

## ISLAMIC INTEGRATED SCIENCE LEARNING IN JUNIOR HIGH SCHOOL

Abdullah Herman, Fachri Dermawan, Fatimah Depi Susanty Harahap, Yenni Kurniawati\*

Universitas Islam Negeri Sultan Syarif Kasim Riau

Corresponding author's email : [yenni.kurniawati@uin-suska.ac.id](mailto:yenni.kurniawati@uin-suska.ac.id)

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### Abstract

*This article's goal is to present the goals of science education at the high school level that are incorporated with Islamic principles. The study identifies some of the learning objectives that are prioritized in the context of integrating science and Islam. Understanding scientific ideas within the context of Islam, developing moral and ethical principles, comprehending the connection between science and religion, and fortifying one's Islamic identity are the main objectives of education. The findings demonstrate that the integrated approach allows students to deepen their grasp of science and increase their awareness of Islam.*

**Keywords:** *Islamic Integration, Education, Science*

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Received: 2 May 2023 | Revised: 30 September 2023 | Accepted: 1 Desember 2023

## INTRODUCTION

Education aims to develop students' potential to become individuals who are confident, noble, knowledgeable, creative, and independent (Aditama & Admoko, 2016; Augusti et al., 2019). Education also aims to shape students into civil humans with cheerful character. Integrating religion and science in schools gives students a comprehensive education.

Education has emerged as the primary basis for forming a capable generation with rapid progress in science and technology. However, given the complexity of today's world, it is increasingly important to have an education that conveys scientific concepts and incorporates religious values. Islamic integrated science education at the Elementary Middle School (SMP) level is an exciting and promising strategy (Fajar & Izzah, 2023). The educational approach known as IPA (Natural Science) integrates Islamic learning in junior high schools, integrating Islamic values and principles with natural science concepts. This method aims to connect students with Islamic values and worldviews while providing a comprehensive understanding of natural sciences. (Djamilah & Atiqoh, 2023).

Several studies on the fusion of science and religion have been conducted in the Indonesian context. This study was conducted at various levels of education, from elementary school to university. Development research is carried out at the elementary school level. Examples of this type of research include the creation of science learning modules that center on integrating Islam and science and research into integrative science teaching materials that prioritize contextual approaches. (Kadir, 2023).

Integrated science learning covers a wide range of topics in secondary school, from interactive and demanding learning techniques to applying critical thinking in accordance with Islamic teachings. Study materials are also designed specifically with Islamic values in mind. In this approach, the teacher functions as a facilitator who helps students explore the relationship between Islam and science and communicates information. Irwansyah (2020). *Islamic Science Integrated Learning* is a method that combines Islamic teachings with scientific principles. This approach provides a solid basis for bridging the gap between science and spirituality in this era of globalization, where the challenges of science and religious values are often considered contradictory. (Septiana & Rahmadi, 2023). In middle school, students begin to expand their understanding of science, including science. However, students can only learn more about the relationship between the universe and its Creator by incorporating Islamic concepts into science classes. It also helps develop an ethical and comprehensive perspective on applying science. (Habib & Sholibai, 2022).

The importance of an Islamic integrated science learning approach in secondary schools will be discussed in detail in this article. We will examine how this method can enhance students' educational experience and help them develop moral principles based on Islamic teachings. Readers should better understand the relationship between science and religious values by learning about the integration of science and Islam. It is also hoped that educators will be motivated to use comparable strategies to identify a generation with Islamic character and academic intelligence.

Integrating a scientific approach to learning science with Islamic values has become a significant challenge for educators at the junior high school level in the context of globalization and the growing transformation of education (Junior High School). A holistic, integrated learning approach is becoming increasingly crucial in strengthening students' understanding of the physical world they face and its relationship to the religious values that underlie its existence. This is part of an effort to bridge the gap between conceptual understanding of science and Islamic spiritual values.

Integrating science and Islam in secondary education significantly impacts modern educational practice. First, by incorporating Islamic values – which include moral, ethical, and spiritual dimensions – into scientific education, students can gain a deeper understanding of scientific concepts. This helps develop a comprehensive perspective on science by tying their understanding of the cosmos with Islamic moral regulations. (Darmawan and others, 2022).

