Science and Technology Improvement Viewed from Islamic Education

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Abstract
The role of teachers and parents in instilling faith and piety is very necessary to direct students in overcoming some of the effects of the progress of science and technology that is happening today. The results showed that the students of class XI MA Ma'arif Roudlotut Tholibin Metro, that the progress of science and technology in the use of learning media can be implemented quite well, can support teaching and learning outcomes in accordance with existing rules, teachers have provided as much guidance as possible about the positive impact negative and consequences of science and technology for students who violate. However, there are still some students who abuse the internet for things that are not good, environmental factors that influence children's thinking patterns to act as they please, because the school cannot supervise each student outside the school. So that the cooperation of teachers and parents is needed to form good character for students.

INTRODUCTION

Learners need to learn the past history by resting on the realities of the development of the present situation, by instilling thoughts that lead to the perspectives of young people. Because the history of history can broaden horizons openly, continuously providing guidance on further developments (Tamburaka, 2002). Science and technology is an insight or source of information relating to science and technology that is devoted to the class XI MA Ma'arif Roudlotut Tholibin Metro. The existence of science and technology is building a mind for each student to develop knowledge, science and technology that has so far provided a variety of positive impacts for students in the learning process. However, the progress of science and technology will also provide some negative impacts such as information, news and images that can damage the morals accessed by the internet through gadgets that are difficult to avoid.

Based on problems related to science and technology, related to some facilities and room constraints that are not yet in accordance with the number of students, the problem is expected to be overcome in accordance with government programs that require internet and computers to support activities in Madrasas and other schools. The knowledge of Islamic education in MA Ma'arif Roudlotut Tholibin Metro, is expected to be a fortress and the boundaries of students in socializing, who apply life according to the rules of religion, because religion is required to adapt to the

development of science and technology that runs simultaneously. The source of motivation from the Qur'an, if we study in depth as stated in the Arrohman, we can find the command of Allah to think critically, analyze, Allah's creation in the sky and in the planetary region with the content of his wealth. However, thinking or thinking about the phenomenon of Allah's creation must also be accompanied by *dzikir*, because all that is in the universe is his creation. In accordance with the word of God in the Qur'an

يَمَعْشَرَ الْجِنِّ وَالْإِنْسِ اِنِ اسْتَطَعْتُمْ اَنْ تَنْفُذُوْا مِنْ اَقْطَارِ السَّمٰوٰتِ وَالْاَرْضِ فَانْفُذُوْا ۗ لَا تَنْفُذُوْنَ اِلَّا بِسُلْطٰنٍ

O assembly of jinns and men! If you have power to pass beyond the zones of the heavens and the earth, then pass (them)! But you will never be able to pass them, except with authority (from Allah)! (QS. Ar-Rahman: 33)

From the background above, explaining about science and technology, the researcher can examine the discussion related to the title of progress of science and technology viewed from the point of view of Islamic Education Case Study at MA Ma'arif Roudlotut Tholibin Metro.

Education

With increasingly evolving times in the world of education that continues to change significantly so that many change the mindset of educators, from a lay mindset and rigid to more modern. This is very influential in the advancement of education in Indonesia. By karen, to address this matter, education experts criticize by expressing and the actual theory of education to achieve the goal of real education. The purpose of education is to create someone who is quality and characteristically so that he has a broad outlook on achieving an ideal that is expected and able to adapt quickly and precisely in various environments. Because education is an action to motivate ourselves to be better in all aspects of life.

Education is a process of giving meaning toward individual and the invironment. This individualist over view is different from the materialist viewing human as a product of surronding nature. According to Marxisme in Nugroho, Riant and Tilaar (2009: 21) education process is the process of giving power to the person or learner in order to fight againts the power of restriction of his or her development that is managed by the ruled the roost of economics group power or capitalist group.

Basically the essence of education is an important part of life that differentiate human from others living thing or creature. Animals are also learning but they are dominantly decided by their instinct. However human uses their mind they have in all activity. It is also used by the human being to improve their knowledge, for instance the object of science and the types of the science. Those interesting things encourage the learners to know the essence of education inside and outside the

school. It is because the education is basic point in order to make lerners are able to compete in the workplace. Education also build good character of the learners to be applied in their daily life.

The function of education is as follows; (a) finishing the effort, every effort has an end. Commonly, the effort is finished after the goal accomplished. (b) Directing the effort, having a goal , an effort has clear direction. (c) It is an ending point of reaching the other goals, both previous and future goals. (d) It gives values of an effort (Umar, 2010).

