History and Study of Philosophy of Science in the Development of Value-Based Management Islamic Education

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Abstract: The development of Islamic education management science has become an important aspect in the evolution of knowledge in this domain. The focus of the study involves ontological and epistemological analysis to detail the concept and implementation of management principles in the context of Islamic education. This type of research is qualitative literature research on the History of Philosophy of Islamic Education Science and Management, exploring the evolution of Islamic education management science through literature analysis, combining historical and philosophy of science approaches. The discussion in this research includes four main historical phases and a study of the philosophy of science, with an emphasis on ontology, epistemology and axiology. The basic management concept includes the integration of Islamic values in modern management principles, emphasis on Islamic character, multicultural education, and management of educational quality as well as the role of technology, national standards, and the implementation of the PDCA cycle as a strategy to improve the quality of Islamic education. So, there is a need for in-depth understanding and a holistic approach in overcoming quality challenges in Islamic education.

Keyword: Education, History, Islam, Management, Philosophical Studies

A. Introduction

The development of Islamic education management science is an integral part of the evolution of knowledge in this domain. The history of the philosophy of science and educational management in the Islamic context plays a significant role in shaping the principles, practices, and theoretical foundations of this field (Hanafi et al., 2021; Olanya et al., 2023; Tahmassebi & Najmi, 2023; Zou et al., 2023). This historical journey is deeply rooted in the richness of Islamic civilization, spanning diverse periods of intellectual, cultural and educational development. This narrative reflects the deep influence of Islamic philosophy, ethics, and pedagogical traditions, which contribute to the distinctive characteristics of educational management in an Islamic context (Jafar, 2021). (Sakur et al., 2022). The philosophical study here involves ontological, epistemological and axiological exploration to understand the conceptualization and
implementation of management principles in the Islamic education environment (Hidayah & Murtafiah, 2023; Jafari & Sandikci, 2016; Sabic-El-Rayess, 2020; Zaelani, 2015). The synthesis of history and philosophical inquiry provides a comprehensive understanding of the development of educational management, revealing the complex interactions between historical contingencies, philosophical orientations, and contemporary manifestations of educational management in Islamic educational institutions (Badruzaman et al., 2023; Dewi et al., 2023; Sarpendi & Komalasari, 2023). This holistic approach discusses the ontological and epistemological dimensions that shape the evolution of educational management in the Islamic education environment.

An in-depth understanding of the history and philosophy of science is considered crucial in strengthening the epistemological, methodological and conceptual foundations for managing the Islamic education system. Philosophical inquiry discusses the integration of Islamic values into educational management practices, explaining the ontological essence of educational management in Islamic education. The philosophy of science plays a central role in forming the scientific basis for managing Islamic education in accordance with deep philosophical values (Firmansyah et al., 2023; Rahayu et al., 2023; Suraijjah et al., 2023; Zuhdi et al., 2023). Exploration of new concepts that are responsive to the dynamics of the times and increasingly complex educational challenges is the focus for bringing Islamic education management in a more progressive and adaptive direction. Thus, the philosophy of science becomes an essential guide for forming a scientific foundation that supports the management of Islamic education in accordance with deep philosophical values and responsive to current developments.

**B. Methods**

This research is a qualitative literature with the title History and Study of the Philosophy of Science in the Development of Islamic Education Management Science. Here the research involves in-depth analysis of related literature which includes the history of the development of Islamic education management science and relevant aspects of the philosophy of science. This method is to develop a conceptual framework (Onwuegbuzie et al., 2012; Rozas & Klein, 2010), that includes a chronological explanation of the development of Islamic education management science, identification of key figures, as well as an overview of the philosophy of science that underlies its development. In addition, this research will examine the theories and views of the philosophy of science that have been applied in the context of developing Islamic education management science, with a focus on analyzing the meaning, main concepts and philosophical implications for this scientific discipline. By combining historical approaches and philosophy of science, this research aims to contribute to an in-depth understanding of the theoretical foundations and scientific evolution in the context of multicultural value-based Islamic Education Management.
C. Results and Discussion

