

Maths In The Qur'an: Should The MI Curriculum Adopt An Islamisation Of Science Approach?

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Abstract: A number of studies have highlighted the importance of integrating Islamic values in science and social learning in madrasahs, but studies that specifically address the Islamisation of mathematics are still very limited. Most of the current MI curriculum adopts a competency-based approach with very little exploration of the relationship between mathematical concepts and Islamic teachings. This study aims to identify Qur'anic verses related to mathematical concepts, analyse the urgency of applying the Islamisation approach in mathematics learning, and formulate strategies for the integration of Islamic values in the MI mathematics curriculum. This research uses a qualitative approach with in-depth interview method. The research was conducted in several MIs that have implemented or attempted to integrate Islamic values in mathematics learning in West Bandung and Makassar. Data were collected through in-depth interviews with teachers, academics and curriculum experts. The interviews were semi-structured to allow the respondents the freedom to express their views in depth. This research highlights the importance of integrating Islamic values in mathematics learning in Madrasah Ibtidaiyah through the Islamisation of science approach. The results showed that although mathematical concepts in the Qur'an have long been recognised, the implementation of the Islamisation approach in the MI curriculum is still limited. Concrete steps are needed to adopt the Islamisation of science approach in mathematics learning in MI. The government and Islamic education institutions need to work together to develop a more integrative curriculum, provide textbooks that reflect the integration of science and Islamic values, and organise training for educators.

Keywords: Curriculum, Mathematics, Science And Islamic

INTRODUCTION

Mathematics is one of the disciplines that has a fundamental role in human life (Asliyah & Ananda, 2022; Habibi et al., 2021; Mahdalena, 2024; Nopriana et al., 2021; Prayetno et al., 2024; Yanuarto et al., 2021; Yuliani et al., 2020). In the context of education, mathematics is taught from an early age as part of the national curriculum, including in Madrasah Ibtidaiyah (MI) (Al Ayyubi,

Bukhori, et al., 2024; Al Ayyubi, Hayati, et al., 2024; Al Ayyubi, Rohaendi, et al., 2024). However, the approach used in learning mathematics in MI is still dominated by conventional methods that tend to be secular, without linking it with Islamic values. In fact, the Qur'an itself contains many mathematical concepts, such as numbers, patterns, proportions, and the regularity of the universe (Khoir, 2024; Nurhadiningtyas et al., 2025; Ramadhan et al., 2024).

Islamisation of science, including in the field of mathematics, has become an increasingly relevant topic in the world of Islamic education (Muna et al., 2024; Nurhikmah, 2024b; Purnamasari et al., 2024; Utomo & Rizqa, 2024). Islamisation of science is defined as an effort to integrate Islamic values in various disciplines, so that science is not only rational but also has a spiritual and ethical dimension (Marzuki et al., 2024; Putri et al., 2025; Rahma et al., 2024; Zulkhaidir et al., 2023). Some Muslim countries, such as Malaysia and Turkey, have developed educational models that integrate science with an Islamic perspective. However, in Indonesia, the concept of Islamisation of mathematics in the MI curriculum has yet to be implemented systematically.

A number of studies have highlighted the importance of integrating Islamic values in science and social learning in madrasahs, but studies that specifically address the Islamisation of mathematics are still very limited. Most of the current MI curriculum adopts a competency-based approach with very little exploration of the relationship between mathematical concepts and Islamic teachings (Eriyanti et al., 2022). Some textbooks do include Qur'anic verses as an introduction, but have not yet reached the stage of developing a comprehensive approach to the Islamisation of science. This indicates a gap in the literature and practice of Islamic education that needs to be filled with further research (Dewi, 2021).

This article offers a new perspective in examining how mathematical concepts in the Qur'an can be integrated in the MI curriculum through an Islamisation of science approach. By exploring Qur'anic verses that contain mathematical concepts and examining how Islamic principles can enrich mathematics learning, this article provides new insights for the development of a more holistic Islamic-based curriculum.

