Al-Muhajirin International Conference

Integration of science underlying the transformation process of Wali Songo State Islamic University Semarang

Mohammad Rusli Hamdani
STAI Al Masthuriyah
rtea00797@gmail.com

Muhammad Mukrim Fair Rifaie
UIN Sunan Gunung Djati Bandung
jendral589690@gmail.com

Muhamad Yasir
SMPN Cikarang Utara, Kabupaten Bekasi
muhamadmyasir@gmail.com

Erni Haryanti
UIN Sunan Gunung Djati Bandung
erhaka19@gmail.com

Isop Syafe'i
UIN Sunan Gunung Djati Bandung
isof.syafei@uinsgd.ac.id

Abstract
The aim of this study is to explore the development of integrative science at Walisongo State Islamic University Semarang through the implementation of the Intan Berlian Ilmu model. This research employs a library research approach involving activities such as data collection from literature, reading, note-taking, and analyzing scholarly materials. The findings reveal that UIN Walisongo promotes a paradigm of scientific integration by merging various branches of knowledge under the foundation of divine revelation. The concept of Islamization of science in the Indonesian educational landscape is manifested particularly in Islamic Higher Education Institutions, positioning them as key drivers in this transformative process. This study emphasizes the strategic transformation of IAIN into UIN as part of the realization of the wahdat al-'ulūm (unity of knowledge) paradigm in higher Islamic education.

Keywords: Paradigm; scientific; transformation; UIN Walisongo; integration

INTRODUCTION

The dynamics of societal change are greatly influenced by the development of knowledge. According to Irwansyah (2021), the evolution of knowledge significantly contributes to the emergence of various transformations. This is also evident in the transformation of Islamic universities in Indonesia, one of which is Walisongo State Islamic University (UIN Walisongo) in Semarang. The discourse on models of Islamic knowledge integration among Indonesian Muslim intellectuals remains fragmented. On a broader scale, these ideas have not yet been formulated into a distinctive, systematic, and harmonious framework.

It is believed that the transformation of several State Islamic Higher Education Institutions (Perguruan Tinggi Keagamaan Islam Negeri or PTKIN), including the State Islamic Institutes (IAIN) and State Islamic Colleges (STAIN), into universities, does not inherently represent a clear scientific mapping in Islamic thought. This condition is not exclusive to Indonesia but also occurs across the Islamic world, both in classical and modern periods. Consequently, the discourse on the integration of knowledge—particularly as it relates to the transformation from IAIN or STAIN to UIN—has become an inevitable necessity in the effort to build a typology of integrated Islamic sciences (Thoyyar, 2009).

According to Yunus (in Hasbi, 2021), the idea of knowledge integration arises from the dichotomy between religion and science. This dichotomy can be observed in the separation of educational institutions into general and religious tracks, a divide that has persisted since the introduction of modern education in Indonesia. The separation of Islamic and secular sciences has had significant implications for various aspects of education within the Muslim community. These impacts are evident in perspectives on knowledge and education, curriculum design, institutional frameworks, and even the broader educational psychology of the Muslim society (Thoyyar, 2009).

Philosophically, this study is crucial in light of the transformation carried out by IAIN Walisongo into UIN Walisongo. The research is expected to serve as a reference for UIN Walisongo Semarang in continuously developing its scientific framework and distinctive identity, setting it apart from other UINs that currently exist or will be established in the future. On a broader scale, this study seeks to answer questions regarding the ideal epistemological foundation of UIN Walisongo Semarang and its model of knowledge integration. This paper is a qualitative and library-based research.

METHOD

In accordance with the characteristics of the problem discussed in this study, the authors employed a qualitative research method that emphasizes descriptive analysis of textual data. The qualitative approach was chosen to examine the scientific paradigm that underpins the transformation process at Walisongo State Islamic University (UIN Walisongo), Semarang. Accordingly, the study relies on library research by reading, analyzing, and interpreting scholarly works and written sources closely related to the topic.

