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Technology Education in the Quran

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Abstract: *The type of research that the author uses is a type of qualitative research using a content analysis approach (Content Analysis), or what can be called a content study. This analysis is a research technique for making a conclusion or inference that can be replicated and the correctness of the data by taking into account the context. The object of this research is explored through various information in the form of books, interpretations, and journals. This journal aims to discuss how children use technology in their early years, both at home and school. because in this increasingly sophisticated era, children cannot be separated from technology. The existence of technology is undeniable, and children cannot be prevented from using it. However, rights to property and assistance may be the best option for children. Teachers and parents alike are expected to learn a lot from the findings of this research regarding the process of using technology and its applications.*

Keywords*: technology education, benefits of technology, application of technology to children.*

INTRODUCTION

Technology has become an inseparable part of human life in an increasingly sophisticated and modern era; adults and children can not be separated from its use. Technology is becoming more and more integrated into everyday life to simplify it and provide new insights to users.[1]

Different types of technology are created and used in different ways and under different conditions. This technology can have several positive effects and even contribute to creating engaging and stimulating educational materials for children when used wisely and appropriately. However, if technology is misused, it can hinder a child's development, and it is entirely up to parents to decide whether their child uses technology wisely or not.[2]

Technology is widely used to support the learning process, including in early childhood education, in addition to everyday life. Children can be introduced to the concept of numbers and reasoning through technology. [3]

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RESEARCH METHODS

The type of research that the authors use is qualitative. Qualitative research is a research method based on the philosophy of postpositivism, used to study the condition of natural objects, where the researcher is the key instrument, and the results of qualitative research place more emphasis on meaning [7].

While the approach used in this study is the content analysis approach (Content Analysis) or also known as content study. This analysis is a research technique for making a conclusion or inference that can be replicated and the correctness of the data by taking into account the context [8]. The object of this research is explored through various information in the form of books, interpretations, and journals.[9]

RESULTS AND DISCUSSION

Definition of Technology

Technology is a means to provide all scientific matters that function to facilitate the continuity and comfort of human life. In the Word of God that is related to technology, including in the letter Al-Anbiya [21] 80-81:

"And We taught David an armor for you, to protect you in battle, so are you not grateful? And for Solomon, a strong wind that blows on the land that We have blessed, and We know about everything."

In part of the Qur'an it is narrated that Allah SWT showed the Prophet David making armor that was used for war, Allah helped Prophet David to make a protective layer which previously was just plates of armor then Prophet David made woven small circles. In this case, technology is not found in the Prophet's miracles. However, humans have extraordinary thinking capacities. humans make something extraordinary and the story of the prophet is just an illustration. Call it the story of Prophet Sulaiman who was able to control the wind so that he could travel throughout the country.

In this case, people generally think about how they can fly, and because of that a Muslim researcher named Ibn Firnas flies using wings covered with feathers, he thinks about how to fly from how birds fly that have wings and feathers, then Leonardo da Vinci made a flying machine. With the invention of airplanes, humans can now fly to any country in a short time, along with the advancement of time and technology. Therefore, people, who know they should be grateful. Knowledgeable humans should be closer to Allah, not arrogant or even farther from Him.[10]

According to Ibn Kathir's interpretation of this verse, Allah SWT advised the Prophet Dawud about making protective clothing that could be used in battle. According to Qatdah, previously the armor consisted only of plates. Prophet David was the first to produce it in the form of small balls made of woven cloth. In another verse through His words:

"And we have softened the iron for him, (namely) make a big smell of iron and measure the woven." (Saba [34]: 10-11)

These means don't make the rounds larger or the webbing larger as doing so will tear the webbing loops and cause the webbing to tear [11].

We can see the development of armor specifically designed for soldiers in the battles they face, whether in the form of iron caps, bulletproof vests, and so on, this is the technological development that Allah has given for centuries from the lessons that Allah taught the Prophet David to make clothes iron used for war.

In the same way, Allah has subdued the winds for Prophet Sulayman to enable him to travel to the nearby lands. Current developments show how sophisticated the instruments have been created in the image of God. Sailing ships, windmills, and other heavy equipment all use wind power [12].

Muslims can only feel and guess the answer from the technology of the past century. As a result, we have witnessed firsthand in this century how sophisticated rocket technology and electronic control have been able to launch humans to the surface of the moon, return them to Earth, and send them on spaceships with different missions.

In addition, the most sophisticated means of transportation are described in the Qur'an, in Surat Yasin [36] verses 41-42 Allah says:

"And a sign for them is that We raise their offspring in arks that are full of loads and We create for them that they will ride like that ark."

In the translation of al-Misbah, the chorus describes the power of Allah which helps humans to remember their ancestors who were saved in the boat of Prophet Noah as. In verse 41, Allah describes Noah's ark and explains that Allah also commanded Noah how to build a boat so that it can be used. Then, in verse 42, Allah also provides information about various transformation tools that humans can use. We can see God's data and feel all of his presence [13].

