

## STRATEGY FOR INTEGRATION OF THE VALUES OF FAITH AND TAQWA IN SCIENCE LEARNING AT MAN INSAN CENDEKIA SERPONG

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**Abstract:** *This article describes the research results related to how MAN Insan Cendekia Serpong manages the integration of faith and piety values in science learning. This study uses a descriptive qualitative research model with data from various sources, emphasizing observation and library research. The results of this study indicate that (1) MAN Insan Cendekia Serpong integrates the values of faith and piety in science learning and is arranged in a curriculum known as the integrated curriculum of imtak and science and technology in learning; (2) several factors that influence the successful integration of the values of faith and piety in science learning are the competence of teachers, students, and the learning tools used; (3) evaluation of the implementation of science learning that is integrated with the values of faith and piety needs to be carried out maximally following technological developments in order to produce a generation that excels in the field of science and has a complete understanding of religion or human beings.*

**Keywords:** *Integration, Science, Faith and Piety, Madrasah*

### Introduction

Some experts state that mastery of science integrated with Islamic religious education is two mutually reinforcing and interrelated competencies. Science can improve one's religious understanding by studying empirical evidence so that humans will understand how Allah created all things to meet human needs. Likewise, if science is not based on an excellent religious understanding, it will be a disaster.

Madrasah Aliyah Negeri (MAN) Insan Cendekia Serpong is a madrasa/school under the guidance of the Ministry of Religion which is a top-level superior madrasa. Achievements show academic excellence at national and international levels, and alumni are accepted at well-known universities at home and abroad. At the same

time, the superiority of faith and piety is shown by a person who has good morals and competence in applying worship practices. This achievement is driven by the integration between the values of faith and piety in science learning or mafikibi learning (mathematics, physics, chemistry, and biology).

The integration of the values of faith and piety in science learning at MAN Insan Cendekia Serpong is an effort to build a generation of Muslims who are not only capable of mastering science (science and technology) but also have the right faith and piety (imtak) in implementing and responding to scientific developments itself. The writing in this article discusses the management of the integration of faith and piety values and science learning (mafikibi). The researchers limited their application at MAN Insan Cendekia Serpong.

## **Discussions**

### **1. Islamic Religious Education in Madrasas**

The purpose of Islamic religious education is to direct students to know, believe, live, be pious and have a noble character based on the primary sources, namely the Al-Quran and Al-Hadith (Chanifudin & Nuriyati, 2020). The research of Suradika et al. (2020) concludes that the learning outcomes of Islamic Religious Education in Higher Education are influenced by many factors, one of which is educational background. Students with Madrasah Aliyah backgrounds have higher learning outcomes if they use learning materials packaged as a compilation of relevant learning materials compared to independent learning materials.

Education is the need of every human being. Education is expected to make a person a complete human being after having the provision of knowledge that positively impacts attitudes and behavior. Islamic religious education in madrasas is also directed so that students have strong faith and piety in the development and application of science in life. It is intended that the development of science-based on faith and piety will benefit humanity.

### **2. Integration of Faith and Piety Values in Science Learning**

The word integration means an effort that makes something unified or integrated into a unified whole. The integration of science with Islam departs from the thoughts of several fiqh scholars who use the Qur'an and Al-Hadith as the pinnacle of truth. Islamic education can be classified into three groups: the science of kalam, the science of jurisprudence, and the science of language rules. The science of kalam is the same as metaphysical science, where one of the objects of study is knowing God (Allah SWT). The science of jurisprudence can be analogized with practical science because it teaches the best ways to obtain the perfection of worship or an action. The science of Arabic rules has the same position as the science of logic in intellectual science.

In modern science, science is grouped into natural, formal, social, and applied sciences. The clusters of science usually studied in senior high schools such as madrasas include geography, physical science, biological sciences or the science of living things. Formal science consists of logic and mathematics, commonly referred to as pure science. Applied science can be exemplified in applied sciences such as architectural engineering and medicine. Formal science has particular benefits for the knowledge itself. The functions and objectives of applied science include teaching students to use natural resources for human life (Hasanah & Zuhaida, 2018).

