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Islamic Higher Education in the Perspective of Imre Lakatos' Research Program Method

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Abstract

This study aims to analyze Islamic higher education through the perspective of the Methodology of Scientific Research Programmes developed by Imre Lakatos. This approach is employed to understand how the epistemological structure of Islamic education can be developed progressively without losing the revelatory values as its fundamental core. The study adopts a qualitative method with a library research design, in which data are collected from various literature sources such as books, journals, and relevant scholarly works. The findings indicate that the application of the concepts of hard core, protective belt, and a series of theories within Islamic higher education can serve as a methodological framework that maintains a balance between the Islamic intellectual tradition and modern scientific innovation. Through Lakatos's approach, Islamic higher education is expected to develop research that is progressive, rational, and grounded in spiritual values, thereby enabling it to respond to the challenges of globalization and digitalization without losing its epistemological identity. Accordingly, Lakatos's research programme methodology has the potential to become a new paradigm in the development of Islamic epistemology that is dynamic, adaptive, and sustainable.

Keywords: *Imre Lakatos, Islamic Higher Education, Philosophy of Science.*

PRELIMINARY

Islamic higher education in Indonesia currently faces various challenges in adapting to current developments, particularly in the era of globalization and digitalization. The necessary transformations include curriculum development, educator competency, and the relevance of Islamic values to the demands of modern technology and science (Manshur & Isroani, 2023). However, Islamic higher education institutions often lack a strong methodological framework to respond to these changes systematically and scientifically (Guna & Ramadhani, 2021).

On the other hand, Imre Lakatos offers a research methodology called Research Programme Methodology that combines elements of Popper's falsificationism and Kuhn's paradigm revolution, with an emphasis on the hard core, the protective belt, and the A Series, or series of theories, both positive and negative. This methodology allows for research to continuously develop within a framework of interrelated theories and allows for auxiliary hypotheses to be tested and adapted without having to arbitrarily change the basic core of the theory. Applying this approach in the context of Islamic higher education can strengthen research so that it is not easily eroded by criticism and is able to maintain core Islamic values while adapting and evolving (Muslih, 2020).

However, so far there is a gap in research on the application of Lakatos' methodology in Islamic higher education, particularly in terms of how the hard core of Islamic education (e.g., aqidah, moral values, sharia) can be maintained while supporting theories (teaching techniques, educational technology, curriculum) are tested, updated, or replaced according to social and scientific changes (Saumantri, 2022).

In addition, there is a Series or series of theories in a collection of theories that are interrelated and develop systematically in a research program.

Concrete challenges that have emerged in Islamic higher education include: a lack of lecturer competence in the use of technology and digitalization, a misalignment of the curriculum with societal developments, especially in the Society 5.0 era, and problems with access to and management of adequate educational infrastructure (Mailani, 2025). These constraints cause Islamic educational institutions to sometimes be more reactive to external demands than proactive in designing supporting theories and educational policies that can mitigate crisis responses while still strengthening core Islamic values.

Thus, it is crucial to conduct research that thoroughly examines how Islamic higher education can utilize Imre Lakatos's research program methodology as a framework for consistent scientific development. Such research should detail the elements of the hard-core methodology, the protective belt, and a series of theories within the Islamic context, and formulate strategies for enabling Islamic educational institutions to grow, adapt, and be relevant without losing the integrity of their values. Such research will also fill the gap in the literature on the concrete application of Lakatos in Islamic education and provide recommendations for more scientific and sustainable Islamic higher education policies.

METHOD

This research uses a descriptive qualitative approach with a literature study (Assingkily, 2021). This approach was chosen because the focus of the research is to analyze the concept of Islamic higher education through the perspective of the scientific research program methodology developed by Imre Lakatos. Research data was obtained from various literature sources such as books, scientific journal articles, and other scientific works relevant to the themes of philosophy of science, Islamic higher education, and Lakatos's thinking. Data collection techniques were carried out through documentation by tracing and identifying scientific works that discuss the concepts of hard core, protective belt, and series of theories within a scientific research framework. Next, the data were analyzed using content analysis with the steps of data reduction, categorization, interpretation, and drawing conclusions. The analysis was aimed at identifying the relevance and implications of Lakatos's research program methodology for the development of epistemology and the direction of Islamic higher education policy, ensuring that it is progressive, adaptive, and remains grounded in the values of Islamic revelation and spirituality.