The potential to increase students' intrinsic learning motivation exists when science and Islam are integrated. Students are more likely to be motivated to learn and actively engage in learning when they can relate the subject to their beliefs and values. In addition to laying the foundation for a deeper understanding of the relationship between science and religion, secondary schools' Islamic integrated science learning approach also promotes character development, intrinsic motivation, and broader intercultural dialogue in educational contexts.

**RESEARCH METHODS**

The method used in this research is Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). This research began by searching for articles using the keyword "Science and Islamic Education" on Google Scholar. The article selection process is depicted in Chart 1. The first step was identification, where 120 articles were found. The second step was screening, which resulted in 80 journals after removing duplicates and irrelevant studies. The third step was an eligibility assessment, which resulted in 53 journals meeting the inclusion criteria. Finally, 41 journals were worthy of further analysis.

**Table 1.** Research Questions

Research Questions	Motivation
1. What materials are most often taught by teachers in science lessons in Junior High Schools?	Identify the material most taught by teachers in science lessons
2. What are the Al-Quran verses that most often appear in science learning materials in Junior High Schools?	Identify the Al-Quran verses that appear most often in science learning

A search for research articles on this topic using the keywords "Education, Science, and Islam" in Google Scholar yielded the articles used in this library review. Below is a diagram of the selection process using the Prisma method.

The process of selecting articles suitable for analysis is depicted in the graphic above. This is the first step in the identification phase, which involves identifying and using keywords to search for articles in a particular database. The next step is eligibility, which is a check on the validity of a possible article based on its abstract and title. The final step was to define several criteria, such as failing to meet the journal article criteria, not having the full text available, and exposure to irrelevant content.