As explained by Zed (in Sofyan, 2020), library research involves a series of activities related to collecting data from the literature, reading, note-taking, and analyzing relevant research materials. Qualitative research, according to Ibnu (in Arifudin, 2021), refers to studies where data are presented in verbal form and analyzed without statistical techniques. Thus, qualitative research involves verbal rather than numerical data, with analytical processes that are non-statistical in nature.

This study involved both formal and material research objects. The formal object is the scientific paradigm supporting the transformation of UIN Walisongo Semarang. Meanwhile, the material objects are the sources of data—primarily books and academic publications relevant to the university's transformation. The research was conducted from September to December 2024.

Data were collected using documentation techniques, namely through literature surveys to gather materials relevant to the research focus. As stated by Bahri (2021), data collection is a critical step in research, as the main goal is to obtain valid data. Several

techniques were used, including observation and documentation. The sources of data included both primary and secondary materials. Primary data consisted of books focusing on scientific paradigms supporting UIN Walisongo's transformation, while secondary data included national and international journal articles.

The documentation method was used as the primary tool for collecting data, as this study is library-based. In other words, data were gathered from primary and secondary literature relevant to the research topic.

Data analysis was conducted not only after data collection but also during the collection process itself. The authors employed a qualitative analytical strategy, which involves deriving general conclusions based on the data. This strategy follows an inductive approach, where conclusions are built from empirical data. According to Sugiyono (2012), the discussion method used in this study is descriptive-analytical, which involves describing and elaborating core ideas related to the research topic, supported by critical analysis of primary and secondary literature sources.

Data were recorded, selected, and categorized according to thematic classifications. This study applied a descriptive-analytical approach. As noted by Rahayu (2020), analytical descriptive research involves the search for facts and the interpretation of existing ideas through review, analysis, and generalization. The procedure aims to produce descriptive data based on content analysis of the collected materials. Once the relevant sources were gathered, the authors analyzed and presented the data narratively to formulate conclusions.

RESULTS AND DISCUSSION

The importance of integration in the development of science

René Descartes, through his famous dictum *Cogito, ergo sum*, initiated two major streams of thought concerning science. The first holds that the purpose of science is to discover universal truths and absolute knowledge. The second, commonly associated with idealism or rationalism, posits that human understanding of the natural world is filtered through the senses, making knowledge a product of consensus within the scientific community, shaped by social and historical contexts (Langgulung, 2002).

Differences in the perception of truth are deeply influenced by one's worldview or the collective worldview of a society (Arifudin, 2020). Thomas Kuhn, a seminal thinker in the philosophy of science, popularized the concept of *paradigm* in his book *The Structure of Scientific Revolutions* (as cited in Nasser, 2021). Kuhn uses the term in two senses: first, as the entire constellation of beliefs, values, and techniques shared by members of a scientific community; and second, as specific problem-solving models or methods that guide normal scientific inquiry.

According to Kuhn, a paradigm is intimately connected with the established traditions of a particular field, comprising postulates, theories, applications, and instruments. It forms a conceptual structure—logical, systematic, and often implicit—used by a community of scholars to examine, explain, and solve complex problems.

A paradigm includes both ontological and epistemological assumptions that serve as the foundation for theory construction and validation. It represents an interconnected set of concepts that serves as a framework for understanding reality. Paradigms evolve within scientific traditions and gain strength when they can solve problems more effectively than their predecessors. The scientific community evaluates

the productivity of a paradigm based on its accuracy, comprehensiveness, simplicity, and practical utility (Fedyani, 2005).

The nature of science in Islam

The Islamic perspective on science has historically served as a foundation for knowledge development within Muslim civilizations, from the classical era to the present. The Prophet Muhammad ﷺ explicitly emphasized that knowledge originates from Allah, who is the ultimate source of all human understanding. One of the most significant contributions to Islamic epistemology is *Tahāfut al-Falāsifah* by Imam al-Ghazālī, which has sparked extensive criticism and debate among *mutakallimūn* and *fuqahā'*. These scholars argue that the decline of Islamic civilization was partly due to al-Ghazālī's forceful critique of philosophy. In response, Ibn Rushd (Averroes) wrote *Tahāfut al-Tahāfut* (The Incoherence of the Incoherence), in defense of philosophical reasoning. These intellectual exchanges underscore that philosophy in Islam is a discursive and dialectical tradition, shaped by historical context.

