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The Philosophy Of Knowledge And The Development Of Science And Technology As The Foundation Of Islamic Education

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Abstract

The question that is most often raised is how science can become the basis for every development of civilization. With this, civilization can be supported by every theory put forward systematically which is embedded in science, and all of this also has an impact on the development of science and technology. Therefore, this study tries to explore issues regarding the nature of science and the development of science and technology along with their influence on contemporary developments under the pretext of being able to restore understanding of science and the development of science and technology. This science is divided into several discussion sections, including nature, function, object, source, truth tester and classification. The development of science and technology includes understanding, influence, ethical responsibility for the use of technology and its influence on Islamic education and how Islamic education responds to developments in science and technology

Keywords : Science Knowledge, Development Science and technology, Islamic Education

INTRODUCTION

To become someone who enjoys philosophy, it is not necessary to always master numerous scientific facts. Instead, one must understand the concepts of principles, methods, and general understanding if they enjoy the world of philosophy. The initial sentence above is a statement made by Bertrand Russell when giving his opinion regarding science and philosophy. We understand that doing philosophy means trying to reflect on every problem while also attempting to solve it if necessary, whether based on reason, empiricism, or transcendental matters (Kattsoff, 2004, p. 85).

Salah satu persoalan yang berkaitan antara filsafat dan ilmu adalah bahwa filsafat ilmu One of the issues related to philosophy and science is that the philosophy of science aims to analyze the investigative methods used in various sciences, leading to the question of why this should be the responsibility of a philosopher as a thinker. By viewing science from a philosophical perspective, we can delve deeper to uncover the assumptions implied in scientific practice but not explicitly discussed by scientists. For illustration, suppose a scientist conducts an experiment several times and consistently obtains the same results. Afterward, they might stop, confident that repeating the experiment under the exact same conditions will continue to yield the same results. This assumption may seem obvious, but a philosopher has a desire to question it. Why assume that repeating the experiment in the future will yield the same results? How do we know this is true? Scientists may not spend much time pondering such seemingly odd questions; they might have other, better things to do (Okasha, 2002, p. 12). Therefore, it is important to understand the context of science from a philosophical viewpoint.

Science and the development of science and technology (S&T) play a crucial role in guiding and shaping the direction of societal and global development. The philosophy of science opens the door to understanding the epistemological, methodological, and ethical foundations of knowledge formation. Through this philosophical understanding, we can delve into the essence of science and how the development of S&T significantly affects human life.

The philosophy of science provides space to explore fundamental questions such as what knowledge means, how we acquire knowledge, and to what extent that knowledge can be accepted, among others. In this framework, science is not just a collection of facts but also a process of understanding that involves critical thinking, observation, and reflection.

The development of S&T, on the other hand, is the tangible result of the application of science in practice. S&T has transformed the face of human society, bringing innovation, advancements in various fields, and profound changes in how we interact with the world around us. Therefore, a philosophical understanding of science becomes essential to provide a strong foundation in addressing and responding to the development of S&T.

Therefore, the author will attempt to explore the concept of the philosophy of science and the development of S&T. The author will delve into the meaning of the philosophy of science starting from its definition and other parts, then S&T and its influence, followed by its perspective on Islamic education.

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METHOD

This research is based on a qualitative approach with a descriptive-analytical type. Data collection was carried out using a literature review instrument that collects both primary and secondary data from documents, works, thoughts, or anything documented in writing (Kurniawan, 2018, p. 42). For analysis, the author employs the content analysis technique. Content analysis, by definition, is a systematic research method used to interpret and measure textual, media, or communication data. It allows researchers to uncover underlying themes, assumptions, and patterns in large datasets, making it highly valuable in qualitative research. This method can be approached inductively or deductively, depending on whether predetermined categories or open content exploration is used (Blair-Walcott, 2023), (Bass & Semetko, 2021).

RESULT AND DISCUSION

Pada bagian ini berisi hasil dan pembahasan dari topik penelitian, yang bisa di buat terlebih dahulu metodologi penelitian. Bagian ini juga merepresentasikan penjelasan yang berupa penjelasan, gambar, tabel dan lainnya. Banyaknya kata pada bagian ini berkisar.

