The Integration of Science and Its Implementation in the World of Education in Schools

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Abstract

The purpose of this paper is to determine the integration of science and its implementation in the world of education, by adopting the library research method. The main topic of discussion is research on the integration of knowledge that still exists among Islamic scholars who are then applied from this integration in the world of education. The result is that science is a burden of values that should not be touched by religion, they assume that religion and science are different things, religion is religion, science is science, so this results in humans being far from religious values which actually science can strengthen religion. Including in the Islamic world, science and technology have become the focus of thought on the concepts offered by Islamic thinkers regarding the issue of the integration of science in education especially in schools.

Keywords: Integration, knowledge, Education

Integrasi Ilmu dan Implemntasinya dalam Dunia Pendidikan di Sekolah

Abstrak

Tujuan penulisan ini untuk mengetahui integrasi ilmu dan implentasinya dalam dunia pendidikan, dengan mengadopsi metode library research. Pokok bahasan pembahasan pada penelitian mengenai integrasi ilmu yang tetap eksis dikalangan cendikiawan Islam yang kemudian dari integrasi ini diaplikasikan dalam dunia pendidikan. Hasilnya   bahwa ilmu pengetahuan itu beban nilai yang tidak boleh disentuh dengan agama, mereka menganggap bahwa agama dan ilmu pengetahuan suatu hal yang berbeda, agama adalah agama, illmu adalah ilmu, sehingga hal ini mengakibatkan manusia jauh dari nilai-nilai agama yang sejatinya ilmu pengetahuan dapat memperkuat agama. Termasuk dalam dunia Islam, ilmu pengetahuan dan teknologi telah menjadi fokus para pemkiran terhadap konsep yang ditawaarkan oleh para pemikir Islam mengenai permasalahan tentang integrasi ilmu dalam dunia pendidikan khususnya di sekolah.

Kata Kunci: Integrasi, Ilmu, Pendidikan

INTRODUCTION

Education plays a very important role in the continuity of progress in a country. Because education is a process to transmit knowledge knowledge involving educators and students. Participant students are not only required to develop cognitive potential but also emphasizes personality values that can later be brought into the community environment, so that students become more mature people and can face the problems that occur around them.

Education basically has two very important functions, namely to transfer values and transfer knowledge. The value transfer function in the world of education is expected to be able to transfer values, norms and noble character and as a knowledge transfer function, the world of education is expected to be able to transfer knowledge and technology to students.

The world of education is an activity that involves two parties at once, namely educators and students. In this case, there will also be many parties that can influence students in obtaining education, namely the family environment and the school environment.

The rapid development of knowledge has put science as a new religion, especially for western scientists. The development of science and all Boundaries, including religion have been violated for the advancement of science itself. The product of this science, such as the existence of technology that is useful in order to facilitate human life, actually results in the alienation of humans from their lives. Humans are busy with their own world and even forgotten in carrying out their duties as caliphs on earth, which must be balanced between the life of the world and the hereafter. Because actually this integration provides benefits for humans to balance by combining general science and religious knowledge, because in Islam there is no separation between general science and religion,

Responding and anticipating the negative impact that occurred, Muslim scientists immediately made efforts to integrate science and religious knowledge, Muslim scholars tried hard to reintegrate science and religion, the first attempt was made by Islamization of science for Muslims who have long behind and far from modern world civilization has its own dilemma. Striving to transform religious normativity through its main references to the Qur'an and hadith into its historical reality empirically. The integrative-interconnective approach is an attempt to create a connection between religious and general scholarship.[1]

From the explanation above, the writer will describe and discuss in terms of the integration of knowledge, this will be studied in this article entitled "Integration of Science and Its Implementation in the World of Education". Which in this article will discuss from the beginning the understanding of science and the history of the birth of the integration of science which is then developed and implemented in the world of education in Indonesia.

RESEARCH METHODS

In writing this article the author uses data collection techniques using the library research method, which means library research.This type of research used in collecting information and data is carried out in depth through various literatures, ranging from books, magazines, notes, and supporting references, as well as relevant previous research results, which will later find answers and theoretical foundations regarding the problems to be studied.[2]Using this method will make it easier for the author to collect various theories from several different literatures that support the topic of discussion of this article.