Development of Technology Science

Entomologists have created cutting-edge technologies in this modern era, all of which are based on the perfect design of the living things around them. We must consider the incredible diversity of life on Earth. The splendor of God's artistic creation can be seen in every creature we see. The extraordinary wonders hidden in His creatures such as spiders, dragonflies, beetles, and flies are the same.

Spider fiber was found to be 30% more flexible than rubber fiber of the same thickness in one study. This spider fiber is of such high quality that humans have imitated it in the production of flak jackets. Amazingly, the material that most people think of when they think of cobwebs is comparable to the best industrial materials in the world.[14]

Humans have attempted to fly in various ways. Thousands of different airplane models have been developed since the creation of the first airplanes some one hundred years ago.

Although flying is an excellent skill, its usefulness depends on the range it can control. Being able to fly at a fixed altitude or land where you want is just as important as being able to fly. Humans designed helicopters, which are highly maneuverable aircraft, as a result. However, surprising facts have been discovered in recent studies. When compared with tiny creatures that can fly, flying helicopter technology is currently very behind.

The creature is a dragonfly, and the dragonfly's flight system is a marvel of engineering with flight technology superior to any machine created by man. This is why the dragonfly design formed the basis for the final model of the famous Sikorsky helicopter. A company contributed to Siskorsky's design by loading an image of a dragonfly onto a computer for this project. Following dragonfly flying technology, Sikorsky helicopter models were produced [15].

In short, the body design of small insects is superior to that of humans. Dragonflies can move quickly because they have two pairs of wings arranged diagonally across their bodies. It is incredible for an insect that a dragonfly can reach a speed of fifty kilometers per hour in a very short time. The dragonfly's wings and flight technology highlight the amazing design of Allah's creation, which is exemplified by this tiny creature.

The same goes for flies, which are different from other insects [16]. Regardless of wind speed and direction, flies can fly in any direction. Even with the most advanced technology, humans are still unable to create machines with extraordinary specifications and flying

techniques like flies. This is due to the intelligence and abilities of the fly. Allah has given flies an ability that is responsible for all their unique characteristics.

When we contemplate the natural oddities that seem ordinary to our eyes, it is there that Allah will show us how amazing His insights and creations are. Only Allah is the only force capable of creating even a fly. In the Qur'an, Allah states this fact:

"O people, parables have been made, so listen to you to parables. Verily, whatever you call upon other than Allah, could not even create a single fly, even if they were united to create it. And if the fly snatches something from them, they will not be able to take it back from the fly, it is very weak (also) who is worshiped ". (al-Hajj, [22]: 73) [12].

Islamic Figures in the Field of Technology

The Islamic figures who had the greatest influence on Islamic technology were the many famous scientists and figures of the Prophet's time, and their discoveries are still used today. Here are some of them:

Ibn Sina (father of medicine)

He is abu 'ali al-husain bin Abdullah Bin Sina, more commonly referred to as "Avicenna" in the West. Born in Persia, he was a philosopher, scientist, and physician. His most famous work is "Qonun fi thib", which has been a reference in medicine for centuries. because of his expertise, he is called the "father of medicine".

Abbas ibn firnas (inventor of the concept of flying)

His name is Abbas qosim bin firnas, and he was born in the city of Iznrand onda in Andalusia in 810 AD. It was he who came up with the idea for airplanes. History says that Abbas was the first to attempt controlled flight. Ibnu Firnas can also control and adjust his flight altitude using a control device mounted on two pairs of wings. He can also change the course of his flight by landing back at the start of his test launch. And then he died in AD 888, some 12 years after the second launch due to failing health. The Libyan government honored him by issuing a stamp with the image of Ibn Firnas.

Al-Jazari (inventor of the concept of modern robotics)

A medieval scientist from al-Jazira, Mesopotamia, by the name of Abu al-'Izl ismail ibn al-razzi al-jazari In his book, "Fi ma'rifat al-hiyal al-handasiyya," explains how he came up with the idea of a robot first modern. He devised hydraulic principles for propulsion machines, which became known as robotic machines.

Mariam Al-astrubali (inventor of GPS)

Mariam al-jilya al-astrubali is her full name. He is best known for inventing the astrobale, complicated land navigation, and timekeeping device. He developed a GPS-like astrolabe using complexes. Europeans used this tool until the 18th century to accurately determine the Qibla direction. Although this astrolabe was invented, the Renaissance helped Europe find its way around the world.

Al-Khwarizimi (inventor of the number Zero)

Al-Khwarizimi's biography is still unknown to most people. His full name was Abu Abdullah ibn Musa, and he was born in 800 AD and died after 847 AD. He was an astronomer, and scientist and also skilled in algebra. He is famous for his discoveries in algebra, especially for finding zero.

Ibn Al-Haitham (inventor of optical technology)

One of the most influential Islamic figures in the field of technology is Ibn Al-Haitham. This researcher makes optical innovations that are currently used in camera devices. The innovation discovered by Ibn Al-Haitham motivated Rogen Bacon and Kepler to make magnifying devices and telescopes [17].

Technology Education

Tools, machines, materials, and processes that help people solve problems are examples of technology. Since the universe and its processes are often referred to as "the verses of Allah", Allah Most High guides in the verses of the Qur'an by giving examples of what can be observed and for what purpose. This ensures that humans will always make observations to find a bright spot in what Allah has described [18].