The Nature of Knowloedge From a Philosopichal Perspective

a. The Nature of Knowledge

The term "knowledge" originates from the Arabic word ‘ilm, Dutch wetenchap, and German wissenchaf. Knowledge is essential in human life, as it enhances one's quality and capabilities and affirms existence. Harre defines knowledge as a collection of theories that have been tested and explain both regular and irregular patterns among carefully studied phenomena. According to the Russian Marxist thinker Alfensyef in Octaviana & Ramadhani (2021, pp. 151–152) science is a reflection of society and thought, encompassing correct interpretations, categories, and laws derived from practical experience. Knowledge is human understanding of nature, society, and thought, reflecting concepts and categories whose truth is tested through practice. Generally, knowledge is defined as an understanding of specific objects organized systematically, objectively, rationally, and empirically as a result.

Knowledge encompasses the entire range of ideas, thoughts, concepts, and understandings humans have about the world and its contents, including human life. Scientific knowledge, on the other hand, is the entire system of knowledge that has been systematically standardized. Knowledge is more spontaneous, while scientific knowledge is more systematic and reflective. Knowledge is broader than scientific knowledge, as it includes everything known by humans without needing to be systematically organized(Soelaiman, 2019, p. 26).

Certain criteria must be met for knowledge to be considered scientific knowledge, characterized by its systematic and systemic nature and intersubjectivity. Among these criteria are; First, the foundation of justification requires organizing scientific work to achieve the highest degree of certainty. This involves statements based on empirical research results. Second, systematic and systemic refer to the organization of knowledge based on scientific investigation, where connections form a unified whole through regular comparison and generalization. Third, the intersubjective nature of scientific knowledge is not based on individual institutions or subjective properties but requires agreement and recognition of the truth in every part and overall relation of that knowledge, achieving intersubjectivity (Semiawan, Setiawan, & Yufiarti, 2005, pp. 98–99).

Scientific knowledge, or science, is a form of knowledge that meets basic criteria of justification, which can be proven by scientific methods, tested by scientific processes, and systematically organized, involving interconnected systems and products whose truth is verified (A. T. Nasution, 2016, p. 4).

Philosophically, knowledge is based on three main foundations, First, the ontological foundation (analysis of the material object of knowledge), where the material object of knowledge is empirical things or objects. Second, the epistemological foundation (analysis of the process of forming knowledge), where knowledge is formed through a process called the scientific method. Third, the axiological foundation (analysis of the application of knowledge), where the application of knowledge is intended to facilitate the fulfillment of needs and enhance the dignity of human life (Wahana, 2016, p. 69).

According to Notoadmodjo, knowledge is the result of human perception, or one's awareness of objects through the senses. Knowledge is also interpreted as information continuously required to understand experiences. There are six levels of knowledge, including 1) Knowing, 2) Understanding, 3) Application, 4) Analysis, 5) Synthesis, and 6) Evaluation (Rahman, 2020, pp. 16–17).

b. Functions of Knowledge

1. To acquire systematically organized knowledge based on criteria and methods that can be considered scientific knowledge

The primary function of knowledge is to obtain an understanding of systematically organized knowledge, referring to specific criteria and methods used to produce knowledge that can be regarded as scientific. In other words, knowledge plays a key role in organizing and understanding information according to established scientific standards and methods, aiming for knowledge to be accepted and validated in a scientific context.

2. To function effectively within a system, consisting of interconnected parts

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In this context, a system refers to a whole composed of various parts, and knowledge plays an effective role within that system. This statement highlights that knowledge does not stand alone but is connected with various elements or components within a framework or structure. Thus, knowledge not only discusses individual parts but also explains the relationships and interactions among parts to achieve specific functions or goals within a larger system.

3. To formulate hypotheses to be tested for truth

A hypothesis is an assumption or guess to be tested through scientific research or experimentation. By formulating hypotheses, knowledge creates a framework or prediction that can be empirically tested. The purpose of this is to verify or refute a statement, concept, or phenomenon through scientific methods. Therefore, this function becomes the first step in the systematic development of knowledge.