FINDINGS AND DISCUSSION

Biography of Imre Lakatos

Imre Lakatos, whose real name was Imre Lipschitz, was born in Hungary on November 9, 1922, to a Jewish family. To avoid the threat of the Nazis, he changed his name to Imre Molnár, and after the war, he chose to use the name Lakatos, after the Hungarian General Geza Lakatos. Lakatos studied at the University of Debrecen and earned a degree in mathematics, physics, and philosophy in 1944, despite Hungary being in a highly unstable political and social situation due to World War II. In 1947, Lakatos briefly served as an official in the Ministry of Education, but in 1950 he was imprisoned for three years for spreading ideas that were detrimental to political stability. After his release, he became active in academia and translated mathematics books into Bahasa Indonesia (Heinz, 1974). The Hungarian Revolution of 1956 forced him to flee to Vienna, where he later settled in London, where he continued his doctoral studies at the University of Cambridge and earned a Ph.D. through his dissertation entitled Proofs and Refutations: The Logic of Mathematical Discovery (Hacking, 2019).

This work became one of Lakatos's important contributions to the philosophy of mathematics, which emphasized that the process of mathematical proof and discovery is dynamic and never final. Later, this idea became the basis for the development of the methodology of scientific research programs (Methodology of Scientific Research Programmes). During his career at the London School of Economics, Lakatos discussed many important figures such as Karl Popper, Thomas Kuhn, and Paul Feyerabend, which led to the synthesis of falsificationism and paradigm revolution (Gillies, 2011). His monumental work, Criticism and the Methodology of Scientific Research Programmes (1968), is an evaluation of Popper's falsification principle and a refinement of the form of progressive scientific research methodology. Lakatos died in London on February 2, 1974, leaving a great intellectual legacy in

the philosophy of science, particularly through his efforts to bridge scientific rationality with the dynamics of modern scientific development.

Basic Concepts of Imre Lakatos' Research Program Method

This research program methodology is the result of Imre Lakatos's thinking, which sought to unify the ideas of Popper and Kuhn. In this methodological structure, the research program methodology offers a new path for researchers seeking to develop future research. This is done to advance science and improve it, while also addressing the challenges of Popperian falsificationism (Pahlevi & Kuswanjono, 2023). This research program methodology includes methodological rules commonly referred to as heuristics. According to The Oxford Dictionary of Philosophy Oxford Paperback Reference, a heuristic is a process for solving a problem that does not involve an algorithm, such as trial and error. Therefore, a heuristic can be interpreted as a rule or method of approach to problem-solving (Kiss, 2006).

The Greek word "eurike" is the origin of the English word "heuristic," which, through the dynamics of trial and error, is a science that emerges as a discovery. The primary purpose of this science is not to prove a problem right or wrong, but rather to discover insights as solutions (Tootakhane, 2016). Heuristics, in the research program methodology developed by Lakatos, are crucial in guiding the path to conducting the desired research. The standard considered scientific is not a single, stand-alone theory but rather a series of theories. This series of theories is connected by a continuity that forms a research program. This continuity has played a crucial role in the history of science. To be able to foresee from the beginning, this continuity has been developed from a research program (Mustansyir, 2007).

According to Imre Lakatos, science is neither about what is true (verification) nor what is false (falsification). Science is not merely a matter of trial and error, which only gathers assumptions and then rejects them. Rather, science is a deeper insight to solve a problem. According to Imre Lakatos, science is a research program that has been created and is good (progressive) (Lakatos, 1970).

Lakatos compared the theories of falsification and paradigm shift and identified weaknesses when used alone to derive true knowledge. In other words, falsification and paradigm shift are insufficient to explain scientific truth unless they are integrated into a progressive research program. Here, falsificationists encourage all scientists to develop a new theory (new hypothesis) in order to abandon a theory that is no longer falsifiable. This paradigm shift explains that science consists of periods of normal science, which will encounter anomalies, leading to change.

