologian. Barbour maps four main models in the relationship between science and religion: Conflict, Independence, Dialogue, and Integration (Barbour, 2000). This framework will be used to dissect the learning practices at the research location. Based on this background, this study aims to answer the following questions: 1) How does the learning model at Berkah Amanah Private Tutoring Center concretely integrate a scientific approach with religious values in teaching reading, writing, and arithmetic?; 2) Which model from Ian G. Barbour's typology most accurately represents the practices implemented at the institution?

B. Research Methods

"This research uses a qualitative approach with a case study research type. (Moleong, 2017) This approach was chosen because it best aligns with the research objectives, namely to gain a deep, rich, and holistic understanding of a phenomenon within a real-life context. Case studies allow researchers to explore the "how" and "why" of a social unit, in this case, an educational institution, doing what it does. This approach prioritizes depth of understanding over the statistical generalizations characteristic of quantitative approaches.

The subjects of this study were the tutors at Les Berkah Amanah, who directly designed and implemented the learning process, and several students who served as supporting informants. The object of this study was the entire process of learning to read, write, and count, including teaching methods, teaching materials, teacher-student interactions, the

institution's educational philosophy, and other practices that reflect efforts to integrate science and religious values.

To obtain valid and comprehensive data, this study uses three data collection techniques (triangulation):

1. Participatory Observation: Researchers were directly involved in several teaching and learning sessions to directly observe how scientific concepts, such as phonetics, were taught alongside religious values, such as exemplary stories.
2. In-depth Interviews: Researchers conducted semi-structured interviews with institutional leaders and teachers to explore their philosophies, goals, challenges, and methods used in integrating science and religion.
3. Documentation: Researchers collect and analyze relevant documents, such as teaching modules, student worksheets, reading books used, and teacher diaries.

Data analysis was conducted qualitatively using the interactive model of Miles and Huberman. This process took place in three iterative stages: (1) data reduction, in which important data from field notes and interview transcripts were collected and categorized into initial themes; (2) data presentation, in which the reduced information was arranged into descriptive narratives and matrices to facilitate understanding; and (3) drawing conclusions (verification). (Miles & Huberman, 1994), where the findings in the field are interpreted and compared with Ian G. Barbour's theoretical framework to determine the most dominant model of the relationship between science and religion in practice.

C. Results and Discussion

The data analysis revealed several key practices that demonstrate conscious and systematic integration efforts at Les Berkah Amanah. These practices can be grouped into two main themes.

1. Learning Letters through the Religious Visual-Thematic Method

The most striking finding from classroom observations was the strong use of visual methods in letter recognition, which were thematically integrated with religious values. Based on the cognitive science principle that children excel at visual pattern recognition, the teachers went beyond simply displaying letters in abstract form. (Dehaene, 2010). For example, when introducing the letter 'A', the teacher shows a card with a beautiful calligraphic picture of "Allah". The letter 'A' in the word "Allah" is given a contrasting color to attract attention. This process is repeated for other letters, such as the letter 'S' which is associated with an image of a child praying or giving alms, and the letter 'M' which is associated with the Prophet Muhammad.

This practice demonstrates a deep alignment with cognitive science principles of multisensory learning and associative memory. Children not only see the symbol 'A' (visual), but also hear the pronunciation of the word "Allah" (auditory) and associate it with a familiar spiritual concept (association). This strengthens the memory trace in the brain, making the learning process more effective than simply memorizing letter shapes. This is where the depth lies. Connecting the letter 'A' with "Apple" is a purely cognitive association. However, connecting 'A' with "Allah" is a cognitive-affective association. The word "Allah" carries a much stronger emotional, spiritual, and cultural relevance for

children than the word "Apple." This emotional connection serves as a powerful memory "hook," making the learning process not only easier but also more meaningful.

Viewed from Barbour's typology, this method is a clear example of the Integration model. Science (cognitive principles of visual learning) and religion (introducing the concept of divinity) not only coexist but are integrated into a single pedagogical activity. The teaching material itself is a synthesis of knowledge about how the child's brain works and the goal of instilling spiritual values.

2. Instilling Learning Manners as a Foundation for Cognitive Readiness

The second significant finding concerns the practice of cultivating good manners before the core learning process (science) begins. Observations show that each study session at Les Berkah Amanah always begins with a communal prayer and a brief lecture on the importance of having a pure intention in seeking knowledge. Interviews with instructors confirm that this is not simply a ritual, but rather a conscious act of "cleansing the heart and mind." The goal is to ensure students are in an optimal mental and spiritual state to receive knowledge.

This practice has a strong basis in neuroscience. Activities such as prayer or quiet time can activate the prefrontal cortex, the part of the brain responsible for executive functions such as attention, concentration, and emotional regulation. By reducing mental "noise," students become more cognitively prepared to absorb and process new information. Therefore, *adab* (religion) serves as a neurological foundation for effective science learning.

This practice best aligns with the Dialogue model, even leading to Integration. Religion (through *adab* and prayer) not only speaks to science but actively prepares the conditions for better science learning. There is a mutually supportive relationship: a good spiritual condition (religion) will lead to better intellectual understanding (science).

D. Conclusion

In analyzing the learning practices at Berkah Amanah Private Tutoring Center, this study draws several main conclusions. First, answering the problem formulation regarding how integration occurs, it was found that Berkah Amanah Private Tutoring consciously and systematically combines scientific approaches with religious values. This is manifested in two main practices: (1) the use of visual-thematic learning methods that combine cognitive science principles (pattern recognition, associative memory) with religious content (Allah's calligraphy, images of worship), and (2) the instilling of learning etiquette through prayer as a foundation for creating students' cognitive and neurological readiness to receive knowledge. These practices indicate that integration occurs not only at the content level, but also at the methodological and philosophical levels.

Second, regarding the model of the relationship between science and religion, the practice at Les Berkah Amanah does not conform to either the Conflict or Independence models. Instead, the practice represents a dynamic blend of the Dialogue and Integration models from Ian G. Barbour's typology. The instilling of morals demonstrates the Dialogue model, in which religion provides a foundation for science. Meanwhile, the visual-

thematic teaching method is a concrete example of the Integration model, where scientific principles and religious content are integrated into a coherent pedagogical framework. Thus, the case study of Berkah Amanah Private Tutoring demonstrates that integrating science, education, and religion in early childhood education is not merely a theoretical idea, but also a practical reality that can be implemented effectively and creatively. These findings suggest that other elementary education institutions can adopt a similar approach to create a non-simplified, progressive, and spiritually enriching learning experience.

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