

INFORMATION TECHNOLOGY THEOLOGY PARADIGM IN ISLAMIC EDUCATION MANAGEMENT

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Abstract. Theology is the study of divine philosophy related to His Essence and His attributes. Theology is also meaningful about the relationship of humans as creatures with their God as *Khaliq*. In this research, what is Information Technology Theology means the study of the philosophy of divinity in information technology and efforts to internalize Divine values in the application of Islamic education management through information technology. This research concludes that there is God in Information Technology, there is *tajalli* (manifestation) of God in information technology. This study agrees with Ibn Arabi's *Huwa la Huwa* concept, there is *tajalli* of his attributes such as *al-Ahad*, *al-Shamad*, *laysa Kamitslihi Shay'un*, The Organizing, The Justice, which can be internalized into the character of the manager of Islamic educational institutions as *khalifah fi al-ard*, through the application of information technology for Islamic educational institutions, so that there is a pious human being who is orderly, sincere, honest and fair according to the goals of Islamic education. It is also concluded that information technology is a way to internalize Divine values in Islamic educational institutions, better the application of information technology, better the quality of Islamic educational institutions. This research method is a qualitative research with a descriptive approach, which describes the meaning of information technology theology, application of information technology in Islamic educational institutions and the realization of Divine values through the application of information technology. The research method uses literature study, by classifying, comparing and relating concepts to the theories that are compiled.

Contribution/ Originality: This study aims to conceptualize or describe the paradigm and linkages between information technology theology in Islamic education management.

Keywords: *theology, information technology, Islamic education management*

Introduction

ICT is the convergence between computer technology as information processing and communication technology. The convergence product currently appears in the form of a smartphone, which contains content (information) that humans need. This convergence characterizes the 21st century. Klaus Schwab called it the Industrial Revolution (IR) 4.0 era. Alvin Toffler and Heidi Toffler argued that the complex and contradictory human history is described in a pattern divided into three major changes or waves. The First Wave is a transformation of nomadic and hunting patterns into the era of agroculture. The Second Wave is an era of engine power, marked by the industrial revolution (18th century). This era is a simple cultural transformation of farming to work in factories. The Third Wave is an era of information or knowledge.¹

Observe what Toffler predicted. Every information is always presented at any time on the internet. Pingdom explained the wave of global internet statistics throughout 2018. In the third quarter of 2018, Facebook had Monthly Active Users (MAUs) reaching 2.7 billion. Youtube has 8 billion users every month (May 2018). Google handles more than 1.2 trillion search queries per year, averaging 40.000 searches per second. Internet domains have reached 339.8 million registrations, as of the end of the second quarter of 2018. More than 1.93 billion websites are active on the internet as of November 2018. In the US in 2019, there are an estimated 224 million digital shoppers, nearly 2 zettabytes of internet traffic processed in 2017. That means two trillion gigabytes of more than 30 billion iPhone data². Another report states, there are 2.2 billion email users worldwide (425 million use Gmail (the largest email service today); 634 million websites (addition 51 million websites every year)³. More than 3.8 billion people worldwide using the internet. This indicates, worldwide internet penetration reaches 51%.

The Indonesian Internet Network Providers Association (APJII) revealed that 64.8% of Indonesia's population is connected to the internet. The survey conducted throughout 2018 found that 171.17 million out of 264.16 million Indonesians were connected to the internet. This indicates an increase of 61.43% compared to 2014 (88 million users), or 10%

¹ Alvin Toffler, *The Third Wave*, Canada: Bantam Book, 1980

² Look at di <https://www.pingdom.com/blog/2018-pingdom-year-in-review/#>.

³ Look at <https://inet.detik.com/cyberlife/d-2147888/pengguna-internet-24-miliar-jumlah-situs-tembus-634-juta>. Also look at <https://www.youthmanual.com/post/fun/did-you-know/data-pengguna-internet-tahun-2017-dan-apa-kesimpulan-yang-bisa-diambil-dari-data-tersebut>

compared to 2017 (143.26 million users)⁴. Indonesia is the 6th largest internet user in the world.