Furthermore, in its essence in understanding the meaning of education, it is first necessary to know two (2) terms in the world of education, namely pedagogy which means "education" and pedagogia means "science". This term comes from the Greek "pedagogia" (paedos and agoge) which means "I guide, lead children". Based on the origin of the word, then education has an understanding as a business that is run by someone or a group of other people, in order to grow up and reach a higher level of life in the mental sense (Kasan, 2005).

According to Islam, intellect and ratio are not two different substances. Both intellect and ratio, both are included in the sense of reason. A person who has perfect reason, besides being able to think quickly and precisely (Nature, 2015). Religion is used as a guide for all religions, because of the guidance to complement each other. The reason itself is a gift from Allah SWT to humans, is a social being who needs each other and is not enough for humans to only use a feeling to live alone

Islamic Education

Religion is the treatise that Allah conveyed to the Prophet as a guide for humans, in which there are perfect laws to be used by humans in carrying out real life procedures by regulating relationships, responsibilities to God, society and the surrounding environment (Ahmadi, 2008). Education in Islam is more shown in the improvement of mental attitudes that will be realized in deeds, both for the needs of oneself and for others, Islamic education is not theoretical, but also practical (Daradjat, 2017). Furthermore, the Operational basis of Islamic Education is the basis that is formed as the actualization of the ideal basis.

According to Ramayulis (2011), the operational basis is six types; (a) The historical basis is the basis that contributes to education from the results of past experiences in the form of rules and culture of the community. (b) The social basis is the basis that provides a cultural framework in which education develops, such as moving, choosing and developing culture. (c) The basis of the economy is the basis that provides a perspective on human potential in the form of material or preparation that overrides the sources responsible for the expenditure budget. (d) Basic Politics That is the basis that provides a basic frame and ideology that is used as a place of departure to achieve the intended goals and plans that have been made. (e) Basic psychological Namely the basis for providing information about the character of students, teachers, the best ways in practice, achievement and assessment and

measurement by guidance. (f) Physiological Basis That is the basis that gives the ability to choose well-directed, gives direction to a system, controls and gives direction to all other operational basics (Daradjat, 2009; Uhbiyati, 2008).

Therefore, according to researchers, Islamic education is a way to form a good personality, with actions and behavior, in accordance with religious values. Connect with humans and with Allah Almighty. In addition, from some of the above meanings, the researcher concluded that Islam is a heavenly religion, which is recognized by Allah SWT as the true religion, passed down through the Angel Gabriel to the Prophet Muhammad to all the people. In it there are rules, values, norms, orders and prohibitions contained in Islamic guidelines such as al-quran, hadith, ijma ', qias, applying them need comparisons that are in accordance with certain circumstances.

Moreover, Islamic education is restricted by the scope due to its function as stated by Arifin (2008) the scope of Islamic Education that is commonly implemented in schools are: (a) Teaching *Aqidah* / Faith, the teaching of faith means the learning process about aspects of belief, in this case of course beliefs according to Islamic teachings, the core of teaching this is about the pillars of Islam. (b) Teaching Morals, moral teaching is a form of teaching that leads to the formation of the soul, how to behave individually in his life, this teaching means the process of teaching and learning in achieving goals so that those taught are of good character. The next stage is; (c) Teaching of worship Teaching is a teaching about all forms of worship and procedures for its implementation, the purpose of this teaching so that students are able to perform worship properly and correctly. Understand all forms of worship and understand the meaning and purpose of worship. (d) Teaching *Fiqh* Teaching jurisprudence is teaching that contains material about all forms of Islamic law originating from the Qur'an, *sunnah*, and other *syar'i* propositions.

The purpose of this teaching is that students know and understand the law - Islamic law and carry it out in everyday life. The next is; (e) the teaching of the Koran teaching the Koran is intended so that students can read the Koran and understand the meaning of the content contained in every verse of Al-Quran. However, in practice certain verses are included in the material of Islamic Education which is adjusted to the level of education. (f) Teaching Islamic History the teaching purpose of the history of Islam is so that students can find out about the growth and development of Islam from the beginning to the present so that students can know and love Islam.