From what has been compared above, Imre Lakatos concluded a methodology to balance these two opinions with the research program methodology. Where the research program methodology has three main points, including the following:

Hard Core

The hard core, or framework, consists of very general theoretical hypotheses that form the basis of a scientific theory. This hard core has basic hypotheses that form the central core of a scientific theory and are used to develop or abandon it. This framework, within which the development and change of a research program are carried out, becomes undeniable by the methodological decisions of its supporters. By forming the central core of a theory, Lakatos was attempting to determine continuity in science using general propositions. The hard core, as theoretical hypotheses, is the basis and foundation of a research program (Alihosseini & Keshavarz, 2016).

1. Protective Belt (protective circle)

   In this initial state, it consists of auxiliary hypotheses. In articulating a protective circle, in order to maintain the hard-core, the protective circle must be able to withstand various attacks, accepted tests, and receive adjustments, even changes in its understanding. In methodological rules, this protective circle is called a "positive heuristic," which consists of suggestions and hints discussing how to modify and improve the flexible protective circle and how to develop complex variants. So the purpose here is to show how the main core of this research program is equipped to be able to predict and explain real phenomena. By shifting the target of falsification to other assumptions, a theory can be protected from the threat of falsification (Zubaedi, 2007).

2. A Series Theory

A series of theories can be defined as a theory where the subsequent theory is the result of auxiliary clauses added to the previous theory, explaining that the theories are interrelated. This is what must be assessed as scientific or not; scientificity is simply a series of several theories, not a single theory (Salmon, 1999). Therefore, to obtain scientific results from this research program, it must be based on two conditions, including the following:

- For further research programs, the degree of coherence contained in the planning must be met.
- Able to produce a discovery of the latest phenomena.

It is hoped that this program structure will produce rational scientific development. The success or failure of a research program can be assessed. Success can be seen in terms of progressive change. However, failure can only be assessed in terms of degenerative findings. This opens the door for discussion, criticism, and development, increasing the "empirical content," making a theory better or superior. This is because the dynamics of science are the accumulation of theories that are constantly enriched by empirical results.

Basic Principles of Islamic Higher Education

Islamic higher education is a continuation of the Islamic education system, which is oriented towards the formation of a perfect human being, a person who possesses a balance between spiritual, intellectual, emotional, and social potential. The basic principles of Islamic higher education are based on the values of monotheism, justice, humanity, and welfare, derived from the Qur'an and Sunnah. This principle emphasizes that the primary goal of Islamic higher education is not only to produce academically competent professionals but also to develop individuals with noble morals and a sense of responsibility for the advancement of the community (Hadi, 2019).

One of the main principles of Islamic higher education is the integration of knowledge and religion. Islam does not recognize a dichotomy between religious and worldly knowledge, as both originate from God and share the same goal: to uphold truth and the well-being of humanity. Therefore, the educational process must be grounded in an Islamic worldview, which connects knowledge with divine values. In this context, Islamic higher education serves as a forum for developing knowledge that aligns with revelation and is inseparable from moral and spiritual values (Mahmudi et al., 2022).

The next principle is ta'dib, namely education that emphasizes the formation of adab or morality of Muslim scholars. In this case, the goal of Islamic education is not merely the transfer of knowledge (ta'lim) or skills training (tarbiyah), but primarily the instillation of adab that places knowledge and good deeds in the right place according to God's will. Therefore, Islamic higher education must create an academic culture that upholds integrity, scientific honesty, and social responsibility, so that the graduates produced are not only superior in knowledge but also possess a high ethical and spiritual awareness (Ariska et al., 2022).

Furthermore, Islamic higher education is based on the principle of developing human potential holistically. In Islam, humans are viewed as beings with physical, intellectual, and spiritual potential that must be developed in a balanced manner (Sunarto et al., 2024). Therefore, the curriculum and learning system in Islamic higher education must be designed to optimize all aspects of this potential. Islamic higher education focuses not only on mastering knowledge but also on developing a personality that is faithful, critical, and committed to social justice.

The next principle is empowerment and devotion to the community (ummah-oriented education). Islamic higher education must play an active role in providing solutions to community problems and contributing to the development of a just Islamic civilization. Islamic universities should not be ivory towers detached from social realities, but rather should be driving forces for change toward a civilized and ethical society (Suhartini & Fajri, 2021). This principle aligns with the spirit of rahmatan lil 'alamin, which means making knowledge a means of mercy and benefit for all creation.