Efforts to integrate the values of faith and piety with science do not mean mixing it up because the identities of the two entities do not have to be lost and must be maintained. The expected integration is constructive integration, as an effort to produce new contributions to science because, in Islam's view, natural science is continuous with religion and God (Allah SWT). This relationship implies a religious aspect to Muslims' pursuit of scientific knowledge because nature is seen in the Qur'an as a collection of signs pointing to the concept of Tawhid (Arifudin, 2017).

Ratnasari and Suradika (2020: 19) state that the Muslim community believes education that prioritizes Islamic values as a basic need which is expected to be the foundation in facing the rapid development of globalization.

## **Results and Findings**

### **1. Profile of the State Islamic Madrasah Aliyah Serpong Scholar**

In 1996 on the idea of Prof. Dr Ing. Bacharuddin Jusuf Habibie, the Agency for the Assessment and Application of Technology (BPPT), through the Science and Technology Equity Program (STEP) project, established Magnet School, which later changed its name to SMU Insan Cendekia in Serpong and Gorontalo. Magnet School's establishment aims to meet the need for high-quality human resources in the mastery of science and technology (Iptek) based on the values of faith and piety (Imtak). Since 2000, the Insan Cendekia High School management has been delegated by BPPT to the Ministry of Religion of the Republic of Indonesia. Furthermore, the name of Insan Cendekia High School was transformed into Madrasah Aliyah (MA) of Insan Cendekia.

The vision of MAN Insan Cendekian Serpong is: Realizing high-quality human resources in faith and piety, master science and technology, and be able to actualize themselves in people's lives. The missions of MAN IC Serpong are: (1) Prepare future leaders who master science and technology, have high fighting power, can communicate in international languages, are innovative, and have a strong foundation of faith and piety, (2) Establish human resources professional educators and education staff, (3) Making MAN Insan Cendekia Serpong a model madrasa in the development of science and technology teaching and imtak for other educational institutions.

## **2. Implementation of the Integrated Curriculum of Imtaq and Science and Technology in Science Learning at MAN Insan Cendekia Serpong**

The curriculum is an element that contributes so that the process of developing the potential quality of students can be realized. The curriculum is developed as an instrument that aims to direct students to become quality human beings who are proactive and able to respond to the challenges of an ever-changing era, educated whom faith and piety to God Almighty, healthy, noble, knowledgeable, creative, independent, capable have, and become responsible and democratic citizens. Some things that can be used to determine the integration of science with religion in learning tools are the presence or absence of religious content in the lesson plans prepared by the teachers and the moral and character content applied in learning.

According to Barbour (2002), managing the integration of science with religion in schools includes four implementations, namely integration: (1) Conceptionally, it can be interpreted that madrasas must be able to direct students to become human beings who understand science as well as understand religious knowledge; (2) Institutional, which means there is a firm policy from madrasa institutions related to the implementation of the integration of science and religion; (3) Operational means that the curriculum includes the fundamental concepts of religious knowledge along with science and technology which will be applied in learning tools such as teaching materials, learning media, and learning methods; (4) Architecture is stated in educational institutions as well as having space for the development of science as well as reviving worship facilities, namely prayer rooms or mosques.

MAN Insan Cendekia Serpong continues to strive to respond to existing problems and make breakthroughs, with the obligation to implement the Integrated Imtak and Science and Technology Curriculum, namely the paradigm of the unity of science and religion in providing teaching to their students. This integration in science learning is carried out through (1) preparation of science curriculum documents by linking the subject or sub-subjects to the values of faith and piety, (2) mafikibi teachers develop learning plans that include the integration of faith and piety values in learning, (3) mafikibi teachers compile learning resources (modules, student worksheets) that are integrated with the values of faith and piety, and (4) teachers carry out learning by integrating the values of faith and piety in science learning.

Some of the obstacles teachers face are the difficulty in finding the relevance between the theme of scientific studies and sources of Islamic studies, both from the Koran, Hadith, and the history of Islamic civilization. According to the researchers' observations, it can be seen that the integration of science with religion at MAN Insan Cendekia Serpong Madrasah has been seen at the conceptual, operational and architectural levels. In terms of architecture, it has been seen that there are dormitories and mosques built in Madrasas. However, developments that support integration at the conceptual and institutional levels are still needed so that the integration of faith and piety values in science learning at MAN Insan Cendekia Serpong can run better. In this regard, it is vital to state the views of Mas'ud, Suradika,

and Gofur (2021), which state that service to students is essential to achieve learning objectives in schools that integrate general knowledge and religious knowledge.

