



Equilibrium Between Technology and Civilization

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Abstract

The application of science and technology is intended for human welfare and benefit, not to undermine moral and religious values. We are worried about the younger generation who apply science and technology to negative things so that it has a bad influence on their behavior and personality. We will be disappointed if the younger generation has advanced knowledge and technology but has bad morals because it is not based on moral, ethical and religious values. Therefore, it is necessary to emphasize the balance between the use of technology and human welfare. The key is that the application of technology must be integrated into Islamic religious values and moral values and consider environmental ethics. This means that the application of technology takes into account the value of the natural environment, and the social environment.

Keywords: Civilization, Technology, Equilibrium Between.

1. Introduction

The development of science and technology lately is growing very fast. Currently, we are in the digital age. Many human activities both at work and in daily life are based on applications or online features such as buying food and drinks, buying goods, using transportation services and applying for jobs. The use of technology that is connected to the internet will simplify and speed up an activity. The application of digital technology has a positive influence on various human activities so that the results are more effective and efficient. However, these technological advances have a negative effect if the user's behavior is not based on qualified ethics, morals and religion. We often hear of cyber crimes such as bank account break-ins, data theft, data engineering and online fraud. In addition, we also hear of hoaxes and bullying. These examples are behavior that is not commendable and detrimental to others.

The application of science and technology is intended for human welfare and benefit, not to undermine moral and religious values. We are worried about the younger generation who apply science and technology to negative things so that it has a bad influence on their behavior and personality. We will be disappointed if the younger generation has advanced knowledge and technology but has bad morals because it is not based on moral, ethical and religious values. Therefore, it is necessary to emphasize the balance between the use of technology and human welfare. The key is that the application of technology must be integrated into Islamic religious values and moral values and consider environmental ethics. This means that the application of technology takes into account the value of the natural environment, and the social environment.

2. Results and Discussions

Industrial Revolution

The journey of the world industrial revolution started from the industrial revolution 1.0 in 1784 with the revolution (use) of the steam engine in industry. Then continued the industrial revolution 2.0 in 1970 with the revolution (use) of mass production machines powered by electricity/oil. Furthermore, the industrial revolution 3.0 in 1969 with a revolution (use) of information technology and automatic machines. In 2011, the industrial revolution 4.0 was introduced with the use of an integrated machine on the internet network.

Utilization of machines that are integrated with the internet network has been applied in various fields such as industry, offices, companies, government and trade. Human activities are getting easier such as ordering plane tickets online, shopping online, paying bills, and learning online. Lately, in general, people are already using smartphones. The application of technology provides convenience and a positive impact on human life, but there are also negative impacts if it is not applied properly and is not based on moral and religious values. Almost all areas of people's lives use technology. The application of basic technology fields includes agriculture, materials, energy resources, manufacturing, information and health technology. The use of smartphones is so great for children, teenagers and adults in various fields of life. Simamora and Ningsih's research (2020) concluded that most students use smartphones for more than 4 hours 17 minutes a day. The duration of use is included in the high category. Another study concluded that most computer users who spend more than 4 hours a day complain of neck pain (Situmorang et.al, 2020). Meanwhile, Noviana's research (2016) concluded that smartphone use among teenagers is in the moderate category, which

spends 3 to 5 hours. The intensity of smartphone use among teenagers can be reduced if there is self-control. Research by Nurningtyas and Ayriza (2021) concludes that there is a significant influence of self-control on smartphones among adolescents in Yogyakarta, meaning that self-control can be a predictor of the intensity of smartphone use. The presence of a smartphone will affect a person's lifestyle. Research by Fulzele and Chirde (2022) concludes that the brand aspect has a significant influence on the intensity of buying a smartphone. Meanwhile, Silvanasari and Rosalini (2021) in their study concluded that poor sleep quality in adolescents with a poor lifestyle. The implication of this research is the need to maintain a healthy lifestyle. Research by Kuntoyo et.al (2021) concluded that there is an effect of long exposure to smartphone light on visual acuity. In addition, research by Battung et.al (2013) concluded that as many as 20% of medical students at Sam Ratulangi University smartphone users experienced mild hearing loss in the left ear. Research by Ferianti and Sunawan (2021) concludes that there is a relationship between the variables of depression and the choice of smartphone applications with smartphone addiction in students. Game applications are applications that have a greater influence on students' smartphone addiction, compared to social media applications. Meanwhile, research by Gowthami and Kumar (2016) concluded that it is very important to understand the positive and negative impacts of Smartphones. It is necessary to educate users on how to use Smartphones intelligently. Education should emphasize increasing positive impacts and avoiding negative ones so that users can take advantage of this exciting technology. Security and control of access to applications need to be in place to reduce smartphone abuse at school, at home, and at work. Smartphones can certainly be smart if vendors, society and technologists understand their responsibility towards using these devices intelligently to get more benefits in business, education, health and social life. The strategy is to avoid using Smartphones intelligently rather than trying to avoid using Smartphones. Gamze et.al (2020) stated that students who have higher smartphone addiction scores have a negative impact on interpersonal communication and social life and reduce learning efficacy. Therefore, students should be better informed about the benefits and risks of using smartphones in education, with precautions given against excessive use. Yang et.al (2020) concluded that adolescent girls' excessive use of social media leads to unhealthy self-esteem, which exacerbates appearance and anxiety about self-evaluation. Bong et.al (2021) stated that on weekdays, perceptions of stress, sleep satisfaction, depressive symptoms, and indicators related to suicide worsened in both groups who used