Thus, the basic principles of Islamic higher education can be summarized in four main aspects: the integration of science and religion; education based on morality; the development of human potential holistically; and the empowerment of the community. These four principles emphasize that Islamic higher

education is not merely an academic institution, but also a civilizational institution that plays a role in shaping knowledgeable and moral individuals, as well as developing knowledge based on revealed values and universal humanity.

Application of Imre Lakatos' Research Program Method in Islamic Higher Education

1. Conceptualization of Lakatos' Research Program Method

Imre Lakatos introduced the concept of the Methodology of Scientific Research Programs as an attempt to bridge two major views in the philosophy of science, namely Karl Popper's falsificationism and Thomas S. Kuhn's paradigm. Lakatos rejected the view that science develops in a revolutionary manner according to Kuhn or through Popper's absolute rejection of old theories. Instead, according to Lakatos, science develops through a series of cumulative and evolutionary research programs that maintain the core of its theory while updating its outer parts.

In Lakatos' model, every research program has three main components:

- Hard Core: Basic principles that serve as a fixed and unquestionable foundation.
- Protective Belt: A layer of theories and hypotheses that are flexible and can change to adapt to developments or new empirical data.
- A Series Theory: A collection of derivative theories that continually evolve to strengthen and expand the main research program (Lakatos, 1970).

This concept explains that sound science is theoretically progressive, capable of generating new theories and empirical findings, yet methodologically consistent, maintaining its core values and principles. In the context of higher education, this methodology is highly relevant because it can serve as a framework for dynamically developing Islamic science without losing its spiritual foundation and revelation as the primary source of knowledge.

- Methodological Implications for the Development of Islamic Higher Education

The application of Lakatos' research program method in Islamic higher education has several important methodological implications, namely:

- Encouraging Revelation-Based Scientific Progressivity

Lakatos' model emphasizes that a healthy research program must be progressive. In Islamic higher education, this means that research and teaching must produce new knowledge relevant to the needs of the community, without abandoning the value of revelation as the source of truth. Islamic universities are expected to become centers of scientific innovation with spiritual value.

- Maintaining a Balance between Tradition and Modernity

With a hard core and a protective belt, Islamic higher education can maintain a balance between the conservation of classical values and modern innovation. Curriculum and research can develop methodologically without causing disorientation. This is crucial for understanding Islam not only dogmatically but also contextually and rationally.

- Building an Open and Dynamic Islamic Epistemology

Lakatos's approach encourages the creation of a dynamic Islamic epistemology, in which knowledge develops through a process of revision and refinement, rather than a complete break with the past. This aligns with the spirit of academic ijtihad in the Islamic tradition of exploring, interpreting, and developing knowledge to ensure its continued relevance to the times.

- Strengthening the Integration of Knowledge and Values

This methodology also emphasizes the importance of integrating scientific rationality and Islamic spirituality. Islamic higher education needs to develop research and learning that is not only oriented toward empirical results but also meaningful morally, ethically, and theologically. Thus, the knowledge produced by Islamic universities can provide solutions to the global humanitarian crisis, not merely technical competencies. In this way, Islamic higher education can become a center for the integration of knowledge and faith that is progressive, scientific, and deeply rooted in Islamic tradition (Lubis et al., 2024).

CONCLUSION

The application of Imre Lakatos's research program method in Islamic higher education has significantly contributed to the development of a progressive and integrative epistemology of Islamic scholarship. This approach places revealed values as the unchanging hard core, while methodological and technical aspects such as curriculum, pedagogy, and technological innovation serve as a protective belt that adapts to changing times. With this model, Islamic higher education can maintain its theological integrity while encouraging the emergence of new theories relevant to contemporary challenges. Through a synthesis of Popper's falsificationism and Kuhn's paradigm, Lakatos presents a framework that balances tradition and scientific renewal. Therefore, Islamic higher education needs to adopt this approach to strengthen the scientific basis, enrich research methodology, and make Islamic research a sustainable, rational program oriented towards the welfare of the community.

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