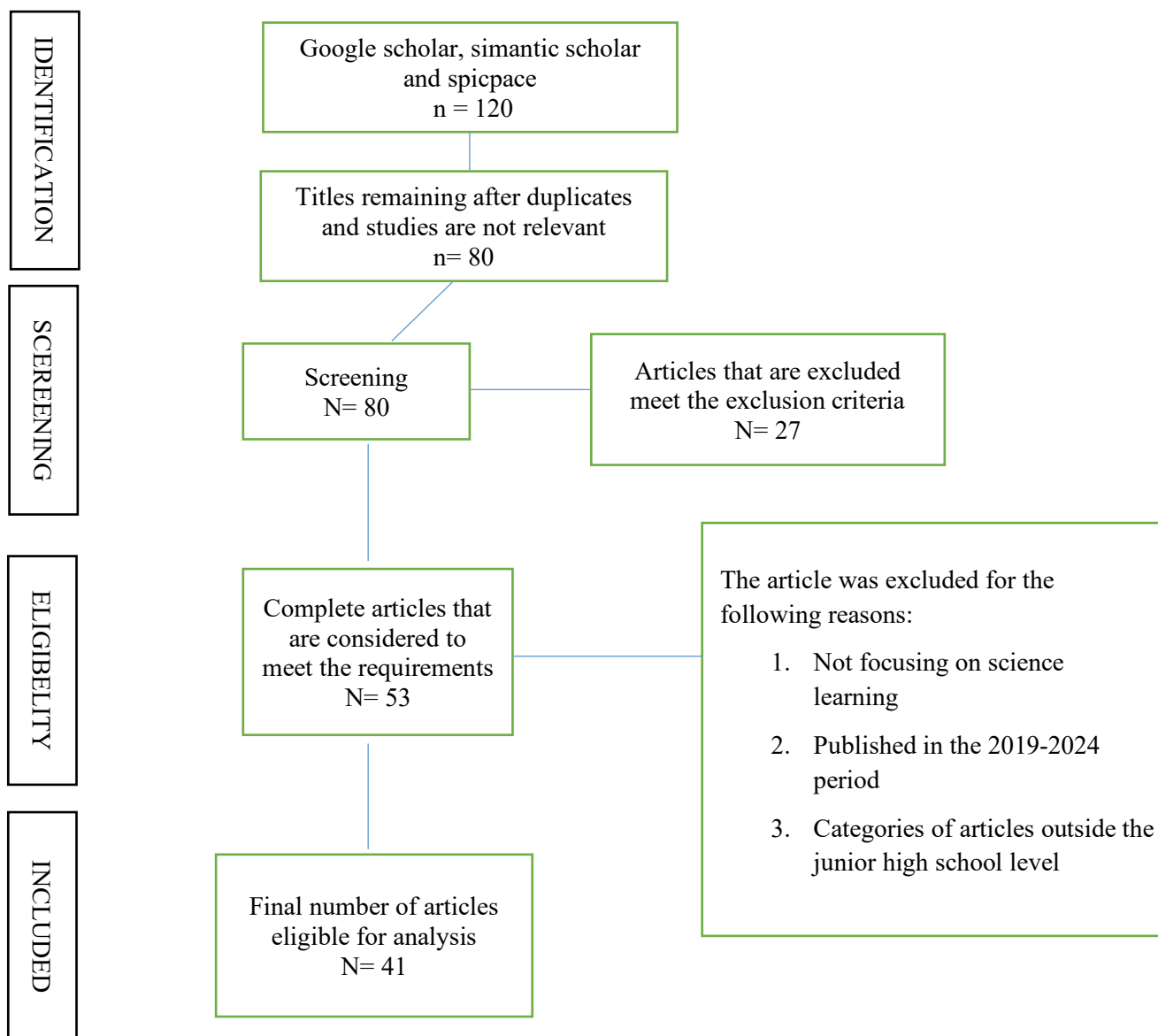
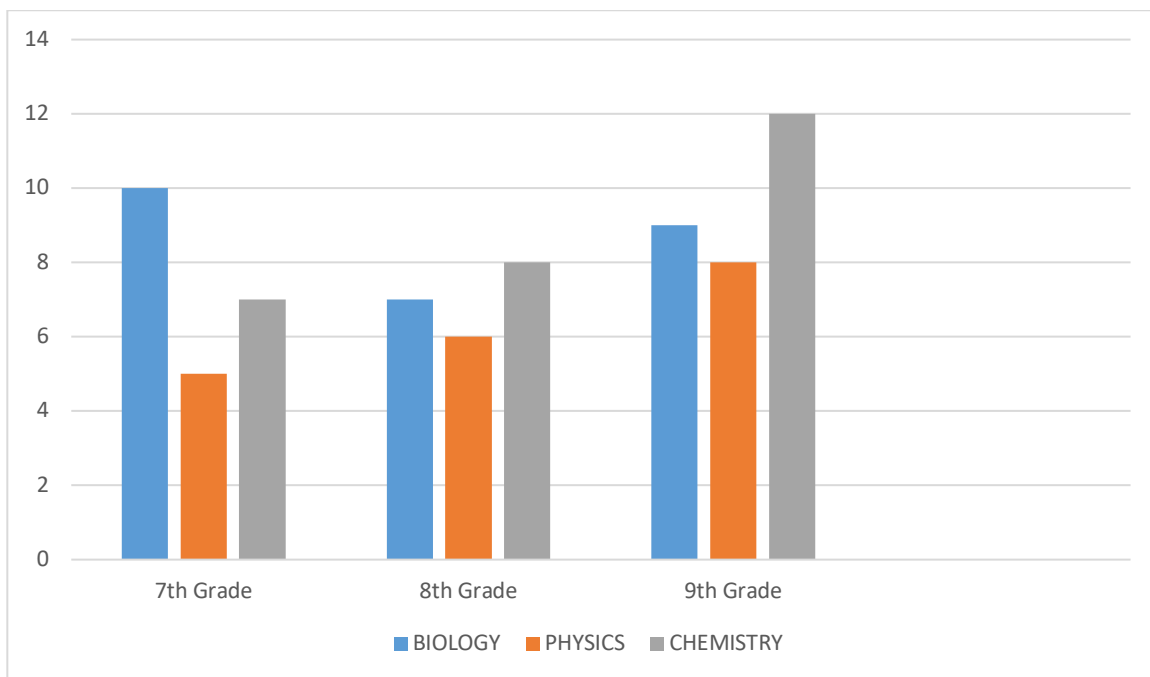


Chart 1. Prisma

**RESEARCH RESULTS AND DISCUSSION**

Based on the research method using the PRISMA chart, there are 120 articles from Google Scholar, Semantic Scholar and Spicpace in the identification section. After that, in the screening section, 80 journals were obtained; in the eligibility section, 53 journals were obtained, and after analysis was carried out according to the inclusion and exclusion criteria, 41 journals were obtained that were worthy of analysis.