From the results of the research that has been carried out, it was found that this research involves an in-depth analysis of the history and study of the philosophy of science in the context of developing value-based Islamic education management science. This research explores the history of the development of this science, identifies key figures, and details relevant aspects of the philosophy of science. This research method requires the preparation of a conceptual framework with a chronological explanation of the development of Islamic education management science, as well as providing a focus on identifying the thoughts of the main figures and examining the philosophy of science that underlies the development of this science. By combining historical and philosophical approaches to science, this research aims to contribute to an in-depth understanding of the theoretical basis and scientific evolution in the context of Islamic Education Management with a value nuance.

History of the Philosophy of Science

The paradigm of defining history among historians indicates a diversity of opinions, but can be narrowed down to the concept that history is a series of continuous events across the past, present and future. Chronological and geographical criteria are the basis for identifying historical events with reference to certain time periods. In each historical era, the development of science exhibits unique characteristics, although different literatures may show deep differences periodization. Proverbs Bakhtiar divides the history of science into four crucial phases, including Greek, Islamic, renaissance and modern, and contemporary (Halawati & Laelasari, 2022). This approach makes it easier to understand the evolution of science throughout human history.

First, Greece, as a catalyst for civilization, plays a central role in the progress of philosophy which is considered to be the root of science. Classical Greek philosophers, although focused on philosophy, continued the legacy of earlier developments in philosophy. Greek contributions formed an important foundation for the evolution of science. Bertrand Russell emphasized the special features of the birth of civilization in Greece which are difficult to explain simply, even though elements of civilization already existed in Egypt and Mesopotamia. Greece, as an agent of change, enriched and perfected elements of civilization. As a center of philosophy, Greece is not only a historical place, but also a continuous foundation that inspires and guides scientific thought (Russell, 2004). Greek philosophy, which became the basis for thinking for the development of science, opened the door to various scientific disciplines which are still influential today (Proverbs Bakhtiar in (Dzar, 2023). The period of development of Greek philosophy, from the 6th century BC to around the 6th century AD, was marked by a critical attitude and the fertile growth of philosophy. Greek scientists such as Thales, Pythagoras, Socrates, Plato, and Aristotle each made significant contributions. They changed their mythical, developing number theory, methods
of moral inquiry, the concept of ideas, as well as the fields of Metaphysics, Physics, Ethics, Politics, Medicine and Natural Sciences

**Second**, Science developed rapidly in the Islamic Age, which shows Islam's love for knowledge, reflected in the command 'iqra' (read) in the Qur'an. Josep Schumpeter noted the glory of Muslims when the West was experiencing a time of darkness, which was actually the golden age of Islam. In the Classical Age of Islam (650-1250 AD), the civilization of the Islamic world did translate massive Greek work, creating scientific progress. Islamic scholarship in the central cities of Greek civilization such as Alexandria, Jundisapur, Antakia, and Bactra was influenced by perceptions about the position of reason from the Koran and hadith, united with Greek thought. In the 6th-7th century AD, Islam led the advancement of science. Al-Razi, Ibn Sina, Al-Khwarizmi, Ibn Rushd, and Al Idris, created breakthroughs in medicine, mathematics, and philosophy, making valuable contributions that influence Europe (Adiwarman A. Karim, 2013) (Rizal Mustansyir dan Misnal Munir, 2002) (Lenn E. Goodman, 2003) (Nasution, 1998) (Tim Dosen Filsafat Ilmu Fakultas Filsafat UGM, 1996).