The internet - including artificial intelligence, e-commerce, big data - is one of the pillars of IR 4.0 which has a major impact on various fields of life. IR 4.0 has brought digitalization and automation to the combination of the internet and manufacturing, as well as encouraging the automation system in all activity processes⁵. According to Schwab, IR 4.0 gave rise to breadth-power-reach based technology and innovation, that spread much faster and wider than before, which continues to open up in several parts of the world.⁶

Another pillar is Google which has succeeded in making the internet a much more efficient media of information. The Google engine is designed to get better results when the web grows. The more sites and links that Google evaluates, the more accurately it classifies pages and their ranking of quality. When the traffic is getting heavy. Google is able to collect more behavioral data including religiousness. Google can connect its search results and advertisements in a more accurate way to users' needs and wants.⁷

In Indonesia, the internet revolution and Google have changed almost all lines of life. In the economic sector, there has been a change in the old business model to the crowd business era. There is e-commerce that makes shopping easy. In the political field, legislative and executive candidates use buzzer services to increase their publicity. Demands for openness, democratization and human rights have emerged in various parts of the world, as happened in several Middle Eastern countries, known as the Arab Spring, originating from the social network, Facebook. In the religion field, theologians, spiritual teachers and philosophers compete to harness the power of cyberspace to transform teachings, worship, religious organizations and even core religious organizations. They strive to understand and exploit the radical-effect of cyberspace on religion. The internet changes one's diversity. Cyberspace has become a new religion⁸. The internet is more

⁴ Look at APJII sites in www.apjii.or.id. Survey results at <https://apjii.or.id/survei2018s>

⁵ Hendra Suwardana, *Industrial Revolution 4.0 Based on Mental Revolution*, Jurnal JATI UNIK, vol.1, no.2, 2017, p. 102-110. Look at, Andreja Rojko, *Industry 4.0 Concept: Background and Overview*, Jurnal ECPE European Center for Power Electronics e.V., Nuremberg, Germany, p. 79.

⁶ Klaus Schwab, *The Fourth Industrial Revolution*, Switzerland: 2016, WEF, p. 12 – 13.

⁷ Nicholas Carr, *The Shallows: What the Internet is Doing to our Brains*, New York: WW. Norton & Company, Inc., 1st ed, 2010, p. 96

⁸ The phenomenon of the cyberspace (internet) revolution invites people to explore religions from sites built by religious people from figures to virtual congregations, internet priests, virtual da'wah, and virtual places of worship. Zaleski reviews the struggle of believers in cyberspace by exploring various questions: will cyberspace separate mosques? Will congregants in mosques, churches and temples be displaced by cyberspace congregations? Can religious services be done through a computer screen? Can we do the Divine dimension in cyberspace? Zaleski shows how technology is changing our vision of spirituality and holiness. Look at Jeff Zaleski, *The Soul of Cyberspace: How New Technology is Changing Our Spiritual Lives*, NY: HarperCollins

trusted and believed to be true than legitimate and authentic sources such as experts, religious experts whose expertise is recognized. This raises social implications among religious communities.

The social phenomenon due to the development of ICT is a challenge that must be faced. Resilience to the impact of the digital era, as well as efforts to optimize ICT as a media that can provide maximal benefits, while at the same time not leading to the disappearance of social values and religious norms, is a necessity. The key word for this effort is educational empowerment, both within the family and community. It is the intensity of the educational institution's strategy that can provide the color desired by various interests⁹. This is where the importance of theological understanding of information technology, especially in its application to Islamic education management.

Research Objectives

In general, the research objective is to find, develop a paradigm of information technology theology in Islamic education management, especially the relationship between theology and information technology in Islamic education management. In particular, the goal to be achieved is to conceptualize or describe the paradigm and linkages between information technology theology in Islamic education management.

Research Methods

This research uses qualitative research methods, the research procedure will produce descriptive data in the form of written or oral documentation and observable behavior¹⁰. This research approach uses descriptive studies, aiming to describe existing phenomena, at present or in the past, based on visible facts. This method tells, analyzes, and classifies; investigate with interview techniques, observation, or with case studies.

Research Procedures

The research procedure was carried out in three stages. *First*, the pre-research stage. Identify problems through written materials, scientific and non-scientific activities, then formulate problems, what is the paradigm of theology, information technology and Islamic education management? *Second*, the research implementation stage. Preparing the necessary materials

Publishers, 1997, p. 9

⁹ Maisyaroh, Burhanuddin, Ali Imron, *School Based Education Management Perspective*, Malang: UIN Maliki Press, 2004, p. 11

¹⁰Lexy J Moleong, *Qualitative Research Methods*, Bandung: Remaja Rosdakarya, 2006, p. 3

such as research permits, research equipment and instruments, and consulting with experts, collecting data or information related to the research focus. In this stage, there are observations as well as interviews with several respondents or research sources and literature studies. Followed by collecting and extracting data from the interview results, after that conducted field data analysis to develop and prove the theory. *Third*, the post-research stage. Preparation of research reports, forum group discussions with experts, and revised reports.