RESULTS AND DISCUSSION
SCIENCE INTEGRATION
Definition   Knowledge

Integration or dichotomy science, to more easily understand it, what must be known first is the definition and nature knowledge. Definition and the nature of science long ago become a problem gathered by philosophers and scientist. In Indonesian terms, the word "science" is sometimes interpreted with the word "knowledge". This is the reason it is not easy to give a definition "knowledge". Yuyun Suriasumantri, declares knowledge a knowledge which has three characteristics, namely: rational, empirical, and systematic. As stated by Proverbs Bachtiar, where he stated that science is knowledge that is categorized, systematic, measurable and can also be implemented through valid proof. empirical.[3]

Term equivalent science from English, its synonym in the sentence science. Knowledge that comes from the word language Arabic, and science in English. In this case, Mulyadhi Kartanegara strengthens his opinion by saying the term "science in" Islamic epistemology is almost similar to the term science in epistemology West. In epistemology West is classified by knowledge, knowledge in epistemology Islam is classified by opinion (ra'y). As for science, it is stated as any organized *knowledge*, in the sense of "knowledge in the form of things by explaining the situation". Based on this knowledge is not just an opinion and haphazard knowledge which is guaranteed the truth.[4]

The . Perspective Liang Gie knowledge is classified by its scope First, science is a general term to say a scientific knowledge classified as a wholeness. Within the scope of the first This science refers to knowledge universal. As for in the second sense science expresses in every aspect of knowledge scientific which discusses a series of principals certain questions, for example anthropology, geography, sociology.[5]

From the definitions the science that has been described above classifies between science and religion. In short, what is said by science is knowledge that has been accommodated, in the sense that it is classified

by knowledge. Definition knowledge has long been object of thought of philosophers painstakingly and controversially, until now. But in general, knowledge means everything or the whole received by human senses. Science is knowledge acquired through learning and proof of knowledge that includes a general truth path of laws nature that exists, examples are found, proven through the method scientific. Science In this case, it is guided by a system to get knowledge by experimenting to illustrate and explain phenomena what happened in natural.

Science can also be interpreted as knowledge of a fields arranged in systemized according to methods certain that can used to describe in detail the symptoms specific in the field (knowledge) and is integral, empirical, systematic, measurable and proved.[6]Those are some of the differences between science and science. Each word has a different meaning, and each character gives a different definition in understanding a theory.

Definition of Knowledge Integration

Integration comes from English *"integration"* means universal or comprehensive, Integration Knowledge means a process perfecting or integrating science which is currently suspected of being dichotomous, in this case obtaining a concept of understanding integrative related concepts Science.

Akh Minhaji said that what is meant by integration is the origin of the word to integrate which means "to join to something else so as to form a whole" something else so that there is a unity.[7]

In context Islamic scientific paradigm, integration science has the meaning of an integral knowledge. This was stated by Kuntowijoyo that integralistic science (the result of integration) is a science that blends not only mixes God's revelation and thought humans, to produce principle output knowledge that will not deny the existence of God and also does not deny humans.[8]

In development, secularization also been successful cultivate attitude dichotomous in human in view Science. As strengthened by Nur Ahmad Fadhil Lubis that the problem of dualism even the dichotomy between various aspects of life and science human, world Islam is the cause of the emergence scientific integration. Not only Institutions Separate education from religious education and general, it's just science who are picked up and guided are separated from religion adhered to, and the sciences it is grouped into two are science religion and science non-religious. In answering these problems, the movement for the Islamization of science and the Islamization of scientists began popping and embedded integration science.[9]

Within the scope of Islam, there are two causes of the dichotomy: factor is factor internal and external that separates between religion and science general,

effort division or grouping just a "sorter" specification Science as done by para cleric.[10]