4. To control various things based on theories within knowledge (Octaviana & Ramadhani, 2021, p. 154)

Knowledge provides a theoretical foundation that can be used as a guide to manage and regulate specific phenomena or situations. Theories within knowledge provide a conceptual framework for planning actions, making decisions, and controlling various aspects in different fields of life. Therefore, knowledge not only provides understanding but also a basis for directing and managing the world around us.

c. Object of Knowledge

The objects of investigation in knowledge consist of two types: material and formal objects. Material objects are the targets of investigation or thought, whether concrete or abstract. The first type of material object is concrete, physically observable and tangible by the senses. The second type is abstract, not observable or tangible by the senses. Formal objects, on the other hand, refer to the perspective or approach to material objects, including the principles used. Formal objects not only provide completeness to a field of knowledge but also distinguish it from other fields (Helmi, 2020, p. 40)

d. Sources of Knowledge

The sources of knowledge are those things fundamentally believed to be where knowledge is obtained. In Western philosophical tradition, two major epistemological schools are inherited: rationalism and empiricism. Rationalism emphasizes reason as the source of knowledge, while empiricism considers sensory experience the primary source. These sources—reason and senses—are inherently part of humans, as humans possess both reason and senses.

Additionally, there is knowledge sourced from God, known as revelation knowledge. Hence, knowledge is categorized into two types: knowledge acquired by humans through reason and sensory experience and revealed knowledge or naqli knowledge, sourced from Allah SWT (Soelaiman, 2019, pp. 64–65). Beyond these, modern discussions typically mention five sources of knowledge; first testimony, Knowledge obtained through the testimony of others or reliable information (Praja, 2005, p. 11). Much of the knowledge we use daily is acquired this way, not through intuition or personal thought, but through the thoughts of others and facts across various knowledge fields (A. T. Nasution, 2016, pp. 52–53).

Second, experiment (Tajribi), Tajribi means experiment. This method was practiced during the early rise of Islamic science in the ninth and tenth centuries. Research or experiments in material physics require specific methods to ensure the research and observation are as close to the truth as possible. In Islamic scientific tradition, physical object observation is conducted on two levels: Theoretical and practical, where Muslim scholars critically examine scientific works in fields like astronomy and medicine, and then conduct experiments to prove or refute certain theories (M. A. Nasution, 2020, p. 11).

Third, sensory perception (Empiricism), Empiricism emphasizes the human ability to observe things with the senses. Knowledge is gained by forming ideas based on observed facts. In short, empiricism believes humans know what is obtained from the senses (A. T. Nasution, 2016, p. 54). Fourth, reaseon (burhani). In Islamic intellectual tradition, the object of knowledge is not limited to physical objects but also includes non-physical entities. Al-Ghazali stated that our senses cannot reach non-physical entities, so to study them, we need knowledge beyond the senses. Reason (aql) is necessary because senses alone are not always accurate regarding objects; hence, reason is used to investigate, as it can do much more than the senses. In his famous book Mishkat al-Anwar, Al-Ghazali elaborates on the superiority of reason over the senses. The Burhani method is crucial because, like sensory perception, human reason is not always precise in understanding objects, especially non-sensory ones (M. A. Nasution, 2020, p. 11).

Thinkers who emphasize that the mind or reason is the primary factor in our knowledge are called rationalists. Rationalism is the view that knowing what is thought and that reason has the ability to reveal the truth (A. T. Nasution, 2016, p. 55). True knowledge is obtained and measured by reason. Humans acquire knowledge through the activity of perceiving objects (Bakhtiar, 2014, p. 103).

Fifth, intuition (irfani), In the Islamic scientific tradition, besides the senses and reason, there is another tool of knowledge recognized by Muslim scholars, called the heart (qalb) or in philosophical terms, intuition. This intuitive knowledge method is then known as the 'irfani method, which can be used by Sufis or Islamic theosophists (Muta'aliyah), such as Suhrawardi and Mulla Sadra. The 'Irfani method is also considered a legitimate scientific method, an eternal legacy of the Islamic scientific tradition (M. A. Nasution, 2020, p. 12).

Sixth, wahyu (bayani). Etymologically, the term bayani has various meanings: continuity (al-waslu), separation (al-fashlu), clarity and brightness (al-zhuhur wa al wudlhuh), and the ability to produce light. The term bayan encompasses

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the meaning of everything that complements the act of understanding. Generally, the term Bayani is interpreted as an explanation that aims to express and clarify something (Sifa, 2019, p. 124).