Research Results

Based on data analysis, this research results obtain a model of the relationship between information technology theology in education management. See figure 1.

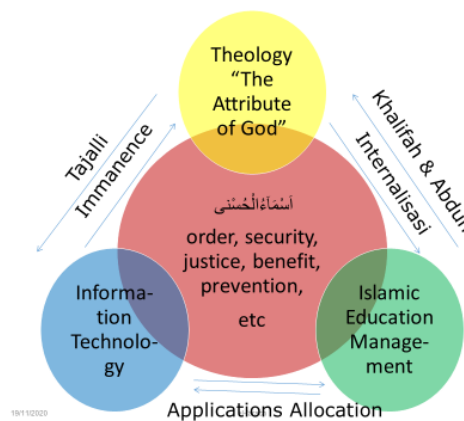


Figure 1. Information Technology Theology Paradigm in Islamic Education Management

Discussion

The Paradigm of Information Technology Theology in Islamic Education Management as illustrated in Figure 1 can be explained as follows:

Knowing God through Information Technology

Buya HAMKA quoted *Colliers Magazine* in New York, United States, there is the view of atomic scientists, astronomers, biologists, and exact scientists that there are many propositions and evidence, which establishes the existence of Being, the Most Great, Who Regulates all of these beings. The Greatest One maintains with His inayat and grace, and His infinite knowledge. It is he who controls the atomic energy, including facts and laws which are very impressive to the mind in this form. Al-Ghazali, quoted by HAMKA, was initially demanded by knowledgeable people not because of Allah, but because of the knowledge itself, but also towards Allah¹¹. According to the Quraish Shihab, Allah s.w.t is present everywhere. He is *al-*

¹¹ HAMKA, *Divine Philosophy*, Jakarta: Gema Insani Press, cet. i, 2017, p. 67 – 68.

Zahir and *al-Bâthin*. He is *al-Zahir*, which is clearly visible through the verses on the stage of this universe which are proofs of His Being and Oneness. Reason cannot imagine how much the universe could exist, let alone with all its beauty and harmony, without His presence. He who shows humans His kingdom and power, by making people aware that the evidence for His Being extends everywhere. Everything that He created - even if it is mute - is evidence that speaks of His Being.¹²

Shihab said, He is *al-Bâthin*, the Hidden Essence, Digest and His Attribute, not because it is unclear, but precisely because He is so clear that eyes and thoughts are even dull, unable to see Him. If the sun was not circulating, humans would be able to suspect that the light visible on this earth would have come from things. Man is unable to suspect that it is the result of sunlight. However, because the sun disappeared from the horizon, and set, at that time man realized that the cause was the sun, and that the sun had a form. Fakhrudin al-Razi said, “*if it is possible for the absence of Allah's form behind this universe, then at that time humans will be fully convinced that all forms come from the form of Allah s.w.t*”. Imam al-Ghazali wrote, “*His hiddenness is due to His extraordinary clarity, and His extraordinary clarity is due to His hiddenness*”.

Shihab also noted that the verses, evidences and signs of His existence and oneness are everywhere. It is stated in His holy book, also spread out in the universe which is His creation. What is spread out is found in humans, individually or collectively, as well as in objects, or natural events and society. These verses show that Allah s.w.t exists and is “being” everywhere.

For Ibn Arabi, knowledge of the essence of God is only limited to that given by Him through His names and attributes. God can be known through the cosmos and behavior. God is the substance of all beings (*jauhar*). If God reveals Himself to see, hear, and love, then God has manifested Himself in the cosmos. That is His *Jauhar*. God corresponds with His creatures. If we see *al-khalq* (being), we actually see *al-Haq* (God). This is because *al-Haq* has the characteristics of *al-khalq*, namely the characteristics of *al-Muhdatsah*. Beside that, *al-khalq* has the characteristics of *al-Haq*. Like two sides of a coin, the *tanzih* side and the *tasybih* side. Between the two is not paradoxical, has a meaning and function respectively. According to Ibn Arabi, the union of these two qualities is the unity of being (*wahdah al-wujud*), with the

¹², M. Quraish Shihab, *He Is Everywhere: God's Hand Behind Every Phenomenon*, Jakarta: Lentera Hati, cet. iv, 2006, h. 11-12

tagline “*Huwa la Huwa*”. Through this theological perspective, Ibn Arabi overcame the impasse of the debate between *tanzih* and *tasybih*. Word “He” (*Huwa*), that is, “He is the Most”, not other Him. Whereas other Him is not “He is the Most” (*la Huwa*).