**Third**, The Renaissance, defined by historian like Michelet, refers to a period of intellectual revival in Europe, especially in Italy in the 15th and 16th centuries. Although clear boundaries between the Middle Ages, the Renaissance, and the Modern Age are difficult to define, a tendency to see the Modern Age as an Extension of the Renaissance emerged. The Renaissance was characterized by humanism, individualism, secularism, empiricism, and rationalism. Greek thought experienced a revival in Europe in the 14th century AD through Arabic translations, study, and translation back into Latin. The influence of Islamic science in Europe since the 12th century AD triggered the Greek renaissance in the 14th century AD, rationalism in the 17th century AD, and enlightenment in the 18th century AD (Bertens, 1986).

**Fourth**, The Contemporary Era, beginning in the 20th century AD, was characterized by technological progress and deep scientific specialization. Physics is the main focus of discussion, and science in the 21st century can be traced as a result of discoveries in the 20th century. Physicists, especially Albert Einstein, stand out as central figures in the development of science. Einstein, with his contributions to the theory of relativity, quantum mechanics, statistical mechanics, and cosmology, became one of the most famous scientists of the 20th century. This era is an important milestone in the history of science and technology, especially in the field of physics. Technology reached its peak, changing human interactions with the world, with innovations such as computing, telecommunications, and genetic engineering. In addition to physics, science has diversified with specializations in molecular biology, computer science, and nanotechnology. This era also marked the exploration of cosmology, astronomy, and new discoveries in the microscopic world (Surajiyo, 2013).
Study of the Philosophy of Science

Ontology is a science that discusses the nature and existence of entities, both physical and spiritual. With the origin of the word from Greece, ontology is the ultimate reality that covers all aspects of existence. As a philosophical study, ontology explores the purest ideas of science that investigates the universe. An ontology provides an explicit understanding of the concepts and representation of knowledge in a knowledge base. Can be interpreted as a hierarchical structure of terms to explain a domain, ontology is a theory of meaning, properties and object relations in knowledge (Nurasa et al., 2022). Ontology of the philosophy of science, according to Suriasumantri, discusses the essence of knowledge and its relationship with human ability to form knowledge. Soetirno & Hanafie call ontology the basis of research that determines the boundaries of research objects and their interpretation. The Liang Gie sees ontology as part of basic philosophy which discusses existence and the basic nature of reality. The Encyclopedia Britannica, taking Aristotle's concept, defines ontology as a theory of being that includes the basic characteristics of all reality. The basis of ontology in science shows differences in Western and Islamic views, with Islam involving metaphysical aspects in the object of its study (Suriasumantri, Soetirno & Hanafie, The Liang Gie, Encyclopedia Britannica) (Rizkillah & Naskah, 2023).

Epistemology Science developed in ancient Greece, influenced by the Skeptic group who doubted everything. The cultural practices of Athens and Sparta reflected both intellectual and practical approaches to information. Romans, with a more practical approach, did not make significant progress in the reflection of information. The arrival of Christianity in Europe raised complex questions about the relationship between heavenly and human knowledge, science and faith, and epistemology. The religious approach emphasizes knowledge that is fides (faith), while scientists highlight the importance of reason. This created attention to epistemological issues in education, leading to a struggle between Hellenism and Semitism. Even though the dominance of semitic elements seemed unmatched in Europe, efforts to combine Hellenism and spiritual concepts were the beginning of the emergence of logic, induction, idealism and positivism (Parida et al., 2021).

Axiology Science, derived from the Greek words "axios" (beneficial) and "logos" (science), is a branch of science that studies the essence of values from a philosophical perspective. The focus is on values in the ethical and aesthetic dimensions, including the concepts of goodness, beauty and truth. Axiology explores the philosophical dimensions of these values, discussing their ultimate nature and reality, providing a deep understanding of ethical and aesthetic aspects through philosophical studies (Sumantri, 2005).