Based on this, in seeing the development trend of Maths in the Qur'an: Should the MI Curriculum Adopt an Islamization of Science Approach, the researcher will dig up some data from Google Scholar accredited by Sinta. The researcher did this to dig deeper and find a gap and novelty in the research to be conducted, this literature review was conducted using software applications, namely VOSViewer ver. 1.6.20 and publish or perish ver. 8.

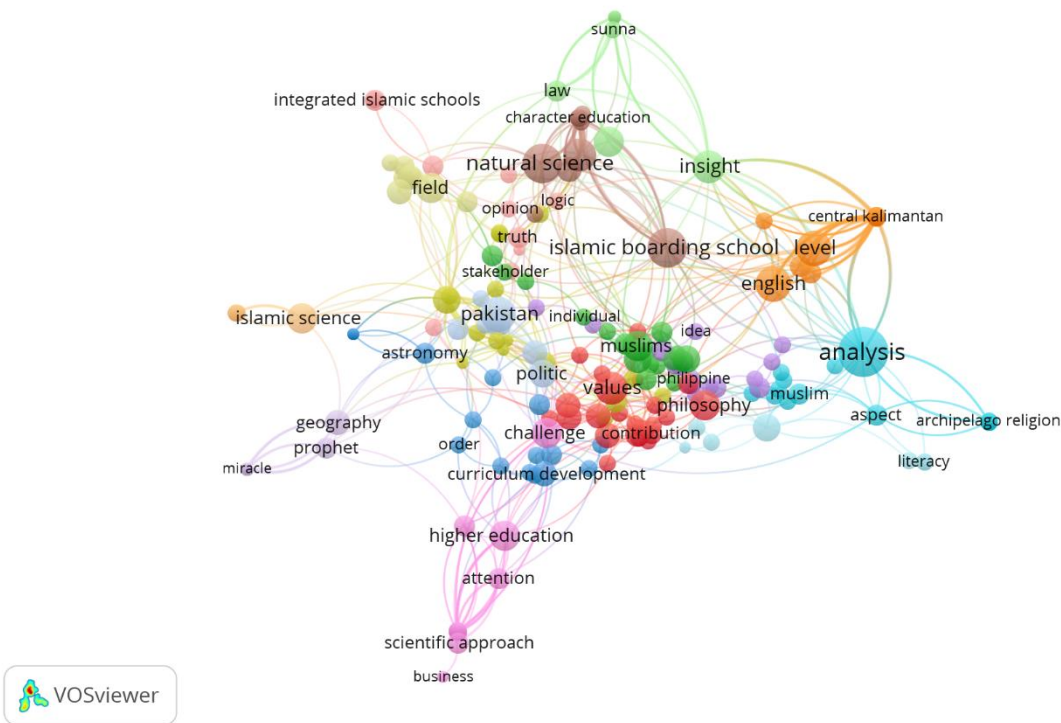


Figure 1. Results VOSviewer

Through bibliometric analysis using the VOSViewer ver.1.6.20 application, researchers reviewed articles that had been published and syntactic from 2020-2025 regarding Maths in the Qur'an: Should the MI Curriculum Adopt an Islamisation of Science Approach with the help of Publish or Perish ver.8, indexed articles visualize the extent to which the bibliometric network is interconnected and the extent to which research developments on Maths in the Qur'an: Should the MI Curriculum Adopt an Islamisation of Science Approach. So far, research on Maths in the

Qur'an: Should the MI Curriculum Adopt an Islamisation of Science Approach is still scarce based on bibliometric data in Figure 1, developments through literature reviews of hundreds of published articles have made researchers interested in this research.

This study aims to identify Qur'anic verses related to mathematical concepts, analyse the urgency of applying the Islamisation approach in mathematics learning in MI, and formulate strategies for the integration of Islamic values in the MI mathematics curriculum. With this research, it is hoped that education in MI can be more value-based, where science is not only taught as a cognitive skill, but also as a means of shaping the character and faith of students.