Thus, the tagline “*Huwa la Huwa*” has two aspects: first (*Huwa*) in a positive form emphasizes *tasybih*, namely the likeness of God to the cosmos. Second (*la Huwa*) in negative form emphasizes *tanzih*, the absence of equality between God and the cosmos. Ibn Arabi's explanation can only be understood when he fully understands the concept of his *wahdah al-wujud*.

The existence of God's likeness to the cosmos, manifested in the binary number system. This number consists of 2 (two) entities, 1 and 0. The computer works based on the Boolean Algebra concept for the computation and representation process called Binary Numbers. Binary numbers are chosen as a data representation mechanism in computers. Electronic computers are only able to read two signal conditions, namely there is a signal (no voltage) and no signal (no electric current) flowing. These two conditions are used to represent numbers in binary code. High level (there is voltage) as a representation of number 1, low level (no current) as a representation of number 0. Number 1 is the likeness of *al-wujud*. This is a form of *tasybih* or *Huwa*. However, the number 1 is different from His essence. This is a form of *tanzih* or *la Huwa*.

Bit “0” if strung in bytes or word without the bit “1”, then “0” is no different from “00” or “000”. It is different if “10” with “100” and “1000”, or “11” is different in value from “111”. The computer will never be able to represent something if there is no role for the “1” bit. The number “1” here is the manifestation of the nature of God *al-Ahad* (The One), only one, and no numbers. Without a “1” there can be no “2”. Likewise the nature of God. If “1” is the manifestation of *al-Khaliq* and “0” is the manifestation of *al-khalq*, then without “1” (the existence of God), “0” (the cosmos will never exist). Without “1” (God's intervention), the “0” (cosmic life) would never have happened. God “1” but is everywhere, like the “1” bit which must be present in every element that exists or appears on a computer system. This shows, in the computer work system there is a manifestation of the nature of God *al-Wujûd* again *al-Ahad*.

Another representation (*tajalli*) of God's attributes is the *primary key* in database design. The uniqueness of the *primary key* lies in its different nature and the dependence of *field* on the *primary key*. For example, the Lecturer Identification Number (LIN) in the database concept is the *primary key*, because "LIN" has unique properties as required on the *primary key*. The "LIN" of each lecturer is different. Compare this with the *field* "Lecturer Name" which most likely have the same value, namely both Soekarno, or Suharto. *Field* of "Lecturer Name" depends on the "LIN". This means that "LIN" is worth "D01" for Soekarno's "Lecturer Name" must be different from "LIN" with "D02". Although it is possible, "LIN" is worth D02 with "Name of Lecturer" Soekarno as well. It can be ascertained that other fields, such as "Address", "Education level" are different from "LIN" "D01". The column defined as the primary key is NOT NULL, meaning that the value in the column must be filled (not blank). If data input is performed, but does not provide a (blank) value in the column, an error will occur in the database.

The unique characteristic of the *primary key* (in contrast to others, dependence and Not Null) is a manifestation of God's nature which refers to *أَلَيْسَ كَمِثْلِهِ شَيْءٌ*, *al-Shamad*, and *al-wujud*. The *primary key* is the foundation of everything *field*, its existence is required and determines the success or failure of database design. God is also the primary key of the cosmos, on which creatures depend. His being is needed and determines the survival of the cosmos, just like the concept of the "1" bit. In Islamic education management, bit "1" is like leadership which should not be dualism. The leader is the primary key of the members they lead.

The name *الله* as the primary key is also unique (*أَلَيْسَ كَمِثْلِهِ شَيْءٌ*). If the *alif* letter is deleted, it will read *الله* (*belonging to Allah*), if the first lam is deleted, it will read *له* (*belonging to Him*), if the second lam is deleted, it will read *ه* (He). This means that the uniqueness of the name Allah is similar to the concept of the primary key in the database.

In the study of artificial intelligence, there is a *rule base* mechanism, in the form of "if-then" rules. The computer is able to identify something thanks to the *rule base* on the artificial intelligence system. For example, a statement "if" an animal has no ears, "then" the animal lays eggs. When the computer scans an eared animal, the computer will identify the animal as laying eggs. This rule base describes *sunnatullah*. For example, "if" does good, "then" goes to heaven, and "if" does evil "then" goes to hell. Sunatullah is the provision of Allah. The *rule base* mechanism in artificial intelligence is a manifestation of the nature of God al-Hakam

(The Most Determining). In the context of Islamic education management, a manager in determining policies, adheres to the applicable *rule base*, both those originating from the Al-Quran and Sunnah, as well as legislation.