Axiology, as a branch of science that explores the essence of values, is mainly analyzed from a philosophical perspective. This forms the main basis for understanding values in the context of epistemology, ethics, and aesthetics, where
epistemology highlights the dimensions of knowledge, ethics focuses on moral aspects, and aesthetics discusses beauty and art (Zainiyati, 2015). It can also be said that according to Kattsoff (Arifudin, 2021) Ethics is the study of human behavior in assessing goodness and badness, focusing on certain norms. In contrast, aesthetics includes the values of beauty in human experiences of the environment and surrounding phenomena. Although different, ethics and aesthetics provide a holistic view of the human dimension that includes moral behavior and appreciation of beauty. There are three characteristics that can be given to value, namely subjective nature, praxis, and additional attributes of the object. The subjective nature indicates the relationship of values to the subjective dimensions of humans, which can only be provided by them and recognized through human participation. Praxis, in the context of values, refers to the activities or actions involved in providing value. Furthermore, value is considered as something that can be added to an object, showing dimensions of assessment or addition of value by the subject, providing a deeper understanding of value in a humanitarian context (Mayasari et al., 2022). Axiology Science is defined as a collection of knowledge that has been scientifically tested for truth. "Science" includes activities with specific methods to produce specific knowledge. Science is not just information but involves an active and intellectual process in scientific research. It involves systematic steps to understand a phenomenon. Science is the result of accumulated knowledge through research, confirming the existence of the scientific method. This means that science is not only about the results but also the processes that produce them, reflecting active involvement and scientific research activities to ensure the validity and credibility of the knowledge produced (Mayasari et al., 2022).

Development of Islamic Education Management Science

The term "management" comes from the Latin, "manus" (hand) and "ager" (action). The verb "manegere" means to handle, developing into "to manage" in English. According to Sayyid Mahmud al Hawariy, in Al Idarah Al Ushul Wal Ushushil Ilmiyah, management is defined as understanding goals, avoiding difficulties, and using strength to achieve goals (Hidayat & Patimah, 2023)(Jenita et al., 2022)(Blumberg, 1980). The development of Islamic Education Management Science describes an intellectual journey that does not only focus on administrative efficiency, but also considers the spiritual and ethical dimensions of Islamic education. This emphasizes that Islamic education management is not only about managing resources and learning processes, but also harmonizing its aspects with Islamic values. The integration of modern management principles with Islamic values is characteristic of this development, enriching aspects of leadership, planning and evaluation with dimensions of Islamic ethics and morality (Muhammad Yusuf & M. Sayyidul Abrori, 2022)(Saharso & Fadilah, 2024); (Anif, 2023). For example, the concept of transformative leadership in Islamic education management not only emphasizes academic success, but also the formation of strong Islamic character (Bull, 2006). The Basic Concepts of Islamic Education Management provide the main
basis for managing educational institutions based on Islamic values. Management principles, such as leadership, curriculum planning, and resource management, are adapted according to Islamic teachings. This concept encourages a holistic approach that pays attention to spiritual, moral and academic aspects in forming students according to the goals of Islamic education. In addition, ethical and moral values, such as justice, honesty and responsibility, form the basis of educational governance, influencing policies, social interactions and decision making in the educational environment (Yeniningsih, 2008). The basic concept of Islamic education management involves curriculum development strategies that incorporate Islamic values in all aspects of learning. This includes the selection of teaching materials, teaching methods, and learning evaluations that continue to consider Islamic dimensions, as well as encouraging a deep understanding of religious teachings in the educational context (Purwarianti, A., Lestari, D., 2023). Thus, the basic concept of Islamic education management provides a strong foundation in the administration of educational institutions, emphasizing academic aspects and spiritual and moral values, with the aim of forming a generation of quality and noble character according to Islamic teachings (Suartina T, 2023).

Islamic education aims to guide people to internalize Islamic teachings in thoughts, feelings and behavior. The development of Islamic education is inseparable from the foundation of Islam, and religious empowerment is crucial. Therefore, Foundation Religion in the development of multicultural-based Islamic education is important. In a religious context, multiculturalism is a foundation that supports diversity as an effort to understand, appreciate and integrate human values in Islamic education. (Syauqi, 2010) As a basis for the development of multicultural education, this is a manifestation of faith in responding to the will of Allah SWT who creates diversity without the intention of creating conflict, but rather as a vehicle for building an attitude of mutual help and complementarity. God's Word in Surah al-Hujurat verse 13 confirmed plurality as an inevitability in life. Diversity creates a dynamic and balanced life in accordance with God's will.

