

# RELIGIOUS EDUCATION OF BUDDHISM AND THE FOURTH INDUSTRIAL REVOLUTION

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## 1. INTRODUCTION

The digitization of education and academia is being debated diversely. Recently, in all disciplines of Korea, the Fourth Industrial Revolution and Artificial Intelligence are mentioned in important terms. Many economists predicted that the development and digitization of science and technology changed everything and the speed and change of that innovation was explosive at the World Economic Forum.(Schwab, 2016). Changes in organization and individuals in the world are totally different revolution from the former, more fundamental. Changes are occurring in methods that communicate with social work methods. Each government and institution are preparing for a rapid system transition. In the field of education and health care, we are making efforts to improve the system while directly experiencing the development of fusion technology.

The development of innovative science and technology serves as a catalyst to consider human identity and worldview. The change in the Fourth Industrial Revolution is not the only question of what will changes. We ask the fundamental question about who we are and how this world is composed. We need to worry about whether there will be any change in existing identity of human and nature that we had. We should also think about how Artificial Intelligence

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realizes the thoughts and emotions that we considered human. In order to respond to this social change, we need to worry about the religious and ethical issues we face.

The change of religion will not be an exception in the process of transformation in the era of the Fourth Industrial Revolution. It could not predict all the specific aspects of what the Fourth Industrial Revolution will have on religion. However, there will be many changes, and the change needs to be accompanied by a social need to bring human life as positively as possible. In this paper I am trying to explore the problem of Buddhist religious education which is faced in the era of the Fourth Industrial Revolution according to the trend of such time.

## **2. FOUR INTELLIGENCES AND BUDDHIST EDUCATION**

Klaus Schwab has described the following four human intelligences that can bring out the potential of destructive innovation in the era of the Fourth Industrial Revolution (Schwab, 2016: 251).

The first is situational-contextual intelligence. This concept refers to the ability to predict trends in changes and to draw conclusions from facts that are gleaned in fragments. This intelligence enables one to form necessary relations anytime and anywhere, analyze required information, and to make the best decisions possible. One is capable of such intelligence when one can increase connectivity across boundaries and competently build networks.

Relating this, Buddhist religious education seems to attract attention, obviously is the formation and strengthening of networks between religions.

Understanding situations and contexts by increasing connectivity and building networks is not limited to the religious context. In order to address the various social, structural, and ethical issues that we are experiencing and are bound to experience in the current era of the Fourth Industrial Revolution, it is necessary to interact and cooperate with more diverse social organizations, including academia, civil society, government, and business.

The second is emotional intelligence. Emotional intelligence

is the ability to notice one's own thoughts and emotions and to use them in daily life. This concept is not the opposite of cognitive intelligence, which involves rational thinking. Rather, it is the capability to use the cognitive functions of the brain. In fact, it has been developed and utilized by general corporations and organizations in their various psychological and cultural programs. Organizations with higher emotional intelligence tend to be more creative, and they are capable of quicker recovery from problematic situations in a constantly changing world.

Emotional intelligence—the functioning of the mind and its utilization—is the core of traditional Buddhist religious education, which has provided various learning and training programs related to the “mind”. Of course, it is not possible to equate the “mind” with the “emotion” in emotional intelligence. Nonetheless, considering that emotional intelligence is, in fact, the intersection of brain and psychological functions, a path for the better use of the cognitive ability of thinking, studying the “mind” may be a good way to develop emotional intelligence. In the era of the Fourth Industrial Revolution, changes are expected in the educational methods and media of the study of the “mind” that Buddhism currently provides. However, the fundamental content of learning and training need to be continuously developed and utilized.

The third is inspired intelligence; it is the ability to constantly explore meaning and purpose. The most important thing in inspired intelligence is sharing (Schwab, 2016: 255), which means the balancing of directions and methods between individual pursuits and the common goal of society as a whole.