The digital footprint of a person in the past is a manifestation of nature of God *al-Mu'id* (The Most Restorer). In Islam, digital traces are used by Allah swt to evidence on the Day of Judgment, in the form of talking hands and feet (QS. Yasin/ 36: 65), and Allah swt becomes a witness, when humans act and are recorded in a Real Book, *Lauh Mahfuzh* (QS. Yunus/ 10: 61). In the context of Islamic education management, digital footprints can be used in learning resources and methods, as well as introspection materials.

CCTV technology (Closed-Circuit Television) is a manifestation of the nature of God *al-Raqib* (The Most Observe) and the nature of God *al-Mukmin* (The Most Security). In the context of Islamic education management, programmed supervision is an important requirement in the success of program implementation.

The manifestations of the attributes of Him (*Huwa*), as already mentioned, are substantially different from Him (*la Huwa*). From this description, it can be understood that everything in this world, there is resembling to God, in Ibn Arabi's concept there is *tajalli* with Him. Thus, humans can get to know *al-Khaliq* through *tafakkur* on *al-khalq*, including information technology. Information technology can be an entry point for increasing one's religious understanding.

Jeff Zaleski explained, computers and the internet have an influence on one's diversity. In his dialogue with Kazen, (one of the Jewish Rabbis), Kazen said "*the concept of inherent unity in this world, is very real shown by the internet, maybe more when compared to radio and television*". Zaleski asked Kazen, "*Does computer network technology become sacred technology? because it serves a holy purpose?*" Kazen answered him, "*yes, because in recent years, humankind has more often glorified war*". With a little humor, Zaleski told Kazen that TCP / IP is another name for god? Given the TCP/ IP function which regulates the transmission of data communication between computers in various parts of the world. Zaleski also believes that the internet is an effective means of da'wah in introducing Islam, and Islam is a religion that lives in change.

Internalization of Theological Values and Duties of the Caliphate

In its absolute sense, the term Khaliq refers only to God, while makhluq refers to all realities other than Himself, called the cosmos. Among the many creations, the most prime and highest position human being, becomes God's representative as khalîfah on earth. In the hadith narrations it is stated that humans were created in the image of God, "So Allah actually created Adam in His form" (Narrated by Muslim). It is logical that humans have similar traits to their creators. Because he was created in His image and got the spark of His spirit. God is Absolute, while the elements or Divine attributes that exist in humans are His gifts which are relative, at any time the gift can be taken by its owner. Humans knows, but God is All-Knowing. Humans are capable of being creative, but God is The Creator. Humans can control, God is The Controlling. These divine elements are instruments that are bestowed by God to humans so that they can know their true nature, to further know, approach, and establish a relationship with God who is the origin and place of return.

These elements are instruments that are implanted in a human being so that he is able to receive divine light rays. When humans know, approach and love God, then there will be an abundance of divine energy that moves and directs human behavior. Because human nature is fitri, hanif, who has many similarities to His creator. For Muslims, they should have more affectionate qualities, considering that Muslims mention at most two of His attributes.

The relationship between God and humans can be illustrated like the story of an abandoned child in the forest who is raised by a wolf. During its development, the child behaves like a wolf, even though his form is human, because he observes and imitates the wolf. If humans try to imitate and imitate His attributes, such as the story of the child earlier, this is what is called takhalluq bi akhlaq Allah.¹³

The internalization of Divine attributes in humans requires educational efforts with various methods such as observing, imitating, living up and practicing routinely and continuously

¹³ More precisely it is a "quote". See Ibn Qayyim al-Jauziyyah, *Madarij al-Salikin*, Trans. Kathur Suhardi, Ed. Al-Kautsar Team, Jakarta: Pustaka Al-Kautsar, cet. ii, 1999, p. 227. The point is to follow the *mahmudah* attributes and stay away from the *mazmumah* attributes, see Imam al-Ghazali (*al-Ihyâ 'Ulûm al-Dîn*) and (*al-Maqṣad al-Asna*). Al-Ghazali did not citation from Rasulullah s.a.w. Al-Mubarakfuri (*Tuhfah al-Ahwazi*) and al-Abadi (*'Aun al-Ma'bud*) also mentioned the importance of having morals with the morals of Allah s.w.t. This quotation is often quoted by Quraish Shihab (*Qur'anic Insight*), as well as by Nurcholis Madjid (*Living up to the Akhlaq of Allah*). Shihab explained that among the exercises to imitate the "Akhlaq" of Allah s.w.t is through fasting. In accordance with the fitrah of Allah s.w.t, not eating, drinking and having a partner (QS. 6:14 and QS. 6: 101). Nurcholis explained that having character with Allah's Akhlaq is living and imitating His attributes.

without fatigue. An absolute requirement in the internalization process is a clean heart, because Allah is The Clean and The Holy. A magnet can only be paired with objects that have the same elements. Allah can only be approached and imitated by His attributes, if the elements of cleanliness and purity of heart are maintained. In the Industrial 4.0 era, educational efforts were supported by information technology.