Apart from the sensory world and reason as sources of knowledge, Muslim scholars also believe in the Qur'an as a source of knowledge. Since the universe is a vast source of knowledge, a suitable method is required to understand it well. Muslim scholars refer to this as the bayani method. Just as we need a phenomenological method to uncover the deeper aspects of the universe, a source understanding method is required to reveal deeper realities of the Qur'an. Various scientific findings touch on the same issues, but from different perspectives, with different emphases and final views. The terms used and detailed descriptions conceptualizing the dynamics of human knowing behavior may differ from one methodology to another, but they are entirely categorical in their view when emphasizing the hierarchical nature of human knowledge and the universe. Methodology in Islamic science must be rooted in the book of Islamic revelation and the tradition of spiritual revelation (M. A. Nasution, 2020, pp. 11–12). Revelation is a form of knowledge delivered by Allah to His Messengers, who then convey it to humans. Revelation does not only speak about the present life but also the life to come and also addresses transcendental matters beyond human knowledge (Daulay, 2014, p. 57).

e. The Truth of Knowledge

From a Western perspective, three kinds of truth theories are known: the correspondence theory, the coherence or consistency theory, and the pragmatic theory

1. Correspondence Theory

Aristotle formulated this truth as the conformity between what is said and reality. A statement is considered true if what is stated in it is related or has a correspondence with the reality expressed in that statement. Simply put, truth and falsehood are about whether what is said conforms to reality as it is. Furthermore, this theory emphasizes the correspondence between the subject and the object, so it is understood that what the subject knows as truth must conform to the object.

This theory is very dependent .on the empiricist school, which prioritizes experience and sensory observation as the main sources of human knowledge. In this sense, this theory highly values observation, experimentation, or empirical testing to reveal the actual reality. Therefore, this theory emphasizes the aspect of evidence in determining truth (Indarti, 2020, p. 7).

For example, the statement "There is an Almighty God" would not be considered a truth if it is not supported by certain empirical evidence. Thus, this would not be considered knowledge, and this statement would only be regarded as something that pertains to belief. According to the correspondence theory, this matter cannot be considered scientific truth because it is not supported by empirical evidence or any factual reality (Keraf & Dua, 2001, pp. 67–68)

2. Coherence Theory

According to this theory, truth is not found in the conformity between a proposition and reality but in the relationship between a new proposition and previously existing propositions that have been recognized as true. A piece of knowledge, theory, statement, proposition, or hypothesis is considered true if it aligns with other knowledge, theories, statements, or hypotheses. This means that the proposition is consistent with previous propositions that are considered true. For instance, mathematics and the exact sciences highly emphasize the coherence theory of truth. For proponents of this theory, a statement or proposition is declared true or false based on whether it relates to and affirms other propositions (Indarti, 2020, p. 8).

However, the issue observed is that this theory emphasizes truth based on another proposition. But what about the truth of the other propositions? The answer is that those other statements must also be proven based on yet another statement, and so on, without any end that would make it stop. This backward movement will continue without end, so this theory also needs to be combined with the correspondence truth theory (Keraf & Dua, 2001, p. 70).

3. Pragmatic Theory

According to this theory, truth is equivalent to usefulness or applicability. A correct concept, statement, or hypothesis is something useful. The correct idea is the one that most enables someone to do something efficiently. In this sense, success and usefulness are the main criteria for determining whether an idea is true or not (Indarti, 2020, p. 9).

According to Dewey, truth is usefulness or something beneficial, but not merely based on personal satisfaction, but also aligned with the resolution of life's problems in a general and objective way (Minderop, 2005, p. 60). Truth helps humans to accomplish something successfully. Rational truth does not stop at the step of defining it, without any relevance to practical life, but needs to be applied so that it is useful to humans. We do not only need to know "What" and "Why" but also "How" (Keraf & Dua, 2001, pp. 73–74).