One of the biggest changes caused by digitalization is the formation of an individual-oriented society. The society of the Fourth Industrial Revolution is hyper-connected; all information is shared as the scope of human relations expands globally. Physical distance or space becomes meaningless, and individual values and interests define one's membership in the community. Youth are familiar with digital identities created on online platforms and in the media rather than their identities as citizens.

One of the issues to be considered in the balancing between

individuals and organizations is the individual's religious identity. Buddhist denominations and other religious groups have previously sought to form and maintain the same identity among religious believers. However, it is possible that identity in the Fourth Industrial Revolution may be formed with a different meaning from that of the contemporary Buddhist. Individuals may establish a relationship with Buddhism by participating in certain social activities without necessarily joining directly. Others may not fulfill "the Three Refuges" as Buddhists but follow other religious doctrines and programs. There is a possibility of religious organizations autonomously communicating by necessity, rather than due to a sense of religious belonging or per denomination, and that religions will become more active than they are now. In the individual-oriented society, Buddhist communities need to devise practical ways of relating to individuals and setting common goals.

Physical intelligence is the fourth concept. It refers to the ability to cultivate and nurture individual health and happiness. Physical intelligence is a necessary attribute to maximize the three intelligences mentioned above. A sound body has a positive impact on cognitive and emotional functions—we think and feel. The balance among body, cognitive function, and emotional feelings is an indispensable factor not only in the real world but also in carrying out one's life in a future virtual or augmented reality. Currently, we are learning how to manage and monitor our body's functions and activities through wearable body devices, procedures involving implants in the body, and brain research. In this hyper-connected society, the information of our body's functions and activities will become data, providing us with the opportunity to experience a new world that is different from the physical world of time and space we experience today.

The balance between mind and body is often mentioned in Buddhism. Indeed, changes are expected in the educational methods and evaluation of Buddhist rituals and meditations if various devices that can monitor physical functions are developed and applied to the religious practices.

### 3. ARTIFICIAL INTELLIGENCE AND RELIGIOUS EDUCATION

The world's first robotic Buddha image, Android Kannon(觀音, Avalokiteśvara) "Minder" was completed and was announced on the 23<sup>rd</sup>, last February in Kodaiji(高台寺) in Kyoto city. After Kodaiji monks and others opened the eyeglasses, the minder did the first explanation to preach the teachings of the Heart Sūtra(般若心經). As for the minder, Kodaiji(高台寺) was produced with the cooperation of Ogawa Kohei(小川浩平), the instructor of Osaka University(大阪大学) from September 2017. Minder is 195 cm in height, 90 cm in width, 90 cm in depth. Its face and hand parts are made of silicone, but most parts evoke human imagination, so aluminum material is exposed. On this day, the monks of Kodaiji made a legal requirement to welcome the new Kannon Bodhisattva statue to the temple. In addition, Minder went to the first Buddhist sermon for about 25 minutes. With the theme of the contents of the Heart Sūtra(般若心經), it said, "Śūnyatā(空) means everything will keep changing."

Artificial Intelligence has been developed to provide optimal customized solutions for human life through continuous information collection and algorithm analysis in real time. However, Artificial Intelligence does not remain as a tool of mechanical meaning at present. Although it is a virtual space, it is expanding its scope by mimicking the relationship with human emotion. The attributes of continuous self-development of Artificial Intelligence differs from that religious introspection of human. However, we should keep in mind the possibility that it will evolve on its own and change close to the characteristics of religious human beings. The current situation that can be foreseen is that an object equipped with artificial intelligence imitates emotional and spiritual aspects in the form resembling human beings and is humanized.

Humanization of Artificial Intelligence means that various things that programmed human thoughts and emotions can be utilized by forming relationships with humans in physical space or virtual space. The influence of Artificial Intelligence depends on who controls in the short term. However it depends on whether Artificial Intelligence can be controlled in the long run. If the spirit is called the realm of sattva, it cannot be denied that the intelligent

object still imitates the spiritual world of human being, but is still the force of matter to overcome. It is a substance that is shaped by human beings and imitates human beings, but eventually controlled by nonhuman beings. Considering the possibility that Artificial Intelligence plays a role of human, and is moved by collective forces that can control human, first of all, what is necessary is religious learning of artificial intelligence.