These divine attributes are summarized in *Asma al-Husna*. The Nature and Essence of Allah do not need a name. No name would be fit to be attached to Him. The name and attribute of Allah are needed by humans. Without names and attributes, it is difficult to understand and approach Him. That is why Allah taught Adam the first to know names. Without names, it is difficult to build knowledge relations, it is difficult to distinguish between one entity and another, there will be no order and there is no knowledge. Science essentially consists of “names”. Here in lies the educational value and the relationship behind God’s name. Humans can know and imitate God’s character and practice it in their lives through His names. Feeling God’s presence through His name will encourage people to do good and do good deeds according to His attributes.

Asma al-Husna not only shows the attributes of Allah s.w.t, but also becomes an entry point to get to know and get closer to Him. Everyone can access and identify with His names. An honest educational institution manager can control his staff to remain honest, and not behave in a corrupt manner. He also made innovations to achieve his vision. Essentially he has imitated and practiced *Asma al-Husna*, such as *al-Haq* (Most True), *al-Mudabbir* (The Most Regulator), *al-Raqib* (The Supervisor), *al-Khaliq* and (The Most Creator) in his life.

Humans who have the theological values of *Asma al-Husna* will have the character of the perfect *caliph fi al-Ardl*. The habituation of *al-Mu'min*'s character will show an attitude of giving security to others, this is related to the aspect of feeling the presence of Allah, he will feel happiness in a narrow or spacious situation. This indicator is a reflection of the habituation of *al-Mu'min*'s character¹⁴. The results showed that there was a positive relationship between *Asma al-Husna* internalization and spiritual intelligence¹⁵.

¹⁴ Nur Fathonah, *Relationship between the Habituation of Asmaul Husna and the Spiritual Intelligence of the XI Grade Students of MAN Bantul, Yogyakarta*, Yogyakarta: UIN Sunan Kalijaga, 2017, p. 26.

¹⁵ Nur Fathonah, *Relationship between the Habituation of Asmaul Husna and the Spiritual Intelligence*, p. 107.

The duties of the human caliphate was not given without equipment. Allah has equipped humans with complete intellectual potential. Al-Quran explains 7 dimensions of human intelligence, namely *jism*/ body (QS. al-Baqarah/ 2): 247), *aql*/ mind (QS. al-An'am/ 6: 32), *lubb*/ mental (QS. Ali Imran/ 3: 190), *qalb*/ emotion (QS. al-Qashash/ 10: 28), *naafs*/ soul (QS. al-Baqarah/ 2: 48), *ruh* (QS. al-Sajdah/ 32: 9), and *fu'ad*/ spiritual (QS. al-Sajdah/ 32: 9). Spirituality is the emanation of Allah's nature which is bestowed on humans, since Allah blew His Spirit when humans were in the mother's womb. With the Spirit of Allah, life begins, and with it, man's spiritual intelligence can develop into a spiritual one. Spiritual intelligence is the ability to always draw closer to Allah, by listening to the inner voice.

The seven dimensions represent the complete potential of human intelligence to support the task of his caliphate. So, education is a necessity in gaining intelligence¹⁶. Before Adam as was appointed as caliph, he gained intelligence by getting lessons from Allah about the names of objects (QS. al-Baqarah/ 2: 30-33). Among the efforts to reach the potential of this intelligence through education and training, namely by *zikr* and *syukr* (QS. al-Fatihah/ 1: 1-2), enforcing prayer (QS. al-Baqarah/ 2: 45), *amru ma'ruf* and *nahy munkar* (QS. al-'Ankabut/ 29: 45), and *akhlaq al-karimah* (QS. Shad/ 38: 46). One of the efforts to improve *akhlaq al-karimah* is by *takhalluq bi akhlaq Allah* or internalization of theological values.