In conclusion, the correspondence theory points to the conformity between a statement and reality or the actual situation. The coherence theory refers to the conformity between one statement and other statements that have been accepted as true. Meanwhile, the pragmatic theory emphasizes the value of usefulness as a measure of the truth of knowledge or the truth of something (Soelaiman, 2019, p. 69)

f. Classification of Knowledge

Knowledge as a tool and knowledge as a goal. Knowledge as a tool is logic, while knowledge as a goal is divided into two major parts: First, theoretical knowledge, including physics, mathematics, and metaphysics. Second, practical knowledge, including ethics, economics, and politics (Soelaiman, 2019, p. 40).

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Islamic philosophers such as Al-Kindi, Al-Farabi, Ibn Sina, Al-Ghazali, Ibn Taimiyyah, and Ibn Khaldun compiled their classifications of knowledge based on the sources of the Qur'an and Hadith, distinguishing between essential or primary knowledge and non-essential or secondary knowledge. Some classifications of knowledge are as follows, Al-Kindi and Ibn Sina classified knowledge into two types: theoretical knowledge (Physics, Mathematics, Metaphysics, and Universal Science) and practical knowledge (Ethics, Economics, Politics, and Sharia); Al-Farabi classified knowledge as follows: Linguistics, Logic, Mathematics, Physics, Metaphysics, and Social Science;

Al-Ghazali's classification of knowledge is as follows: Sharia knowledge and rational knowledge. Sharia knowledge is divided into fundamental knowledge (Tauhid, Tafsir, Hadith) and subsidiary knowledge (Worship, Fiqh, Ethics), while rational knowledge consists of three levels: The first level is mathematics (Arithmetic, Geometry, Astronomy, Astrology, Music) and Logic. The intermediate level is natural science (Medicine, Meteorology, Mineralogy, and Chemistry). The highest level is about existence (the necessary and possible), about the Creator (His Essence, Attributes, and Actions), about Sufism, angels, devils, miracles, and the Day of Judgment. Knowledge of Fardhu Ain and Fardhu Kifayah. Fardhu Ain knowledge includes Aqidah, Worship, and Suluk/Akhlaq, while Fardhu Kifayah includes the rest; In this classification, it is clear that Islamic knowledge based on revelation is placed at a high hierarchical level. Rational sciences are below it. The concept of classification and the hierarchy of knowledge in the Islamic perspective is a manifestation of Islamic teachings about the verses or signs of Allah SWT's greatness, which are divided into two types: Qur'anic verses and cosmic verses (Soelaiman, 2019, pp. 40–45).

Science and Technology

The growth of science and technology nowadays is very rapid and has a significant impact on everyone's life. It can be said that now every aspect and stage of a person's life is touched by the advancement of science and the development of technology. Science and technology are not simple entities because they are related to the fundamental drives and creative instincts within humans (Habibah, 2017, p. 169).

Etymologically, the word "technology" comes from the words "techne" and "logos." "Techne" means a set of principles or rational methods related to the creation of an object or specific skill, while "logos" refers to logical reasoning, meaning a thought process. Terminologically, technology refers to the human (societal) ability to harness natural forces for the benefit of their lives. This harnessing of natural forces is done by creating tools.

From the above definition, it can be concluded that technology is the application of human creativity related to tools and materials, manifested in the form of materials used to help meet human needs (Yahya, 1970, p. 4).

Technology arises primarily for two reasons: First, the desire to apply scientific knowledge to real-life situations by implementing scientifically accountable methods (Technology); and second, the desire to obtain a scientific basis or accountability for life practices that increasingly demand more complex and intricate methods.

Technology is systematic knowledge in the industrial field, or it can be called industrial science. Just as science can encompass various fields of study, so too is technology an applied science that covers various areas. Technology can be understood from three perspectives: First, technology is the application of science; second, technology is science formulated in connection with external aspects, namely industry; and third, technology is expertise related to the realities of everyday life. Technology as a human work activity helps physically or intellectually in producing structures, products, or services that can increase human productivity to better understand, adapt to, and control the environment.

In this regard, there is a link between science and technology: First, both science and technology are components of culture. Second, both science and technology have concrete dimensions, as well as theoretical and practical aspects. Third, there is a dialectical (reciprocal) relationship between science and technology. On one hand, science provides important supporting material for technological progress in the form of theories; on the other hand, technological discoveries greatly assist in expanding the horizons of scientific research by developing cutting-edge research tools (Wahana, 2016, pp. 174–178)

a. The General Influence of Science and Technology

The rapid development of the world of Science and Technology has brought tremendous benefits to the advancement of human civilization. Jobs that previously required considerable physical ability can now be relatively replaced by automated machines. In short, the technological advancements we have achieved today have been widely recognized and felt, providing much convenience and comfort for human life.