smartphones for 4 hours per day. Andrade et.al (2020) stated that students who use smartphones excessively experience mood disorders and symptoms of depression.

The development of various industries using advanced technology must use the principle of sustainability. Advanced industry is the result of human innovation. Industry generates waste which is sometimes not managed properly so that it damages the environment. Al-Qur'an Surah Ar-Rum verses 41-42 which means as follows:

“Corruption has appeared on land and at sea due to the deeds of human hands; Allah wants them to feel some of the (results of) their actions, so that they return (to the right path)” [41]

“Say (Muhammad), “Travel on the earth and see how the ancients ended. Most of them are people who associate partners with (Allah).”[42]

Achmad's research (2021) states that social changes that occur among citizens are freedom of expression in public spaces so that technology has an impact on them to actualize themselves, while the netizen community changing the interaction process that prioritizes information technology and shifts values and norms in society and has negative and positive impacts. Mathur (2011) mentions tourism has a massive impact on people's lives where connections and interactions occur because of changes that occur in society. Social change brings a lot of economic development. These social changes are in the form of increased learning and changes in the value system of society. Society is in the post world war era where people live in peace with each other. Meanwhile, Yonda (2016) mentions that after Soviet Socialism collapsed, the division of world power was divided into two blocks, namely the development of an increasingly intensive global communication system and an increasingly successful world of capitalism when inequality worsened and ecological problems spread.

Civilization

Civilization is the whole result of human cultivation that covers all aspects of life, both physical (buildings, roads) and non-physical (values, order). An advanced society in a certain culture means having a high civilization. Civilization is part of a refined, advanced and high culture. Civilization is a collection of human cultivation that covers all aspects of human life consisting of physical aspects (such as buildings and roads) and non-physical aspects (such as the value of the order of life, arts and culture, science and technology) as well as other aspects (such as language, history, tradition) whether it is done individually or in groups or in

society. Civilization is a relatively high level of cultural and technological development in various aspects of human life. So, civilization in general is a rule of politeness, gentleness, hospitality, kindness and politeness in everyday life. The implication is that it must be implemented in a balanced manner based on moral and religious values.

Phenomena that occur in society are high technological advances (eg smartphones) but in the use of these technologies sometimes ignore politeness in relationships. An example of impolite communication between students and lecturers through the WhatsApp application “Sir, I am already on campus. Where are you father? I want a consultation. Wrong use of smartphones such as bullying friends, hate speech and cybercrime (such as hackers).

Society, Industrial Revolution 4.0 and Technology.

The application of the industrial revolution 4.0 has given various negative effects on humans. Society 5.0 aims to improve the quality of human life, not to increase the power of technology. Intelligent service aims to improve the quality of human life, not to increase the power of technology. A service always involves human interaction and perhaps non-human. We need to understand what human-to-human and non-human interactions are to understand what intelligent services are. Interaction is (equivalent to) the 'sharing' of information among participating agents. Furthermore, how educators can educate today's young generation to avoid the influence of the industrial revolution 4.0. Ways that can be done to avoid or reduce these negative influences include increasing highly competitive human resources, increasing superior human resources mastering IT, increasing human resources with humanities and increasing human resources with civilization.

How to direct the mindset of the younger generation to avoid the negative effects of the industrial revolution 4.0 . Ways that can be done include:

- 1) Fostering the young generation must have high achievement motivation because of the tight competition in life.
- 2) Strengthening resistance to stress due to the complex and intense competition of life.
- 3) Strengthening civilization as a result of the depletion of social relations.
- 4) Implementing technology based on religious and moral values.

Some of the basic features of the Industrial Revolution 4.0 include:

- 1) Big Data Big data platforms help companies

analyze and make meaningful decisions.