Allocation of Information Technology in Islamic Education Management

Using of IT in education has become an inseparable part. There are four areas of IT utilization in Education. The first area is the use of the internet as the main pillar of the 4.0 industrial revolution. The internet makes it possible to share information, interact with various sources, collaborate research with various parties, wherever and whenever. The Internet of Thing triggers a tendency to shift in education from conventional face-to-face education to a more open education. Ivan Illich predicted "*Deschooling Society*". Extreme teachers are no longer needed. Deschooling Society is flexible, open, and can be accessed by anyone who needs it without any conditions of gender, age, or previous educational experience. The educational process is more determined by a cooperative information network between various entities (institutions, researchers, experts) by collaborating, and is participatory in nature from each interacting stakeholders, rather than with the school building.

¹⁶ M. Masri Muadz, *Intelligence of the Soul and Human Caliphate*, <https://republika.co.id/berita/dunia-islam/hikmah/14/01/26/n00epi-kecerdasan-jiwa-dan-kekhalfahan-manusia>, date Jan 27, 2014, aced on Oct 15, 2020.

The second area, computer-based learning media and multimedia (Computer-Assisted Instruction/ CAI). With the internet, IT can increase the quality and reach of learning. IT causes changes in the competitive climate, provides new and better strategies, demands basic change, and forces change¹⁷. There are opportunities for learning techniques that are two-way, collaborative, and inter-disciplinary, synchronous and asynchronous. Education model develops openly with distance learning mode, sharing resources in a network. This learning mode is characterized by that it can be used randomly, sequentially, and linearly; can be used the way the student wants it, not just the way the designer wants it; ideas are often presented realistically in the context of student experience; the subject matter combines words and visuals from various sources and involves a lot of student interactivity¹⁸. Computers can be used to provide the necessary references, visual aids, material simulations, and laboratories¹⁹.

Several formats for presenting information in CAI, including: drill & practice method, tutorial method, simulation method, gaming method, discovery method, and problem-solving method²⁰. Some of the CAI advantages²¹ are in line with several principles of learning according to the Quran, including: first, helping the teacher-student-manager limitations, in line with the principles of flexible, effective and efficient management. Second, students can learn according to their abilities, without the limits of time and space. In religion, Allah swt does not make things narrow (QS. al-Hajj/ 22: 78), does not burden a person, except in accordance with their efforts and abilities (QS. al-Baqarah/ 2: 286), and Allah s.w.t wants convenience not difficulty (QS. al-Baqarah/ 2: 185). Third, visualizing the material through computers and multimedia will increase the attractiveness of students. The visualization method is also found in the Quran about heaven and hell, in order to become a learning for humans about cause and effect. The existence of heaven and hell visualizations can increase individual religious awareness. Fourth, there is active participation of students in responding to the material and exercises arranged in the program. Fifth, the existence of the material repetition method. Al-Quran was revealed by the method of repetition (QS. al-Hijr/ 15: 87; al-Zumar/ 39: 23; QS. Thaha/ 20: 113).

¹⁷ Marquardt, *Building The Learning Organization*, p. 160-161

¹⁸ Azhar Arsyad, *Learning Media*, Jakarta: Raja Grafindo, 2003, cet. iv, h. 31

¹⁹ Ronald H. Anderson, *Media Selection and Development for Learning*, Jakarta: RajaGrafindo, 1994, p. 197.

²⁰ Robert Heinich, et. al, *Instructional and The New Technologist of Instruction*, New York: Macmillan Publishing Co., 1990, p. 356 – 359. See also Kurt F Lauckner, *Computers: Inside and Out*, Michigan: Pipin Publishing, 1990, p. 248 – 249.

²¹ Robert A. Stern & Nancy Stern, *An Introduction to Computers and Information Processing*, h. 18.

There is a suggestion to worship repeatedly, surah al-Fatihah is repeated at least 17 times (rakat) every day, surah al-Rahman verse “so, which blessings of your Lord do you deny?” there is repetition of the verse up to 30 times, this is so that people can understand the truth of the Quran. Lies (hoaxes or fake news) if repeated, will be accepted as truth. This era is called the post truth era²². Conversely, if the truth is said repeatedly, the truth will be believed.

Once the importance of repetition, Thorndike formulated the law of repetition (Thorndike Law). The law of repetition states that information that is conveyed repeatedly will be considered important by him. In Indonesia there is a saying that shows the importance of repetition. For example, the adage “*alah bisa karena biasa*”, in Java there is a saying “*witing tresno jalaran soko kulino*”. The third area, the education management information system, is the result of the application of the concept of information systems in educational organizations, which is an important factor in improving services as well as efficiency, and is one of the standards for the quality of education. Automation of service systems and information systems is the right solution for solving educational administrative service problems. Among the scope of the education management information system are internet networks, student and graduates, academic, library, human resource, financial, evaluation and reporting.