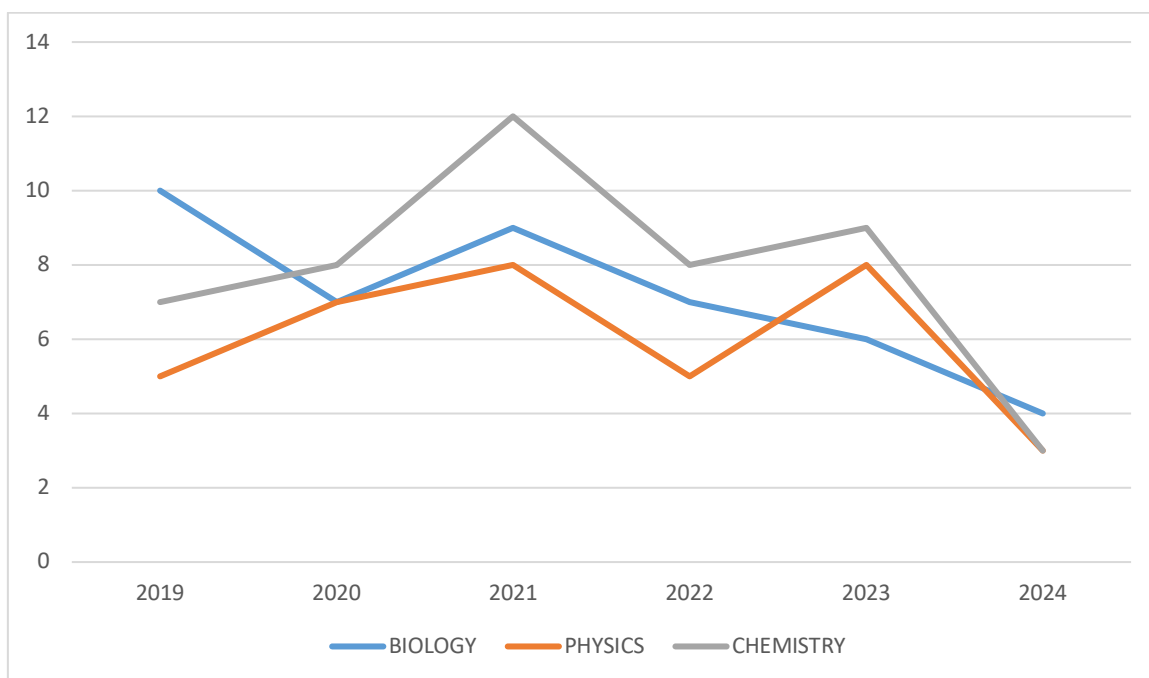
Based on research that has been carried out regarding subjects in classes VIII-IX, which is presented in Figure 1.



**Figure 1. Subjects**

Figure 1 shows the content taught by teachers in three different middle school classes (grades 7th, 8th, and 9th) across biology, physics, and chemistry. Biology is the most taught subject in grade 7th, with about ten lessons, followed by physics with about 6, and chemistry with about 7. In grade 9th, chemistry dominates with 12 lessons compared to 8 in biology and 6 in physics.

Biology is taught in eighth grade, physics in seventh grade, and chemistry in eighth grade. Chemistry is taught most in Year 9, accounting for around twelve subjects, compared with eight in Biology and six in Physics. In these three grades, biology and chemistry are usually taught more than physics, except for grade 9, where chemistry dominates.