METHOD

This research uses a qualitative approach with in-depth interview method (Creswell, 2010). This approach was chosen to explore a broader understanding of how the concept of Islamisation of mathematics can be implemented in the MI curriculum. The research subjects involved mathematics teachers in Madrasah Ibtidaiyah, academics in the field of Islamic education, and curriculum experts who have an understanding of the integration of science and Islamic values. The research was conducted in several MIs that have implemented or attempted to integrate Islamic values in mathematics learning in West Bandung and Makassar. Data were collected through in-depth interviews with teachers, academics and curriculum experts. The interviews were semi-structured to allow the respondents the freedom to express their views in depth. In addition, secondary data in the form of curriculum documents and textbooks were also analysed to see the extent of integration of Islamic concepts in mathematics learning.

The data obtained was analysed using thematic analysis techniques, which included: 1) Data Coding, grouping respondents' answers into relevant themes. 2) Pattern Identification, identifying patterns from the coded data to find similarities and differences in respondents' views. 3) Data Interpretation, interpreting the findings by linking the concepts of Islamisation of science in mathematics education. To ensure the credibility of the research, triangulation techniques were used by comparing interviews from various sources and analysing supporting documents. Member

checking was also conducted by giving the interview results to the respondents to ensure accurate interpretation of the data. With this methodology, it is hoped that this research can contribute to the development of an Islamisation of science-based mathematics curriculum in Madrasah Ibtidaiyah.

RESULT AND DISCUSSION

Result

Based on interviews with mathematics teachers in several MIs, it was found that most teachers agree with the importance of integrating Islamic values in mathematics learning. One teacher stated,

'Maths learning should not only focus on numbers and formulas, but also relate these concepts to the greatness of Allah as found in the Qur'an.'

Interviews with Islamic education academics show that the implementation of mathematics Islamisation still faces challenges, especially in providing appropriate teaching materials. One academic revealed,

"Currently, mathematics textbooks in MI are still based on a general approach. A more systematic curriculum development is needed so that the Islamisation of science can really be applied."

From the perspective of curriculum experts, the Islamisation of mathematics approach can be done through several strategies, including: 1) Inserting relevant Qur'anic verses in mathematics materials. 2) Linking mathematical concepts with natural phenomena described in Islam. 3) Encouraging students to understand mathematics as a means of recognising the greatness of Allah.

In addition, some teachers stated that this approach can increase students' learning motivation. One teacher mentioned,

'Students are more enthusiastic about learning when the material is linked to stories in the Qur'an or the wisdom behind mathematical concepts.' A student interviewed also said, *'I understand more and feel closer to knowledge because it is taught in a more meaningful way.'*

However, challenges faced in implementing this approach include the lack of human resources who have a deep understanding of the Islamisation of science and limited teaching materials that support the integration of Islamic values in mathematics learning.

Overall, the results of this study indicate that there is an urgent need to develop an Islamisation of science-based mathematics learning model in MI. With a more integrative curriculum, it is expected that students will not only gain a strong academic understanding, but also have a deeper spiritual awareness in learning mathematics.

Discussion

The results of this study reveal that the Islamisation of science approach in mathematics learning in Madrasah Ibtidaiyah (MI) is still not systematically implemented in the national curriculum. Interviews with MI teachers showed that although they realise the importance of integrating Islamic values in mathematics learning, limited teaching materials and implementation guidelines are the main obstacles. Islamic education curriculum expert, Dr Ahmad Hidayat, asserts that the Islamisation of science must be done methodologically and not just by including Qur'anic verses in teaching materials. According to him, 'Islamisation of mathematics is not just about adding Qur'anic verses in the textbooks, but also building a framework that shows that this science is part of the order created by Allah.' This concept is in line with the idea of Islamisation of science from (Nasirudin & Putra, 2024; Qosim, 2024; Shodikun et al., 2023; Sultani et al., 2023), which emphasises that the integration of science must go through two main stages: ta'dib (instilling Islamic values in science) and tashfiyah (purifying science from secular elements that are contrary to Islam).