The fourth area, decision support systems (DSS), is an interactive information system that provides information, modeling, and data manipulation. It is used to aid decision-making in semi-structured and unstructured situations, where no one knows exactly how decisions should be made. DSS can support decision-making activities in a structured and logical way based on scientific facts. A decision support can present information graphically, including expert systems or artificial intelligence²³. Some DSS applications in educational institutions, are DSS for scholarships, DSS for Determination of Student Achievement, DSS for Exemplary Employees and Lecturers, and others. Four areas are supporting tools for managers in carrying out the function of the caliphate in Islamic education institutions. So, the concept of Information Technology Theology in Islamic Education Management means that God manifests Himself (*tajalli*) through information technology. By knowing His attributes or names through information technology, humans can get closer to God immanently.

²² An era, truth was created through lies. Data is made to obscure facts. See Seth Stephens-Davidowitz, *Everybody Lies: Big Data, New Data, and What the Internet Can Tell Us About Who We Really Are*, Jakarta: Gramedia, 2017, p. 105.

²³ Efrain Turban et.al, *Decision Support and Business Intelligence System*, h. 75

Theological values taken from His names, as explained, are internalized in the management of Islamic educational institutions. This internalization is an effort of the leadership of Islamic education institutions in carrying out their functions as *khalifah fi al-ard* and ‘*abdu Allah* (pious human beings). Managers as *khalifah* of educational institutions use information technology to create order, honesty, justice, balance, order, as well as the goals of Islamic education itself, the realization of a pious society.

The triangular relationship model between Theology, Information Technology and Management of Islamic Education is depicted in the diagram (See Figure 1). Reading this diagram, conclusions can be drawn through the *bayani-burhani-irfani* approach. *Bayani*, through the text of the Quran, states that humans are breathed from His spirit. Through the hadith, it is stated that humans are created based on His image²⁴. It is clear from the *burhani* that information technology (computer) is the locus of incarnation (*tajalli*) and the locus of appearance (*mazhar*) of His names and properties, such as *al-Ahad* is a *tajalli* of binary number 1. Mathematically also shows that a number is certain comes from number 1²⁵. *Al-Shamad* and *laysa kamitslihi syay’un* are *tajalli* of the primary key concept in computer programming as described. *Irfanially*, based on the author’s observations and interviews with information technology managers in educational institutions, knowledge and awareness are obtained that by applying information technology, the stakeholders of Islamic education institutions are close to God's way, namely justice. “*Be just! That is closer to righteousness*” (QS. al-Maidah/ 5: 8).

Conclusion

The study of information technology theology in Islamic education management can be concluded:

- a. God in information technology. In computer programming there are *tajalli* of God’s attributes such as *al-Ahad*, *al-Wujud*, *al-Shamad*, *Laysa kamithlihi Shay’un*, and others, but these characteristics are certainly different from His substance, such as the concept of *Huwa la Huwa* Ibn Arabi’s. Through this *tajalli*, the effort to know God

²⁴ I checked on the HadisSoft, this hadith is found in the Sahih Muslim Book, hadith no 4731. According to this software, this hadith is a *saheeh* hadith because the narrative line is not cut off to the Prophet, and the narrators are *tsiqah*, ‘*adl*, and *hafidz*.

²⁵ Nasaruddin Umar, *God and Servant Relationship*, pada <https://www.republika.co.id/berita/dunia-islam/tasawuf/12/04/09/m27b4w-relasi-tuhan-dan-hamba>. Posted on Apr 9, 2012.

through computers, as expressed by Mulyadhi Kertanegara, has the dictum "that something can only be known by the subject if there is similarity to the object".

- b. Information technology is a way of internalizing theological values in the management of Islamic education, so that human values are in line with the objectives of Islamic education, such as order, justice, security, prevention and benefit, which is a form of internalization or *takhalluq bi akhlaq* Allah by the characteristics of the nature of *al-Mudabbir* (The Regulator), *al-'Adl* (The Just), *al-Mu'min* (The Giver Security), *al-Raqib* (The Watchful), *al-Mâni'* (The Preventive), *al-Nâfi'* (The Beneficial). As explained by Jeff Zaleski, information technology affects human religious life.
- c. **Research Novelty:** God in Information Technology: Information technology is a way of internalizing theological values in Islamic education management. The better the information technology governance, the more quality Islamic educational institutions are, and the more Islamic the educational institutions are.

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