Science and technology

Science and Technology (Science and Technology) is a branch of science that must and must be studied and mastered in realizing quality human resources (HR). History has noted and shows that:

لَقَدْ كَانَ لِسَبَإٍ فِى مَسْكَنِهِمْ ءَايَةٌ ۖ جَنَّتَانِ عَن يَمِينٍ وَشِمَالٍ ۖ كُلُوا۟ مِن رِّزْقِ رَبِّكُمْ وَٱشْكُرُوا۟ لَهُۥ ۚ بَلْدَةٌ طَيِّبَةٌ وَرَبٌّ غَفُورٌ

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> There was for [the tribe of] Saba' in their dwelling place a sign: two [fields of] gardens on the right and on the left. [They were told], "Eat from the provisions of your Lord and be grateful to Him. A good land [have you], and a forgiving Lord (Q.S Saba': 15)

Obviously in the description of the verse above, it is giving encouragement to humans to analyze and develop technology, for example buildings of iron and copper, which can be clearly utilized by humans that are used for everyday life. According to Fazlurrahman and Maurice said that the Qur'an gave a human creative impulse in thinking and analyzing and developing the universe phenomenon created by Allah Swt (1998). So researchers can conclude about the development of science and technology in Islam, that the existence of science and technology must be used for things that are useful.

Relationship between Science and Technology and Islam in some basic understanding of science is knowledge about natural phenomena obtained through a process called the scientific method. While technology is knowledge and skills that are the application of science in everyday human life. Religious and science relations in line based on an ideological review that underlies the relationship between the two, there are 3 (three) types of paradigms, namely: the first secular government, the most socialist paradigm, the three paradigms of Islam (Ilmi, 2012).

Furthermore, regarding the purpose of science, there are several differences of opinion between philosophers and scholars. Some argue that knowledge itself is the main goal for people who pursue it, and they express this with expressions, science for science, art for art, literature for literature, and so on. According to them, science is only an object of study to develop their own knowledge. Some others tend to argue that the aim of science is the efforts of researchers or scientists to make science a tool to add human pleasure to life which is very limited on this earth. In this second opinion, science is to alleviate the burden of human life or to make people happy, because from that knowledge that will give birth to technology.

Technology is clearly needed by humans to overcome various problems, and so forth. Meanwhile other opinions tend to make science a tool to improve culture and progress for humanity as a whole (Sholeh, 2003). In addition to the opinions above, of course Islamic relations and scientific knowledge are very related. As in the Qur'an it is also stated in broad outline, about technology. That is about the events of the universe and various other natural processes, about the creation of living things, including humans who are driven by curiosity, driven by reason to investigate everything around them, even though the Qur'an is not a book of cosmology, or biology, or science in general, but the Qur'an is far from talking about technology.

Although there is still debate, the Islamic view of Science and Technology is closely related. In its main guideline (Al-Qur'an), there are many things mentioned related to science and technology,

this shows that Islam is very close to science and technology. So the development of science and technology is a manifestation of the implications of the real Qur'an. There are many appeals in it that encourage people to think and develop their potential in knowledge. But one thing is very unfortunate, Muslims are very low in the field of science and technology, so they miss developments with non-Muslim people. Hopefully with this, Muslims will be aware and willing to develop their knowledge in making things happy, so that they become qualified people with the highest piety and knowledge.

Positive and Negative Impacts on the Advancement of Science and Technology.

The following are the positive and negative impacts of the progress of science and technology between them. Positive Impact of Science and Technology Progress (a) Providing Various Facilities (b) Facilitating the Extent of Information. Negative Impacts of Science and Technology Progress (a) Affect thinking patterns (b) Loss of Traditional Culture (c) Inflict Various Damages. Indonesia is known as a country that is rich in sources of terms and vocabulary, but lately, Indonesian has experienced a transition or change. The term slang is used by children up to adults in the general public (Putri, 2018).

Furthermore, there are four aspects that are affected by the advancement of science and technology including social, economic, cultural and political (Cristian, 2019). The economic field has a positive impact: (a) The productivity of the industrial world is increasing. Technological advances will improve the productivity capabilities of the industrial world both in terms of industrial technology and aspects of production. (b) Economic growth will be higher. (c) Competition in the world of work that requires workers to always increase their skills and knowledge (d) Increasing political values of individuals, groups, opposition, majority dictatorship or minority tyranny. (e) The emergence of racial, ethnic and religious fanaticism in forums & organizations. (f) The emergence of demonstrations that are increasingly bold and sometimes ignore public interests. (g) The existence of an international conspiracy, namely the conflict of power and international political arena always leads to conspiracy. (h) The weakening of political values based on the spirit of family, deliberation of consensus, and mutual cooperation.