- 2) Smart Factory machines and equipment can improve processes through automation
- 3) Cyber physical systems (cyber physical systems) Cyber-physical systems are the integrity of computing processes, networks and physical processes
- 4) Internet of Things (IoT) IoT is a concept that basically connects any device to the internet.
- 5) Interoperability of physical, human and Smart Factory cyber system connections that communicate with each other via the Internet of Things

Keep in mind that the Industrial Revolution 4.0 also has weaknesses, including:

- 1) Reducing the need for manpower in industrial processes,
- 2) Data security issues: digital crime
- 3) Privacy issues, regarding production and proprietary information.
- 4) Humans must exercise strict control during production (moral aspect).
- 5) On the social aspect, it has the potential to weaken direct social contact and social care.

Challenges Facing the Industrial Revolution 4.0 include:

- 1) Quality human resources (HR).
- 2) Creative in life.
- 3) Innovate with competitiveness.
- 4) The shift of the human workforce towards digitalization.
- 5) Strengthening civilization.
- 6) Strengthening soft skills (behavioral and personal skills).

Dehumanization VS Civilization

- 1) Dehumanization means the depletion of human nature and emotions to others, human skills will be shifted by machines and there is a phenomenon that is less humane to humans.
- 2) Civilization means the peak of culture with a polite, refined, and virtuous appearance.
- 3) The role of educators and community leaders is to provide intervention/behavior modification so that the application of technology is always based on noble human values. So, the application of the technology must be humane. The application of advanced technology is not useful if it is not based on Islamic religious values. In other words, the application of advanced technology must not conflict with the noble teachings of religious values.

The negative impacts of the Industrial Revolution 4.0 include:

- 1) Reduced social interaction to become a means of spreading lies that can damage the pillars of the nation's life

- 2) Reduced cohesiveness of social groups
- 3) The loss of a job that will be replaced by the sophistication of the internet of things (IOT), artificial intelligence and other applications
- 4) Pollution and waste generated by factories, machinery, and chemicals can pollute the environment.
- 5) Climate change, environmental pollution, and other things that change the process of production and transportation.

The impact of globalization on communication and information, including online data storage, online newspapers, online maps, online learning, online shopping, online communication and working from home. This will shape human behavior. The application of good behavior requires honesty, discipline and responsibility.

Humans are very busy. The busyness, among others, in using smartphones, some people have experienced smartphone addiction. "And it is He Who created the night and the day, the sun and the moon. Each of them circulates in its orbit" (Surah Al-Anbiya: 33).

The importance of science. Humans are encouraged to seek knowledge for the welfare of themselves and the wider community. "Allah raises the rank of those who have knowledge of knowledge" (Surah Al-Mujadalah: 11).

Technology is also indispensable in human life, for example the use of laptops, smartphones, and the internet. But people are sometimes enslaved by technology. Technology is used for human life and benefit. "And there is no life in this world, apart from playing and joking. And indeed the village of the hereafter is better for those who are pious. Then don't you understand it?" (Surat al-An'am: 32)

Gadget addiction: causes health, personal & behavioral problems

According to Utomo (2017) Islam is not only a religion, but also a civilization. Islam contains principles in all aspects of life, so that it becomes a value that guides human life. But in its development, the value order of Islamic civilization began to be eroded by a number of factors. One of the reasons for the development of the internet. If it is based on Islamic principles, the internet will have a positive impact on Islamic civilization while if it is violated it will have a negative impact. Various studies conclude that agricultural technology is developing rapidly, but has not been used optimally. Exploitation of natural resources is quite large, but its utilization is not good and inefficient (Sueb, 2013; Tohari et.al, 2018). Ezimah (2021) concludes that every century of intervention contributes to environmental damage, namely

environmental degradation.

Wilantika (2017) concluded that if you listen to music with a sound that is too loud and long, the quality of hearing will decrease. In addition, he concluded that people who are addicted to using smartphones have the potential to wake up late in the morning because they just slept before dawn. The use of smartphones can damage eye health (Ahmad et.al, 2018; Puspita, 2019). Chairil and Oktaviani (2020) concluded that using a cell phone more than 60 minutes a day had a worse hearing threshold.

3. Conclusion

The development of advanced technology is very useful for human life. Industry 4.0 technology has a positive and negative influence on human life. The negative effects of advanced technology include decivilization (data theft, hacking, hoaxes and fraud). Life in the digital era requires honesty, discipline and responsibility. A strong religious foundation will support life in the technological era. The use of advanced technology must be based on moral values, ethics and Islamic religion. The use of technology must be integrated with Islam and there must be a balance between the two aspects. If technology is not based on these values, then there will be destruction, loss and injustice for users and others.

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