According to Mahdi Ghulsyani, the integration of knowledge is interpreting verses of the Qur'an in relationship with Science modern. Destination the main thing is for show miracles Al-Qur'an as source every knowledge, and stimulate sympathizers to be proud people Muslim because have a complete book this. Perspective that state that Al-Qur'an be a source all knowledge This knowledge is not new, because we find many scholars big people Muslim before even look so, Imam al-Ghazali, in Ihya's book 'Ulum al-Din, quote the words Ibn Mas'ud means when someone wants to have past knowledge and knowledge modern, he should think Al-Qur'an. Then he add that all the whole the science of the scope of the properties Allah and the Qur'an is an explanation essence, attributes, and his deeds. It is not found that these sciences are limited and contained in the Qur'an a sign of the union between the Qur'an and the Qur'an. the sciences.[11]

Therefore, it can be understood that the integration of science is an amalgamation of knowledge, between general science and religious science, which basically comes from the all-knowing God, so that science is only one, there is no separation between general science and religious knowledge.

Background The Birth of Integration Knowledge

In this study, the integration science tends to focus to the integration of knowledge religion with knowledge general. Here are some of the theories that support this. The birth of integration science, that is science Islam with general knowledge (Islamization science) loudly echoed by scholars Muslims, among others, by Sheikh Naquib Al-Atas and Ismail Razi Al-Faruqi, so that the two figures are famous as the originator of the idea Islamization of Science.

Islam is a religion that universal and guaranteed quality for all time, not only managing things the hereafter is absolute, but also a matter world. Islam organizes both structured. Attempts to integrate these two sciences have started promoted by visionary experts since the end of the century the twentieth, then make the atmosphere there is pros and cons. When viewed from such a controversy, efforts to Islamization or integration this science done seriously. Effort This is based on a number of considerations, namely:

1) people Islam needs a science to complete his needs, materials nor spiritual. Science is no longer capable of perfecting needs such. This matter is triggered by modern science that includes values typical western that is already adrift in it. Values this is often a feud with Islamic values and contain threats of intimidation for survival human life in this world.

2) Aspect sociological, people Islam who is domiciled in a geographical area and have culture different from the west need system different science also because of science the west is used to complete community needs alone.

3) people Islam once had a civilization Islam where is science develop in line with value and need Muslims.

Effort to integrate both sciences are in Indonesia made with changes STAIN status and IAIN become UIN. This switch then necessitates an opening faculties and departments classified as a major general. This switch makes nuance and thoughts new to the community UIN academics. Phenomenon-related perspectives nature and thoughts about this have not been famous in the tradition religious sciences starting to be frequently informed by lecturers good exact in discussion or lectures. UIN has essentially made a settlement mechanism with "program" knowledge integration knowledge". However, the opening of the department general at UIN continued to be followed with recruitment program towards the lecturers dominant ones are taken from scholars public PTN graduates, the reality is not without problems. By methodological and science, they different from pattern and system think in the sciences religion that has been developed at UIN. This matter can have an impact on feuds and contradictions between lecturers religion and general. The small thing is to cause confusion between student. The problem is, if someone lecturer stated that the source of knowledge is the senses and relevant method observation, as for others reveal source Knowledge is instinct and method is cleansing heart (kashf). A the lecturer stated that pure scientific discipline empirical without related to belief religion, while lecturers who others reveal that there is none no discipline knowledge that is detached from the observation of the text holy. The reality is that there are really faint all over UIN, among UIN Jakarta according to allegations Mulyadi Kartanegera.[6]

Reality perspective on the dichotomy of science, then suggest to taker's response education policy or government. Government Indonesia ensures that there are two versions of the institution education, namely education general and education religion, where its application often has an impact on attitudes discriminatory. Evidence of treatment government discriminatory against institutions general education in a situation with education Religion in other circumstances is policy two ministries, ministries National Education and Culture regulates educational institutions public with various facilities and funds relatively sufficient, while the Ministry of Religion works on institutions religious education with facilities and funding less sufficient.[12]

Integration science between religion and science is not something that has never been done. But if you remember that all knowledge arises from the pedestal ontological, epistemological and axiology, in fact the foundation of

science Islam and science are different, parameters are needed determined until the goals are achieved thereby. In the event that obtaining it is not sufficient to provide justification verses of the Koran on each discovery and science, give Arabic or Islamic labels on terms science and the like, but there is an urgent need for paradigm innovation on scientific foundations, so that it is in line with the foundations and treasures Islamic science is closely related to reality metaphysical, religious and sacred texts.