For society, Science and Technology is like a religion. The development of Science and Technology is seen as a solution to existing problems. Some even worship Science and Technology as a liberator that will free them from the limitations of the world. Science and Technology are believed to bring humanity health, happiness, and immortality. The contributions of Science and Technology to civilization and human well-being are undeniable. However, humanity cannot ignore the fact that Science and Technology also bring disaster and suffering.

In modern civilization, humans are often startled by the disillusionment from the negative impacts of Science and Technology on human life. Even if Science and Technology can uncover all the secrets of nature and life, it does not mean Science and Technology are synonymous with truth. Science and Technology can only present reality.

In the era of globalization, there are several negative impacts introduced by the Western world that are vulnerable to influencing Muslims and pose challenges to Islamic education. These include: First, materialism; Second, atomization,

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which is individualistic in nature. Where collective life, togetherness, and mutual cooperation have been replaced by strong individualism; Third, secularism, which always separates religious life from public affairs, as religion is considered a personal matter between individuals; Fourth, the emergence of the relativity of ethical, moral, and decency norms, which become taboo in social contexts (Sudianto, 2021, p. 110).

b. Ethical Responsibility Towards Technological Development

The problem of scientific technology requires an ethical dimension as a consideration and sometimes influences the further development of science and technology. Ethical responsibility concerns the activities and use of science and technology. Scientists in developing Science and Technology must consider human nature, human dignity, maintain ecosystem balance, be responsible for the public interest, the interests of future generations, and have a universal nature. Essentially, Science and Technology are meant to develop and strengthen human existence, not to destroy it.

The responsibility of Science and Technology also involves accountability for what has been and will be caused by Science and Technology in the past, present, and future based on human free will in their activities. New discoveries in Science and Technology have been proven to be able to change certain rules for both nature and humans. This, of course, demands responsibility to always ensure that the changes brought about are the best for the development of Science and Technology itself and for the development of human existence as a whole.

Ethical responsibility not only involves striving for the appropriate application of Science and Technology in human life. Humans must also be aware of what should or should not be done to strengthen human position and dignity as it should be, both in personal relationships, with the environment, and as beings responsible to their Creator (Habibah, 2017, pp. 176–177).

c. The Influence of Science and Technology on Islamic Education

Characteristics that are highly relevant to educational goals. Educational technology enables the following activities: First, the widespread, equitable, rapid, uniform, and integrated dissemination of information; Second, the logical, scientific, and systematic presentation of material can complement, support, and clarify concepts, principles, or premises of the subject matter; Third, serving as a partner to teachers in realizing effective, efficient, and productive teaching and learning processes according to the needs and demands of students; Fourth, its utilization as a learning resource can present material more interactively.

Apart from matters related to the context of globalization, the development of Science and Technology also impacts the realm of education. Science and Technology can be useful as an effort to solve educational problems by utilizing available resources as efficiently as possible. One of the accesses that can be utilized is social media, which can facilitate access to the outside world, conduct online learning, discuss issues occurring internationally, sharpen research that can be done online, including the availability of software that can facilitate access to educational matters (Akbar, Inayati, & Abidin, 2024, p. 275). Additionally, online research allows for very effective international collaboration on a massive scale (Department of Technical and Vocational Education, Islamic University of Technology, Bangladesh, mrhuq09@iut-dhaka.edu et al., 2022, p. 811).

The integration of science and technology into Islamic education has an impact on the academic studies in the field of education and needs to be addressed wisely, as this is an urgent need. Studies are indeed necessary to sharpen this thinking, but the most important thing is to carry out concrete activities to experiment and practice the theories already present in the Quran and Sunnah. Islamic research centers need to be established in educational institutions to conduct studies and produce theories that can serve as references in the development of Islamic knowledge, supported by adequate human resources and facilities. Theories developed by the Western world in the field of education can also serve as references and comparisons in the development of knowledge, as in essence, there is no dichotomy between general and religious knowledge. Knowledge is one, sourced from Allah (Wahyuni, 2020, p. 167)

d. The Foundation of the Use of Science and technology from the Perspective of Islamic Educaiton

The golden age of Islam, when religious values were always included in scientific activities, has not been continued. This is what the West and its followers desire because religion is considered an obstacle to the progress of knowledge and its applications/technology. This long-standing secular process has brought significant positive impacts on life in this world.