Al-Ghazālī's dominance in Islamic intellectual history led to a stagnation of philosophical inquiry in many Islamic educational institutions, including those in Indonesia. The divergence in Islamic thought over centuries is primarily rooted in differing epistemological foundations.

Yazdi (2003) explains that epistemology begins with distinguishing between conceptual knowledge (*al-ʿilm al-ḥuṣūlī*) and intuitive knowledge (*al-ʿilm al-ḥuḍūrī*), a distinction that has since been expanded in Islamic thought. Muhammad Abed al-Jabiri (in Daud, 2015) further categorized Islamic knowledge into three systems: *bayānī* (textual), *burhānī* (rational), and *ʿirfānī* (mystical).

In contrast, Western epistemology generally recognizes three sources of knowledge: reason, sense perception, and intuition. Islamic epistemology, however, upholds the Qur'ān as the ultimate source of truth (*naṣṣ*), while other means such as reason and experience serve as tools for interpreting divine revelation. From this perspective, science is viewed as inherently *tawḥīdic*—that is, grounded in the unity of existence and divine truth. Scientific inquiry is therefore seen as a dialectical process involving human reason in interpreting the signs of God, whether they appear in nature, history, or scripture.

Islamic philosophers assert that reality is not confined to the physical realm but also encompasses the mental and metaphysical. In this framework, non-physical realities are equally valid sources of knowledge (Kartanegara, 2002). Revelation can thus be used as a source of knowledge not only in moments of epistemological impasse but also under normal circumstances, serving both as inspiration and as an explicit guide (Daud, 2015).

Revelation in Islam is hierarchical, consisting of the Qur'ān, the Sunnah, and *ilhām* (inspiration or intuition). The Qur'ān stands as the primary source, with the Sunnah as a secondary reference. As Ghulsyani explains (in Siregar, 2021), revelation contains all essential knowledge and instructs humankind to explore the world using their senses, intellect, and spiritual faculties—all under the guidance of divine text.

Thus, Islam regards divine revelation as the origin of all knowledge. Everything within revelation is inherently true. Although reason and perception are acknowledged, their ultimate validation lies in their alignment with revelation. The intellectual decline

of the Muslim community is therefore attributed not to external factors but to internal negligence in utilizing the full spectrum of God-given faculties.

The transformation process of Walisongo State Islamic University Semarang

The discourse on the unity of knowledge is not a novel theme in the realm of philosophy. As early as the 4th century BCE, Aristotle—the "first teacher" of philosophy—had already explored this issue. According to C. A. Hooker (as cited in Juhji, 2020), Aristotle described *metaphysics* as the science of "being qua being," or the most general principles that apply to all things. These universal truths underlie all other disciplines and support the logical structure of reality—such as the axiom that no two things can occupy the same space at the same time.

Hooker further asserts that although human knowledge spans a complex range of disciplines, all science should ideally be unified, as humanity exists within a single, interconnected natural world. However, contemporary science is fragmented into disciplines that often appear unrelated or even contradictory. This fragmentation raises a critical question: can science achieve true unity?

From this perspective, philosophy can be understood as the root of all scientific inquiry, structured hierarchically. At its foundation lies metaphysics, from which various philosophical branches emerge—such as theology, ontology, cosmology, epistemology, logic, ethics, and axiology. These branches, in turn, serve as the epistemological bases for the empirical and applied sciences (Mulkhan, 2002).

In the context of UIN Walisongo, the university's transformation reflects this philosophical ideal of knowledge integration. The university embraces the *wahdat al-ʿulūm* (unity of knowledge) paradigm, producing graduates who can engage meaningfully across various disciplines while remaining rooted in religious values. This integrative model is symbolized by the "Diamond of Science," a metaphor that captures the beauty, brilliance, and multidimensional nature of knowledge.