Religious learning of Artificial Intelligence literally teaches robot with Artificial Intelligence. One way is to program the Artificial Intelligence to respect the core values of religion just as it learns social rules, mathematical principles, and laws.

This is to ensure that the function of continuous reflection in order to acquire the universal value of all religions as like love, respect for human beings and life is taken as essential information.

If this is reflected in the form, it is likely that communication programs will be possible for robots that imitate sitting meditation, a human being who monitoring the robot's learning programs, to communicate religious insights and ideas.

The Fourth Industrial Revolution cannot be free from the logic of capitalism, and the IoT (Internet of Things) and Artificial Intelligence aim to produce more added value. Therefore, there is a constant problem in the social perception that cannot keep up with the development contents and speed of Artificial Intelligence in many parts of society. In this concern, Buddhist and other religions' interest is a fundamental question of humanity and world view triggered by Artificial Intelligence.

The reason why religious education of Buddhist coexists in the discourse of the Fourth Industrial Revolution is because it is a way of gathering the wisdom of mankind into the social change that Fourth Industrial Revolution will bring. It is also intended to take measures against some ethical and religious problems that we have to face as human beings in the era of the Fourth Industrial Revolution. On the other hand, it is an effort to adapt and survive the educational organization of Buddhist in the age of the Fourth Industrial Revolution as a group of society. As the educational environment of the Fourth Industrial Revolution era changed, it

would be inevitable to change the way of religious education and educational media of Buddhism. The content of the education will be reflected in the analysis and interpretation of characteristics of the Fourth Industrial Revolution era based on the doctrine of Buddhism. The aim of education is to cultivate the human capacity necessary for the Fourth Industrial Revolution era.

Artificial Intelligence learns human beings. The future of mankind depends not on Artificial Intelligence but on what we do. In addition, we are neither a God, nor an agent of God. Man is not the lord of all creation. It is just one of those beings that should live together.

#### **4. NEW TALENT IN THE ERA OF THE FOURTH INDUSTRIAL REVOLUTION AND RELIGIOUS EDUCATION OF BUDDHISM**

Buddhism has not only functions of religion but also functions of education. It is to make people able to complete Buddhist personality through education about Buddha's teaching (Kim, 1996: 39).

Especially the educational function of Buddhism represented by wisdom may have succeeded in fostering the intellectual talents required by society through knowledge education in the institutional framework of school education. However it suggests that formal school education really does not achieve the success of 'completion of personality'. The advantage of Buddhism is thus that it can be accomplished through the practice of Buddhism, 'completion of personality' which has not been achieved through school education.

It can be seen that 'the qualitative element of education' is inherent in such educational function of Buddhism. The qualitative aspect of Buddhist education seems to be very helpful not only for formal education but also for 'religious education' to establish directions of future.

From the viewpoint of qualitative research in curriculum through Buddhist curriculum and practice, the possibility of effectively achieving the educational goal of 'completion of personality' is very high. It is possible because Buddhism has an ethical attitude basically by observing the precepts and controlling the sense organs. Buddhism further places the purpose through the

training of the mind such as Samatha and Vipassanā to reach pure Nirvāṇa enlightenment. The achievement of this enlightenment is the perfect ‘completion of personality’.

Therefore, it can be called ‘educational curriculum’ when seeing the process of educational curriculum and practice of Buddhism, that is, the whole process of enlightenment of the highest personality completion from the perspective of education. In other words, if the curriculum is the process of planning, practicing and evaluating the contents of education to achieve the purpose of education, in the case of Buddhism, all processes planning and implementing what kind of contents and how to teach for the purpose to make it to reach enlightenment for Buddhists or people who first introduced to Buddhism to reach enlightenment are ‘Curriculum’. Therefore, we can call it ‘Curriculum in Buddhism’.