It means: "O mankind, indeed We created you from a male and a female and made you into nations and tribes so that you know each other. Indeed, the most honorable among you in the sight of Allah is the most pious among you. Indeed, Allah is All-Knowing and All-Knowing".

In this verse, humans were created in diversity, with plurality involving nations and tribes. To reach the pinnacle of charitable achievement, it is important to recognize each other through cross-cultural communication. Multicultural education is a process of developing human potential that respects cultural, ethnic, tribal and religious diversity as a consequence of its heterogeneity. In this context, interaction and enrichment through cultural understanding play a role in achieving optimal charitable achievements (Ainurrafiq Dawam, 2003). Multicultural education demands
high respect for human dignity, independent of their cultural background. As an education in basic human values, the aim is peace, independence and solidarity, opening horizons across the boundaries of ethnic groups, traditions, culture and religion. This education considers "humanity" as a family with differences and similarities. It can be interpreted as a strategy applied to all subjects by exploiting students' cultural differences, such as ethnicity, religion, language, gender, social class, race, ability and age, to increase effectiveness and build students' democratic, humanist and pluralist character in diversity, both at school and outside school (M. Ainul Yaqin, 2019).

Multicultural education is an educational model to create an awareness of high tolerance, acceptance of differences, and respect for human rights (Saefudin et al., 2021). The concept can be implemented through changes in the curriculum, teaching methods, and evaluation systems. Multicultural education also requires social policies that are inclusive of diversity. In the context of Islamic education, the implementation of multiculturalism requires the Islamic community to be aware of the values of multiculturalism. Until now, awareness of multiculturalism in Islamic society has only been limited to aspects of ethnicity and culture, without considering aspects of diversity and diversity of religious rites (Afif, 2012).

Improving the quality of management of Islamic educational institutions is a central issue that needs attention. Ismail emphasized that implementing quality management in education requires good management, professionalism, effective organizational management and adequate personnel. This aims to carry out the educational process well and produce high quality output. The use of technology in Islamic education management is an important factor in efforts to improve the quality of education. Technology can support efficiency, speed and accuracy in managing Islamic educational institutions. Therefore, technology integration needs to be carried out optimally to achieve the desired quality standards in Islamic educational institutions (Feiby Ismail, 2016).

In the realm of quality and quality of education, there are national norms that have been established for educational institutions in Indonesia. These standards have undergone in-depth study and are considered achievable by every educational institution. The concept of national education standardization has a positive effect on improving the quality of education, encouraging schools to provide the best service for students. Continuous efforts in quality assurance aim to achieve national standards, with a focus on planning and implementing systematic actions to ensure confidence in quality. The quality assurance process involves setting standards, achieving standards, evaluating and improving quality in accordance with the proposed model. The main goal is continuous improvement and efforts to achieve National Education Standards and improve the overall quality of education (Sani, 2015).
In this context, Islamic education institutions are expected to carry out internal evaluations to assess the implementation of the quality assurance process in each Islamic education unit. This evaluation is a crucial aspect for measuring the achievements of Islamic education institutions regarding accreditation, compliance with standards, and the extent to which quality improvement stages have been implemented. General challenges faced in managing Islamic educational institutions include various aspects, such as management, leadership, human resources, finance and institutions. Therefore, concrete efforts are needed to improve the quality of Islamic education. In the field of management, several Islamic educational institutions still need to improve the application of modern management principles. Although a number of Islamic boarding schools and madrasas may have adopted modern terms, the substance of quality improvement lies in the effectiveness of managerial processes, not solely in the terminology or programs used.