Islamic Standard on Utilization of Science and Technology.

In Islam in the view of Islamic *sharia* science and technology must be used as a standard for the use of science and technology because the provisions of Islamic *sharia* laws must be made as a benchmark in the utilization of science and technology. Science and technology that can be utilized, is what has been halted by Islamic *Sharia*. Whereas science and technology that should not be utilized, is what has been forbidden by Islamic *sharia* (Ilmi, 2012). The existence of standards for the use of science and technology according to western ideology and Muslim countries has a duty and follows the western world without knowing the legal laws and in accordance with what should be applied.

Along with the development of an increasingly rapid era, making them find new things, which are not in accordance with the moral and rules that exist in society. As found in An-nisa 'verse 65:

فَلَا وَرَبِّكَ لَا يُؤْمِنُونَ حَتَّىٰ يُحَكِّمُوكَ فِيمَا شَجَرَ بَيْنَهُمْ ثُمَّ لَا يَجِدُواْ فِىٓ أَنفُسِهِمْ حَرَجًا مِّمَّا قَضَيْتَ وَيُسَلِّمُواْ تَسْلِيمًا

But no, by your Lord, they will not [truly] believe until they make you, [O Muhammad], judge concerning that over which they dispute among themselves and then find within themselves no discomfort from what you have judged and submit in [full, willing] submission.(QS. An-Nisa: 65)

In addition there is a Qur'anic verse, namely Al-Anbiyaa verse 80 which explains the use of technology

وَعَلَّمْنَاهُ صَنْعَةَ لَبُوسٍ لَكُمْ لِتُحْصِنَكُم مِّنۢ بَأْسِكُمْ فَهَلْ أَنتُمْ شَاكِرُونَ:

And We taught him the fashioning of coats of armor to protect you from your [enemy in] battle. So will you then be grateful? (Al-Anbiya:80)

According to the commentary on the Qur'an, this verse is the cornerstone of the efforts to make tools and causes. Allah Ta'ala has reported about Prophet Daud AS, that he made armor, binoculars, and food from his own work. While Adam was a farmer, Noah was a carpenter, Luqman was a tailor, and Thalut was a tanner. So, based on the interpretation above, Islam recommends creating or using tools that can facilitate our work (Al Qurthubi, 2006). That is technology, and it turns out that the idea of using this technology is in the Qur'an. The technology does have two sides. He can be useful if used with a good purpose, or can be an enemy if used for bad purposes. This is the time for us Muslims to start using technology in a good way so that it can be useful for people and religion. If you cannot just use it, it's time to be creative to create new technology. And we show that Muslims are also good at making reliable and innovative technologies.

METHOD

In this study the type of research is field qualitative research. This research is more shown in the formation of substantive theories based on concepts arising from empirical data. In the developed research the quality is always open to various changes needed to the conditions that exist in the field of observation (Margono, 2010). The data collection technique that researchers use to discuss the progress of science and technology is as follows: Observation Technique, Documentation Technique, Interview Technique. Methods of data analysis in qualitative research, data obtained from various sources using various data collection techniques (triangulation), and carried out continuously. Data analysis is the process of systematically searching for and compiling data obtained from interviews, field notes and documentation by organizing data into the data categories and making conclusions so that they are easily understood by themselves and others (Sugiono, 2009).

FINDINGS AND DISCUSSION

Based on the results of the description of the research above, according to the researchers it can be seen that the understanding of science and technology in MA Ma'arif Roudlotut Tholibin. students especially class XI, to access various knowledge information related to learning. With the presence of new learning media such as the internet, projectors, wi-fi, laptop that can be used to support the success of female students in the teaching and learning process in class XI, which is viewed from the point of view of Islamic education. Under this explanation of science and technology at MA Ma'arif Roudlotut Tholibin which is based on research that the researchers describe are as follows:

The progress of science and technology is viewed from the viewpoint of Islamic Education in MA Ma'arif Roudlotut Tholibin Metro Utara.

The progress of science and technology at MA Ma'arif Roudlotut Tholibin is everything related to science. The advancement of science will bring new technologies to discover knowledge by unlimited access. The technology used is to support success, Knowledge has a neutral value in providing an easy learning process. The existence of technology and science can be easily accessed through available media used in MA Ma'arif Roudlotut Tholibin.

Positive and Negative Impacts of Science and Technology Progress Viewed from the Viewpoint of Islamic Education at MA Ma'arif Roudlotut Tholibin Metro Utara.