Reality shows that in America, there were five million crimes in 1965, with a population growth rate of 178% compared to 13%. In West Germany, two million crimes were reported in 1960. In France, cruelty and theft, mostly committed by young people, increased by 177% over 10 years from 1966 to 1876. Thus, at the VII International Criminology Congress in Belgrade in 1973, it was unanimously concluded that this era is marked by an extraordinary increase in crime worldwide (Izetbegovic & Ali, 1992, p. 87).

On another point, the era of globalization presents a challenge that needs to be addressed in Islamic education. This situation makes society more open to other beliefs, dividing it into two groups: those influenced by the development of technology and beliefs, and those who adhere firmly to their religious beliefs. In reality, the development of technology will bring welfare to humanity, which is undeniable. However, some in society oppose learning, understanding, and using technology, especially technological advances themselves. On the contrary, for those who support it, religion is seen as an obstacle to technological progress because it is believed to trust in something irrational. Hence, a conflict arises between technology and belief (Sudianto, 2021, p. 111).

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Tawhid is a value that permeates all external and internal activities and directs them towards nobility and perfection. The advancement of knowledge and technology based on Tawhid will always bring great benefits in creating beautiful and harmonious prosperity for human life, as desired by Allah. Not only scientific activities should be founded on Tawhid, but also attitudes, actions, and good intentions in doing something.

Tawhid shows that only He, the Most Real, is worthy of being worshipped, and none other. He is the source of goodness and truth. He is the source of creativity and teaches humans to wisely take lessons from the creation of the heavens, the earth, and all His commands. Moreover, He also nourishes the human heart and soul. And He is the light above all light. All the noble attributes of Allah are encapsulated in Asma al-Husna. The faith you obtain and accept with wholeheartedness and clear thinking not only motivates you to establish the Kingdom of goodness within yourself, but also extends to the broader community (Thoha, Syukur, & Priyono, 1996, p. 64).

Finally, knowledge that is based on or aimed at religious goodness will certainly have a very positive impact on the development and improvement of the lives of both individuals and communities. As explained by Akbar, Islam respects human intellect; therefore, in Islam, it is encouraged to sharpen the thinking abilities of Muslims because knowledge and Islam do not contradict each other. Many issues in Islam serve as guidelines for the development of knowledge. Conversely, Islam also utilizes the role of science and technology as a means to enhance effective learning patterns, such as the conveniences mentioned above (Akbar et al., 2024, p. 273).

From this, it can be understood that knowledge and technology have both good and bad impacts. In Islamic Education, knowledge cannot be separated, and it is not justified if religion, knowledge, and its application are not for the benefit of humanity. Therefore, humans are expected to play their role as khalifah fi al-Ard as best as possible, at least by refraining from committing evil. And the light of Tawhid that continuously shines within the conscience of the khalifah will provide warmth and enthusiasm in achieving love for God (Thoha et al., 1996, p. 65)

CONCLUSION

In philosophical discussions, we will certainly realize that every matter has a theoretical foundation, and this can be found by reflecting on certain results of contemplation on something. From this, a theory about the nature of knowledge, along with the components that accompany it, is obtained, forming a concept or a unified whole that can be used as a basis for conducting research. Moreover, the development of science and technology also gives the impression that it is inseparable from the result of thinking about occurring phenomena; therefore, it is not surprising that science and technology are inseparable from human life.

In relation to Islamic education, the two are interconnected laws, where knowledge and technology can develop with the existence of Islamic education, and Islamic education can also be assisted by the rapid development of knowledge and technology, even though there may be disagreements in this matter when linked to history. However, because of the negative potential also contained in the development of knowledge and technology, there needs to be a firm Islamic value in utilizing a creation, as the tendency of science and technology development dominated by Western bias is concerning for Muslims if there is no strong foundation, in this case, Tawhid

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