In the field of leadership and human resources in Islamic educational institutions, there are challenges, especially in meeting the minimum academic qualifications required (Kepemimpinan & Rus’an Alhadi, 2021; Sarni & Muslimah, 2021; Timang et al., 2021; Trihastuti et al., 2021). Even though there are additional educational requirements, the reality has not achieved the expected quality improvement, because the goal is sometimes only to fulfill legal requirements. The financial aspect also requires support from various parties and it is necessary to develop Islamic educational institutions to make them more professional. The Plan, Do, Check, Action (PDCA) approach is also relevant in the management of Islamic educational institutions, with planning, implementation, evaluation and follow-up as a control tool to maintain the quality of education. The focus of planning, implementation and evaluation of Islamic education must be oriented towards preparing quality graduates with Islamic values as a foundation. Referring to the Juran Trilogy, improving the quality of Islamic educational institutions can be achieved through improvements in the aspects of quality/quality planning, quality/quality control, and improving quality/quality. Islamic education institutions also need to translate these needs into activity programs and design implementation steps to produce quality students (Umar, M., & Ismail, 2018).

In the context of leadership and human resources in Islamic educational institutions, there are significant challenges related to minimum academic qualifications which are still not met by the majority of educational staff. This encourages the need for further efforts in developing the quality of human resources in the Islamic education environment. In response to this problem, the first step that must be taken is to ensure that educators and education staff meet the academic standards set as a prerequisite. However, the process of achieving adequate academic qualifications should not be just a formality. The education and training implemented must lead to increasing competence and skills in accordance with the demands of the times and Islamic values. Current reality shows that educational goals are often only met to comply with legal regulations, without having a significant impact on improving quality. In the
context of management of Islamic educational institutions, the Plan, Do, Check, Action (PDCA) approach is crucial. PDCA forms a systematic framework for planning, implementation, evaluation and follow-up in maintaining and improving the quality of Islamic education. Each step in PDCA becomes an effective control instrument in ensuring that Islamic educational institutions operate in accordance with quality standards and firmly held Islamic values. Referring to the Juran Trilogy, improving the quality of Islamic educational institutions must be focused on aspects of quality planning, quality control and quality improvement. This includes transformation in the quality/quality planning process, implementation of strict quality/quality control, and continuous efforts for overall quality/quality improvement. In addition, Islamic educational institutions need to translate the need for quality human resources and quality education into structured activity programs. Concrete steps in program implementation must be formulated to ensure that the students produced not only meet academic criteria, but also have character and competence in accordance with Islamic principles.

D. Conclusion

The historical definition paradigm, especially the history of the development of science, shows a diversity of opinions among historians. The four main periods in the history of the development of science include the Greek era, the Islamic era, the Renaissance and modern era, and the contemporary era. Each period reflects a center of development in philosophy and science that played an important role in forming the basis of human civilization. Ontology, epistemology and axiology are important dimensions in understanding science. Ontology discusses the nature of existence and is the basis for understanding reality in a knowledge domain. Epistemology, since ancient Greece, examines the sources of knowledge and questions related to truth. Axiology explores values in ethical and aesthetic dimensions, forming a philosophical basis for understanding goodness, beauty, and truth. Science is seen as an active process with a scientific method that does not only produce static knowledge, but also involves a deep understanding of world phenomena. Understanding science also includes active involvement in scientific research to ensure the validity and credibility of the knowledge produced. Islamic education management refers to the basic concepts of management as an important foundation in managing educational institutions based on Islamic values. Multicultural education in the Islamic context is defined as an effort to develop human potential by respecting cultural, ethnic, tribal and religious diversity. Improving the quality of management of Islamic educational institutions involves quality management, use of technology, and quality assurance as an effort to achieve national education standards. Self-evaluation, improving management, leadership, human resources and institutional development are the keys to improving the quality of Islamic education. Application of the PDCA model (Plan, Do, Check, Action) and the Juran Trilogy become a control tool to achieve the desired educational quality and quality goals.
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References