The progress of science and technology will also have a positive and negative impact, especially in the MA Ma'arif Roudlotut Tholibin Metro class XI. However, basically science and technology is neutral depending on how a teacher uses it. The existence of technologies such as modern learning media will help and support better progress from students and teachers in the teaching and learning process, especially in class XI. The progress of science and technology in MA Ma'arif especially class XI such as the use of learning media with internet, wi-fi, laptop, LCD projectors, sending assignments through e-mail, all of which are some examples of the progress of science and technology in the *Madrasah*.

Science and technology is used to overcome the development of the times from year to year that experienced significant changes, so that with the change in technology raises a new pattern of thinking to develop broader knowledge. Internet use in class XI MA Ma'arif Roudlotut Tholibin Metro will provide an insight into the science that aims to provide experience and new learning about the importance of the use of science and technology in life.

In the view of Islam relating to the positive and negative effects of the advancement of science and technology in the MA Ma'arif Roudlotut Tholibin Metro class XI. Islam does not limit science and technology that develops as long as it is used for positive things because science and technology is building someone in thinking by developing their knowledge, but science and technology has

limitations in use according to needs. Fortifying oneself, with the inculcation of taqwa for students in various aspects of life, one of which is to face the impact of the progress of science and technology. At MA Ma'arif Roudlotut Tholibin Metro the principal and teacher are tasked with providing guidance to each student in various aspects, behaviors related to science and technology. Usually the School runs cooperation with parents and family to provide supervision, in order to form students with good character and in accordance with religious values.

CONCLUSION

Based on the data that has been collected and analyzed in the research on the progress of science and technology viewed from the point of view of Islamic education case studies at MA Ma'arif Roudlotut Tholibin class XI metro north. Researchers can conclude the research as follows, Progress in science and technology at MA Ma'arif Roudlotut Tholibin which is specialized in class XI which discusses the media used in the learning process, related to science and technology which is focused on students and teachers in the teaching and learning process, in the Islamic perspective the use of science and technology must be in accordance with religious values, which in it discusses the rules for the use of science and technology that do not come out of Islamic law. Moreover, this research can encourage both the students and the teachers utilize the product of science and technology properly. Besides, this research are also able to encourage other researchers to conduct a research on the same field, utilizing technology in teaching and learning process. However, it should be more specific to certain product of science and technology.

REFERENCES

Ahmadi, A. (*2008*). *Psikologi Belajar Edisi Revisi*. Jakarta, Indonesia: Rineka Cipta

al-Qurthubi, Muhammad bin Ahmad abi Bakr Abi 'Abdullah, (2006) *Tafsir al-Qurthubi al-Jami' li Ahkam al-Qur'an,* Cet I, Daar Ar-Risalah, Beirut.

Arsyad*,* A. (2002). *Media Pembelajaran, edisi 1*. Jakarta, Indonesia: PT. Raja Grafindo. Persada

Cristian, A. (2019). *Dampak Positif dan Negatif Teknologi terhadap 4 Aspek Besar*. Diunduh dari
https://www.kompasiana.com

Daradjat, Z. (2012). *Ilmu Pendidikan Islam*. Jakarta, Indonesia : Bumi Aksara.

Djamarah, S. (2000). *Guru Dan Anak Dalam Interaksi Edukatif*. Jakarta, Indonesia :PT Renika Cipta

Margono. (2010). *metodologi penelitian pendidikan*. Jakarta,Indoensia: Rineka Cipta.

Nugroho, Riant & H.A.R Tilaar. (2009). *Kebijakan Pendidikan*. Yogyakarta, Indonesia: Pustaka Pelajar.

Ramayulis. (2005). *Metodologi Pendidikan Agama Islam*. Jakarta, Indoensia :Kalam Mulia.

Sholeh, K. (Ed). (2003). *Islamisasi Ilmu*.Yogyakarta, Indonesia: Jendela.

Soleh, A. (ed). (2003). *Pemikiran Islam Kontemporer*. Yogyakarta, Indonesia: Arruzmedia

Sugiyono. (2010). *Metode Penelitian Pendidikan*. Bandung, Indoensia: Alfabeta.

Uhbiyati, Nur. (2008). *Ilmu Pendidikan Islam*. Bandung, Indonesia: CV. Pustaka Setia.

Umar, B. (2010). *Ilmu Pendidikan Islam,* Jakarta, Indonesia : Bumi Aksara.