### **3. Several Factors Affecting the Successful Integration of Faith and Piety Values in Science Learning**

The problem in education so far is that there is not yet a visible difference in science learning in madrasas and public schools. Because science, including modern sciences, is still focused on knowledge transformation, there are still limited teachers who have excellent dialectical abilities and also integrate with concepts of Islamic theology, hadith, interpretation and other Islamic education studies. At the same time, science learning and research should be able to increase the value of human spirituality so that science and religion become inseparable parts. It is suspected that the teachers' educational background is the challenge in integrating science and Islamic insight.

Teachers with a science education background from pure science education tend to have limitations in internalizing spiritual and philosophical values into science learning. Likewise, the problems faced by teachers with a religious education background, in general, have limitations in linking and implementing Islamic studies with scientific discoveries in an integrative way. The science teachers at MAN Insan Cendikia Serpong have many alumni or graduates of Mathematics, Physics, Chemistry, Chemistry, and Biology Education from several leading public universities.

Teachers who graduate from public universities find differences in their scientific approach, which is more dominant in researching something that can be physically observed and measured through detailed analysis. Meanwhile, religious learning emphasizes studies based on understanding, faith and metaphysics with a philosophical interpretive approach. This difference in the object of study and approach often makes science teachers find it challenging to explain the integration of religion and science philosophically. On the other hand, religious teachers also find it challenging to interpret religious studies in scientific terms. From the results of observations at MAN Insan Cendekia Serpong, researchers found that most teachers had included religious material in science learning by mentioning verses and explaining and interpreting new religious findings.

### **4. Evaluation of the Implementation of Integrated Science Learning with Faith and Piety Values at MAN Insan Cendekia Serpong**

In addition to conducting independent evaluations in coordination meetings between leaders and teachers, Involvement in the Subject Teacher Conference (MGMP) is also expected to increase teacher competence in terms of technique and evaluation of learning and improve teacher competence in terms of preparing learning tools. The involvement of MAN Insan Cendekia Serpong teachers in MGMP activities is expected to increase the pedagogic competence and professional

competence of teachers in learning, increase creativity and innovation and improve the quality of the learning process, especially the ability of teachers to improve the ability to integrate science and Islam in their learning. Evaluation of the implementation of science learning integrated with the values of faith and piety needs to be carried out optimally following technological developments to produce a generation that excels in the field of science and has a complete understanding of religion or human beings.

## Conclusion

Based on the results of observations and document studies, it can be concluded that MAN Insan Cendekia Serpong performs integrated management of faith and piety values in science learning as stated in the integrated curriculum document. So that in preparing learning plans, teaching materials or materials, and learning media prepared by trained teachers must always balance faith and piety (imtak) as well as science (iptek). The curriculum is divided into two programs: the madrasa program, conducted during the day, and the dormitory program at night.

Teachers must be careful in determining whether science subjects will be taught using an integrated method with religious material sourced from the Qur'an and hadith, generally related to fiqh and moral aqidah material. The teacher determines the indicators of student achievement in learning, not only on the mastery of science. Nevertheless, it also inserts Islamic religious education materials according to the themes discussed along with examples of their application in everyday life with the aim that students are not only intelligent in knowledge but also understand why and how knowledge can increase the values of faith in Allah SWT.

This step is to produce more meaningful learning. Recommendations for suggestions that researchers can give are: it is necessary to conduct periodic evaluations related to the syllabus and teaching materials used in learning. This periodic evaluation is essential to find deficiencies, see the relevance and correct them for future learning. The teachers' musyawarah and discussions in the syllabus preparation will reinforce one another regarding how these teachers can choose the materials, teaching materials and media that will be used to achieve the intended learning objectives. School leaders must provide opportunities for teachers to continue to improve their knowledge in addition to the knowledge mastered and Islamic religious knowledge related to the fields of science they are taught.

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