The purpose of religious education of Buddhism can be explained in two ways. The most basic is to seek bodhi above (上求菩提). Another thing is trying to save all sentient beings (下化衆生). It is the fundamental spirit of Buddhism that self-educational efforts to seek enlightenment as well as the type of other-educational effort based on the deep compassion, to enlighten society and all sentient beings should be exercised. In other words, the goal of Buddhism is to enable other all sentient beings, including oneself, to realize the truth and implement enlightenment in the life of an individual and community life. And this is also the purpose of desirable Buddhist education as it is. Buddhism does not conquer the environment and the world, but emphasizes the sympathy and agreement with it, persuading the organic relevance between humans and the world. The Buddha taught the importance of relationship through the worldview of dependent origination. The fact of religious education in Buddhism has focused on awareness of these relationships. Then, how is the relationship between in individual beings newly organized in the era of the Fourth Industrial Revolution?

The primary factors that explain the relationship between the newly organized individual beings during the Fourth Industrial Revolution are the Intelligent of machines, the appearance of Virtual Reality, Hyper Connected Society. The dimension the newly expanding organization is that the relationship between



human beings and machines becomes intelligent, while the physical space and the virtual world coexist, individual beings are connected between time and place.

The characteristics of the talents emphasized by the Fourth Industrial Revolution can be divided into cognitive and moral character. Among these, attention is focused on the spirit of challenge, the personality to cooperate, the communication, the honesty, the self-led ability, the correct understanding of the rights and obligations as members of civil society, the ability to act, the ability to explore with patience and curiosity want so (Back, 2016: 59-60).

STEAM education aims at the training of human resources with interdisciplinary and integrated fostering through creative design and sensibility experiences. STEAM is an educational approach to learning that uses Science, Technology, Engineering, Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking ([https://steam.kofac.re.kr/?page\\_id=11267/](https://steam.kofac.re.kr/?page_id=11267/) Accessed 2nd February 2019). Various programs at the educational site to train human resources with STEAM Literacy which enhance the interest and understanding of integrated knowledge, processes, and nature in various fields and can solve problems creative and comprehensively have been developed and carried out (Back, 2016: 56).

However, in this respect humanistic knowledge is indispensable in establishing humanity and values as much as improving cognitive abilities. And the field that take charge of this is just religious education. Especially, in the field of religious education, various practices and experience programs of Buddhism are highly utilized in the field of integrated cognitive education in the future. In addition, it will help communication and understanding with other people in the field of education of whole personality and greatly helping the formation of values and establishment.

## CONCLUSION

People are experiencing the Fourth Industrial Revolution while watching innovative devices and platforms that are regarded as reality. Through continuous innovation of technology, we expected

the advantages and convenience that mankind can obtain. Labor market instability and social gaps, which may occur while the changes of industrial structure, are also factors of anxiety. The reason why religious education of Buddhism together with discourse of the Fourth Industrial Revolution is because Buddhism is a means of gathering the wisdom of mankind as a change of society brought by the Fourth Industrial Revolution. In addition, in the era of the Fourth Industrial Revolution, as a human being, we are taking measures to deal with some ethical and religious problems we have to face. On the other hand, it is also an effort to adapt and survive Buddhist educational organizations in the era of the Fourth Industrial Revolution as an organization of society.

While the educational environment is changing in the era of the Fourth Industrial Revolution, changes in methods and media for religious education of Buddhism are inevitable. Based on the teaching of Buddhism, the content of the education reflects the characteristics that analyze and interpret the characteristics of the Fourth Industrial Revolution era. The purpose of religious education of Buddhism should include cultivating human ability necessary for the era of the Fourth Industrial Revolution.

The Fourth Industrial Revolution and Artificial Intelligence are merely tools for a better life, can never become subjects to substitute for humans or adjust human beings. With the Fourth Industrial Revolution, now is the time when religious faith and practice are urgently required.

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