In this diamond-shaped model, the central axis represents Allah as the ultimate source of values, doctrines, and knowledge. Surrounding this center are five clusters of scientific disciplines that reflect the holistic approach to knowledge development at UIN Walisongo:

1. Religious and Humanitarian Sciences
2. Social Sciences
3. Natural Sciences
4. Mathematics and Computer Science
5. Professional and Applied Sciences

As described by Tsuwaibah (2014), the integration of these clusters reflects the mission of UIN Walisongo: to make revelation (the Qur'an and Sunnah) the foundation of scientific inquiry. This model is inspired by the legacy of classical Muslim intellectuals, for whom the pursuit of knowledge—regardless of field—was always grounded in Islamic teachings.

In the golden age of Islamic civilization, scholars such as Ibn Sina, Al-Khwarizmi, and Al-Farabi pursued diverse fields of knowledge without separating religious values from scientific reasoning. The current paradigm at UIN Walisongo aims to revive this tradition by aligning all branches of science with divine revelation, thereby restoring the integrative spirit of Islamic scholarship in the modern context.

CONCLUSION

To construct and further develop a paradigm of scientific integration, UIN Walisongo has designed a model known as the "Unity of Science," represented metaphorically by the "Diamond of Science." This model reflects an integrative scientific vision that is grounded in divine revelation and articulated through interrelated branches of knowledge.

The development of this paradigm is based on five core principles: integration, collaboration, dialectics, foresight, and pluralism. Within the "Diamond of Science" model, knowledge is presented as a multifaceted entity—beautiful, valuable, radiant, and interconnected. At its core lies the axis of divinity, depicting God as the source of values, doctrines, and all forms of knowledge. To operationalize this unity of knowledge, UIN Walisongo applies a strategy that spans five scientific clusters:

1. Religious Sciences and Humanities
2. Social Sciences
3. Natural Sciences
4. Mathematics and Computer Science
5. Professional and Applied Sciences

By adopting this model, UIN Walisongo seeks to revive the integrative spirit of classical Islamic scholarship—where scientific exploration was inherently aligned with revelation—and to produce graduates capable of bridging religious and contemporary scientific discourse.

REFERENCES

Arifudin, O. (2020). *Psikologi pendidikan: Tinjauan teori dan praktis*. Bandung: Widina Bhakti Persada.

Arifudin, O. (2021). Implementasi Balanced Scorecard dalam mewujudkan pendidikan tinggi world class. *Edumaspul: Jurnal Pendidikan*.

Bahri, A. S. (2021). *Pengantar penelitian pendidikan: Sebuah tinjauan teori dan praktis*. Bandung: Widina Bhakti Persada.

Daud. (2005). Ilmu pengetahuan dari John Locke ke Al-Attas. *Jurnal Pencerahan*.

Fedyani, S. N. (2005). *Antropologi kontemporer: Suatu pengantar kritis mengenai paradigma*. Jakarta: Kencana.

Hasbi, I. (2021). *Administrasi pendidikan: Tinjauan teori dan praktik*. Bandung: Widina Bhakti Persada.

Irwansyah, R. (2021). *Perkembangan peserta didik*. Bandung: Widina Bhakti Persada.

Juhji. (2020). *Manajemen humas sekolah*. Bandung: Widina Bhakti Persada.

Kartanegara, M. (2002). *Panorama filsafat Islam*. Bandung: Mizan.

Langgulung, H. (2002). *Peralihan paradigma dalam pendidikan Islam dan sains sosial*. Jakarta: Gaya Media Pratama.

Nasser. (2021). In *The structure of scientific revolution* (edisi sitiran dari buku Thomas Kuhn).

Rahayu, D. (2020). *Metode penelitian deskriptif analitis: Pengantar dan penerapannya*.

Sibawaihi. (2004). *Epistemologi Islam dan pengaruhnya terhadap pendidikan Islam*.

Siregar, S. (2021). Epistemologi Islam: Wahyu sebagai sumber ilmu pengetahuan.

Sofyan. (2020). In Zed's framework of library research methods.

Tsuwaibah. (2014). Model integrasi ilmu: Unity of science UIN Walisongo.

Yazdi, M. T. (2003). *The principles of epistemology in Islamic philosophy*.