As a result, education can benefit from using technology as a tool and method. Learning technology is the focus of educational technology development. This is because of his ability to concentrate more on the formal object he is working on. Theory and practice in the design, development, utilization, management, assessment, and research of learning processes, resources, and systems including Educational technology [19].

As the name implies, Islam is a religion of knowledge. According to Islamic teachings, every Muslim is obliged to seek knowledge, either through religious studies or other fields of study. In this life, the position of knowledge is sometimes ignored by humans. From Abud Darda` radhiyallahu 'anhu said: I heard the Prophet sallallaahu 'alaihi wa sallam say:

“Whoever takes a path on which he seeks knowledge, Allah will make it easy for him to follow a path from the paths (to) Jannah, and verily the angels will indeed lay down their wings for the seeker of knowledge, and verily a seeker of knowledge will be asked forgiveness for him by Allah's creatures in the heavens and on earth, even the fish in the middle of the ocean ask forgiveness for him. And indeed the superiority of a knowledgeable person over a worshiper is like the superiority of the moon on a full moon night over all the stars, and indeed the scholars are the inheritors of the Prophets, and the Prophets did not inherit dinars or dirhams, but they only passed on knowledge, so whoever takes it then indeed he has taken part very much” [20].

The basic principle of the Islamic education system is the belief that every Muslim is obliged to seek knowledge and should not ignore it. Rasulullah SAW said which means: "Seeking knowledge is obligatory for every Muslim." (Narrated by Ibnu Adi and Baihaqi). Therefore, the state must provide free education to its citizens, rich and poor, Muslim and non-Muslim. Apart from being obliged to provide free education, the state must also provide quality education to the principles and objectives of education.

The development of students' Islamic personalities and mastery of science and technology, as well as Islamic philosophy, must be the focus of education. Preaching and preparing students so that they will become cadres who will contribute to the progress of the Islamic Ummah must also be the main focus of education.[21]

Even though students have mastered the knowledge, education is considered unsuccessful if it does not lead to an attachment to Islamic law. Islamic education is a planned, structured, programmed, and methodical endeavor to form individuals with Islamic personalities, acquire adequate knowledge of the life sciences (science, technology, and art), and solve everyday problems by Islamic law.

Every type of intellectual, spiritual, emotional, and political intelligence must be developed in a student. Someone will always be able to solve all his problems by Islamic law, whether personal, family, community, or state. Competence in mastering sufficient knowledge includes Islamic teachings and life sciences.[22]

The role of learning technology in schools is to act as an agent of change for this. As a learning designer, the learning technologist is responsible for creating a good KTSP, a good syllabus and lesson plans, interesting learning strategies, and a learning environment that is conducive to learning. naturally concerning other teachers and other relevant stakeholders. In the same vein, from the perspective of utilization, instructional technology may be able to assist in the selection, evaluation, and implementation of instructional media related to specific learning needs. This is also true when it comes to areas such as development, management, and evaluation. Educational technology cannot be developed and put to good use unless there are people who can handle it. Efforts to develop human resources, especially the education and training system, have included educational technology as a theory and practice [23]. Conceptually, efforts to apply educational technology in educational institutions will be guaranteed if educated and trained personnel are available.

Appropriate Application of Technology to Children

The role of parents is very important in the process of child development, including controlling and selecting television shows that are appropriate for children to watch. Parents are children's first school and environment, and they are fully responsible for everything that happens to their children. Since technology has both positive and negative effects on people's lives, parents need to be good at controlling what their children see and don't see, and use the right technology for them. good girl:

a. Parents who don't limit their children's use of technology force their children to spend their spare time playing games or watching YouTube, thus disrupting their child's sleep. In addition, children who use gadgets more often in their spare time tend to lack life skills, such as not wanting to eat on their own, returning the food bowl or cup to its place, and so on. They also tend to be less responsive when called or invited to communicate by their parents. Pay attention to the child's independence [24].
b. Download applications that benefit children, such as those that can encourage children's talents, read books to children or prophetic tales, download applications, and block adult content that is not educational or useful for children.
c. Take time to do useful things, such as spending more time outside with children, playing with them, studying, reciting the Koran, or doing other things.
d. Be a good role model for children by not playing with gadgets in front of them.[25]

CONCLUSION

It cannot be denied that the existence of technology provides convenience and usability, and the use of technology in everyday life has become a lifestyle. However, if technology is not used properly, especially with young children, it can have negative effects. refers to research findings and results, which show that children's social, emotional, and cognitive development can be negatively affected by excessive smartphone use. Therefore, one of the best ways to control smartphone use is the role of parents in providing direction and assistance as well as consistency in arranging schedules for smartphone use for their children to anticipate these negative impacts.

Technology can also be used in education, apart from at home. Technology contributes to improving the quality of education and facilitating the learning process, making it easier for children to understand educational messages. However, not all educators can utilize technology as a learning tool. Therefore, for educators to make the most of technology in education, they need appropriate government assistance and training. So the creators offer arrangements starting from the regulatory side to the administrative flow with the central government.

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