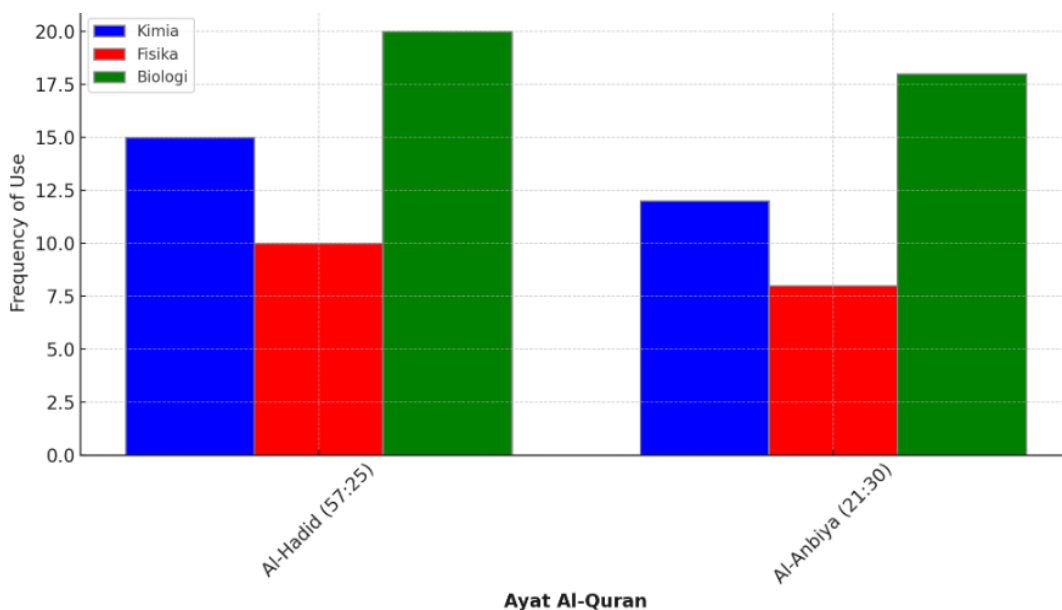


**Figure 2. Journal Release Year**

The number of journals published annually in the three subject categories of biology, physics, and chemistry from 2019 to 2024 is shown in Figure 2. The total number of journal publications in biology was about 10 in 2019, down about 8 in 2020, up about 9 in 2021, down to around 7 in 2022, down again to around

6 in 2023, and finally down to around 5 in 2024. The total number of journals for Physics started at around 6 in 2019, increasing to around 7 in 2020, then decreasing to around 6 in 2022, increasing slightly to around 7 in 2023, and finally dropping to around 5 in 2024. Meanwhile, the number of journals for chemistry courses increased from around 7 in 2019 to around 8 in 2020, then increased significantly to around 12 in 2021, then decreasing to around 9 in 2022, then increasing once again to around 10 in 2023, and finally decreasing sharply to around 4 in 2024.

The Journal of Biology has seen an increase in 2021 but shows a downward trend from 2019 to 2024 overall. The Journal of Physics displays small oscillations, showing moderate increases in 2020 and 2021 before a final decline in 2024. 2022 sees a remarkable increase in the journal chemistry, but by 2024, it has decreased significantly. This graph shows how the number of journal publications for each subject varies yearly, with distinct peaks for each topic and more pronounced declines for all categories in recent years.



**Figure 3.** Verses that often appear in the Material

Verses from the Koran often used in studying chemistry, physics and biology are shown in figure 3. For example, Ayat Al-Hadid (57:25) is used fifteen times in studying chemistry and twelve times in studying physics, but not used in biology learning. Verse Al-Anbiya (21:30) is used ten times in chemistry and eight times in physics lessons but not in biology lessons.

Verses from the Koran such as Al-Hadid (57:25) and Al-Anbiya (21:30) are more often used in chemistry and physics lessons, while the verse Al-Mulk (67:3-4) is not used in lessons chemistry or physics but is used twenty times in biology lessons. This graph shows that the verse Al-Rum (30:48) is also not used in chemistry or physics lessons but is used eighteen times in biology lessons.

## CONCLUSIONS

Islamic Integrated Science Learning in Middle School shows that this method has many benefits for education. By incorporating verses from the Koran into chemistry, physics, and biology lessons, students not only gain a deeper understanding of scientific concepts but also gain a broader spiritual understanding. For example, verses such as Al-Hadid (57:25) and Al-Anbiya (21:30) are often used in chemistry and physics lessons to relate scientific concepts to the majesty of Allah's creation. This creates a sense of awe at the greatness of God.

## ACKNOWLEDGEMENTS

We thank everyone who helped this research happen. We hope this research's findings will be helpful for people in various circles.

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