This opinion is also reinforced by Prof Syed Naquib Al-Attas, who explains that mathematics can be used as a means to understand the greatness of Allah, as He says in QS. Al Imran verse 190 :

اللَّهُ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِأُولِي الْأَلْبَابِ

The Meaning, “Surely in the creation of the heavens and the earth, and the alternation of night and day, there are signs for those who understand”. This verse emphasises the importance of thinking and contemplating God's creation, which can be studied through science, including mathematics and science. This verse is also often associated with the concept of natural order, which can be understood through logic and scientific calculations (Nurhikmah, 2024a).

In another study, (Tamphu et al., 2024) proposes that the Islamisation of science can be done through an integrative approach in the curriculum, where science and mathematics concepts are studied in an Islamic perspective. In the context of MI, this means that learning mathematics not only focuses on numerical skills, but also builds a spiritual understanding that numbers, patterns and structures in mathematics reflect divine order. In addition, interviews with academics in the field of Islamic education indicate that some Islamic schools have started to adopt this integrative method on a small scale. Dr Siti Aisyah, a lecturer in Islamic education, revealed, ‘Some Islamic schools have started to incorporate Islamic aspects in mathematics learning, but the implementation is still sporadic and has not become a curriculum standard.’ According to her, there needs to be clearer guidelines from the government or Islamic education institutions so that this integration can run systematically and sustainably.

Meanwhile, Dr Yusuf Qardawi in his book *Islamic Education in Perspective* (Basuki et al., 2019) emphasises that the Islamisation of science is not an effort to Islamise existing science, but to return the science to the principles of divinity. In this case, learning mathematics in MI should lead to an understanding that the regularity of numbers and logic in mathematics is part of Sunnatullah. Overall, the results of this study indicate that: Mathematics in the Qur'an, many mathematical concepts are already found in the Qur'an, such as balance (mizan), number, and order. MI teachers face difficulties in implementing the Islamisation approach due to limited resources and a secular-oriented curriculum. Thus, learning mathematics based on the Islamisation of science has the potential to enrich students' understanding, not only in the cognitive aspect but also in the spiritual aspect, so that they can see mathematics as part of the divine order that reflects the greatness of Allah.

CONCLUSION

This research highlights the importance of integrating Islamic values in mathematics learning in Madrasah Ibtidaiyah (MI) through the Islamisation of science approach. The results showed that although mathematical concepts in the Qur'an have long been recognised, the implementation of the Islamisation approach in the MI curriculum is still limited. MI teachers revealed that they realise the importance of this integration, but the lack of curriculum guides and teaching materials is a major obstacle. The findings suggest that the Islamisation of science approach in mathematics is not just about inserting Qur'anic verses, but rather building an understanding that order and logic in mathematics are reflections of Sunnatullah.

Expert opinion confirms that the Islamisation of science must be done methodologically, as described by Al-Attas and Al-Faruqi. The integration of science in Islamic education must include deeper aspects of epistemology, so that students not only understand mathematical concepts mechanically but also see them in a spiritual context. Academics and practitioners of Islamic education emphasise that learning based on the Islamisation of science in MI needs to be supported by a systematic curriculum, development of appropriate teaching materials, and training for teachers to be able to teach mathematics from a deeper Islamic perspective.

Therefore, concrete steps are needed to adopt the Islamisation of science approach in mathematics learning in MI. The government and Islamic education institutions need to work together to develop a more integrative curriculum, provide textbooks that reflect the integration of science and Islamic values, and organise training for educators. Thus, this approach not only improves students' understanding of mathematics but also forms a more holistic mindset, where science and spirituality go hand in hand in shaping the character of a superior Islamic generation.

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