About this, in build integration religion and science general, should consider scientific foundations above: ontological, epistemology and axiological. Not just giving justification of a verse or hadith. Because, everything is only a deception, not the essence, until it is just a form of labeling verse and not integration science.

Education Implementation

In the Islamic perspective, education has played an important role in efforts to give birth to humans who are reliable and can answer the challenges of the times. Education cannot be separated from the reality of life in the future, namely the period in which students navigate life. Therefore, education must be designed for a better life in the future, as well as the cultivation of values that are able to equip life in the future, which comes from religion must also be given. This includes the quality and competitive advantage of human resources, up to the ideal society that is aspired to in accordance with future demands based on Islamic values.[13]

In the face of change and development science and human technology in this day and age, Muslims can rearrange the basis of their virtues in the field of education for the future. The concept of merging and integrating knowledge between aqli and naqli science, or the science of revelation and the science of human creation, must be given priority based on Al-Ghazali's own concept. The Islamic community must also not neglect the education of divinity and spirituality, or the field known as the field of Islamic recitation. At the same time, the Islamic community also does not want to be left behind in the field of worldly and professional science that can elevate the dignity and life of the community in a world full of competition. In this case, it is important to know in advance the meaning of education.

Definition of education

Etymologically education in Indonesian comes from from the word "dikti" which means to maintain and provide training such as teachings, guidance, leadership regarding morals and intelligence of the mind. In this case it can be interpreted that education is a process of changing attitudes and behavior of a person or group of people in an effort to mature humans through teaching and

training efforts.

Meanwhile, in terms of terminology, there are several experts who provide an understanding of education. As stated by Ki Hajar Dewantara that education is an effort carried out with full conviction aimed at human safety and happiness. In the world of education, this means that humans can maintain life in order to increase the degree of humanity. Sudirman, also provides an understanding of education which is a business carried out by a person or group of other people in order to become an adult or reach a higher level of life.[14]

Separationscience, one of which appears in the separation in an educational institution, namely general education and religious education, has been ongoing since the time Indonesia recognized the modern education system. The separation of knowledge has implications for aspects of education in Muslims, both concerning the people's perspective on science and education, educational institutions, educational curricula and the learning process.

According to Law. 20 of 2003 concerning the National Education System, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the necessary skills. of him, society, nation and state.[15]

From some understanding of education from the experts above, it can be understood that education is an effort made by educators to students to be able to change the attitudes and behavior of students in a better direction and can develop the existing potential in order to become human beings who believe. and be pious.

Seeing the current situation of the Islamic world, which has adopted a lot of modern Western scientific paradigms, it has created integration knowledge. In the process of education that is held oriented to science which in the end makes people aware that science belongs to Allah Ta'ala. As an effort to implement the idea of integrating science, especially in Indonesia, it has had its own history. There is a separation in the administration of education, namely the Ministry of Education and Culture Education and culture who specifically manages general education while the Ministry of Religion that manages Religious education is the result of the practice of the legacy of Dutch colonialism in Indonesia.

Through the politics carried out by the Dutch at the end of their colonial period by educating indigenous children, especially noble groups, they had a hidden agenda. The Dutch gave education to the indigenous aristocratic class to prepare a rival generation for the ulama in the archipelago who had a strong influence in society since ancient times.

As a result of this political trail, it has given birth to separate educational practices, namely general education and religious education. The implementation of education like this will be able to cause the public's perspective on science.

However, in practice like that, according to writers out there, there is still a lot of hope to be able to do it by integrating science into the world of education.

Efforts to integrate science in Indonesia have appeared in various forms, such as changing the status of a State Islamic Institution (IAIN) to a State Islamic University (UIN).

Meanwhile, public universities, such as Universitas Indonesia Brawijaya, have also conducted studies of Islamic sciences in various fields, including the field of Islamic economics. Implementation like this is already part of the integration of religious sciences in public universities.[16]

Integration is implemented by means of developing the Islamic message in the process social change and adaptive to the development of the times without leaving the attitude critical of globalization and modernization.[17]Furthermore, the implementation carried out in carrying out the integration of knowledge in the world of education has also been carried out in schools, as currently the authors often see in the surrounding environment that many schools have established religious-based educational units that were formerly elementary schools (SD) with combines Islam so that it becomes an IT Elementary School or Integrated Islamic Elementary School, Integrated Islamic First Middle School (SMP IT) and many more schools that were built to maintain Islamic values in it. This has provided many changes so that there is no separation between general science and religious knowledge.

As educational staff, they can also integrate knowledge when the learning process takes place, such as educators who teach Natural Science (IPA) subjects can relate to Islamic elements in them, because basically knowledge is obtained from Allah, the source of knowledge is none other than Allah SWT. So when a teacher conveys a science, it cannot be separated from always providing understanding to students, that the science being studied is for example preserving and cultivating plant and animal ecosystems, plants such as flowers, trees, can live because of a source of rain water. and the lighting obtained from the sun, rainwater and the sun is a creation of Allah SWT, without any intermediary, Of course, all kinds of plants and animals that exist on this earth will not be able to live. Because only Allah can give all that, in fact Allah is the most alive (Al-Muhyi) and Allah is also the most deadly, when all living things can live, of course Allah can also turn them off. Like plants and animals, if they are not cared for properly, they will slowly die. And that is included in the power of Allah, the most deadly, the task of this human being on earth is none other than the caliph on earth who must be able to maintain and preserve the environment as well as possible. Like plants and animals, if they are not cared for properly, they will slowly die. And that is included in the power of Allah, the most deadly, the task of this human being on earth is none other than the caliph on earth who must be able to maintain and preserve the environment as well as possible. Like plants and animals, if they are

not cared for properly, they will slowly die. And that is included in the power of Allah, the most deadly, the task of this human being on earth is none other than the caliph on earth who must be able to maintain and preserve the environment as well as possible.

The existence of the integration of knowledge that is applied in educational institutions, will give birth to actual knowledge which is not only limited to the general knowledge that he knows, but with the integration of this knowledge in the world of education, students will know that general knowledge originates from the religious knowledge that Allah has given. there is a difference between the two. So the role of the teacher here in implementing the integration of knowledge in educational institutions, especially in public school education, teachers must be able to provide understanding to their students by linking or connecting the material being studied with religious values in the material, so that later the children understand the material being taught. can not be separated from the element of religion and knowing the origin of the knowledge they learn comes from Allah SWT.

CONCLUSION AND SUGGESTION

The integration of science leads to the unification of general science and religious science, so that there is no separation of knowledge (dichotomy). By reviving religious values in science which are as basic from the understanding of science in Islam, because basically science is only one and comes from Allah, there is no difference between general science and religious science. This integration of science is carried out by sticking to monotheism, ontology, epistemology and axiology.

In Islam, there is no such thing as a difference between science and religion. Because they are two things that complement each other. The existence of science is due to sticky rice something that has been proven true by carrying out several scientific methods, which therefore becomes a valid knowledge. As for the science of religion, the origin and absolute truth are only from Allah SWT. So it could be in the future will be proven true.Western epistemology has developed a lot of knowledge and from the knowledge it has developed it has made Muslims easily influenced by the assumptions made by western people. Not a few modern Western worldviews that deny reality that is invisible to the senses are imitated so that science becomes dry with Islam.

It must be understood that science and religion are an inseparable unit. The truth in science becomes true, if it has been passed through the process of the scientific method. Meanwhile, religion contains truths that already exist and may be scientifically proven to be true long before or after religion and revelation were revealed by Allah. Therefore, science and religion are an integration to better understand and be closer to Allah SWT who is all-powerful. Only Allah is the best

God, the creator and the best giver of knowledge.

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