Advances in Social Science, Education and Humanities Research, volume 581
Proceedings of the 1st International Conference of Education, Social and Humanities (INCESH 2021)

Development of Pancasila Based on Science and Technology in Building A New World Order Era Pandemic Covid-19

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ABSTRACT
A number of positive confirmed cases of Covid-19 in Indonesia continue to increase fastly. The Covid-19 pandemic has a significant impact on people's lives. Several values and norms must be restructured to produce a social system in building a new world order in the era of the Covid-19 pandemic. This is a literature review to formulate the basic concept of developing science and technology based on Pancasila. A literature search was performed using Google, Book, and opinions from expert. All literature includes information about the Covid 19 pandemic in the form of Laws, Government Regulations, etc. For analysing the data, researchers use deductive logic towards the Invitation Law, and Inductive logic towards the opinions of experts who manage the Covid 19 pandemic. The results of the study include the current rapid development of Science and Technology needs to be balanced with the strengthening of Pancasila. Therefore, the development of science and technology in the future must be able to realize the national goals and ideals of the Indonesian people by what has been mandated by the Preamble to the 1945 Constitution of the Republic of Indonesia. In addition, the development of science and technology must be able to optimize the role and resources of human beings so that can increase the quality, dignity, and more then can support and fulfil all the needs currently in welcoming the new normal era.

Keywords: *Science and Technology, Pancasila, Covid-19 Pandemic.*

1. INTRODUCTION

The increase in the number of positive confirmed cases of Covid-19 in Indonesia is quite fast. Initially, on March 2nd, 2020, it was confirmed by President Joko Widodo that only 2 people were confirmed positive for Covid-19 in one of the regions in Indonesia. Then the number jumped to a peak on April 9th, 2020, which was marked by many confirmed positive cases of Covid-19. Covid-19 cases are spread to 34 provinces in Indonesia. Until now, this number has continued to soar up until Indonesia is ranked first in Southeast Asia with a high number of confirmed cases of Covid-19 [1].

The outbreak of the Covid-19 pandemic has also influenced state policies in regulating the behavior and habits of the community, including WFH (Work From Home) and the New Normal Era as a form of community adaptation to the new world order in the era of the Covid-19 pandemic. President Joko Widodo stressed all Indonesian citizens to participate in mastering technology because of the importance of technology in the life of the new normal era. However, not all citizens understand the use of technology to build a normal life during the Covid 19 pandemic.

The development of science and technology in building normal life during the Covid 19 pandemic was different from the development of science developed by Popper and Thomas S. Kuhn. Popper developed science using the principle of flexibility or the principle that scientific hypotheses or propositions can be wrong. While Thomas S Kuhn developed science as a starting point from the history of science as the starting point for all investigations, starting from normal science anomalies, a crisis arose so that there was a new paradigm of science. The progress of science comes from science in his book entitled “The Structure of

Scientific Revolutions" which is a guide in the study of science about scientific methodology. Kuhn distinguishes between normal sciences practiced by the majority of science workers with revolutionary science [2].

Based on the description above, researchers try to analyse by having a question, how is the development of science and technology for the Indonesian people in building a normal life during the Covid 19 pandemic? Then, the study aims to formulate a basic concept for the development of science and technology-based on Pancasila.

2. METHOD

This is a literature review to formulate the basic concept of developing science and technology based on Pancasila. A literature search was performed using Google, Book, and opinion from an expert. All literatures include information about the Covid 19 pandemic in the form of Laws, Government Regulations, etc. For analysing the data, researchers use deductive logic towards the Invitation Law, and Inductive logic towards the opinions of experts who manage the Covid 19 pandemic. The library data material and the opinions of experts were carried out a content analysis to find out its true meaning. The analysis is carried out by interpreting, describing, and arranging systematically and logically according to the research objectives [3]. As stated by Sunaryati Hartono, qualitative analysis is done by interpreting, describing, and arranging systematically and logically according to the research objectives. In this case, content analysis from Klaus Krippendorff is used [4] namely, a research technique to make replicable and valid inferences by considering the context. Therefore, it also can be said that the content analysis method is a method of symbolic meaning of messages. Besides, it can also use deductive and inductive methods.

3. RESULT AND DISCUSSION

3.1. Its philosophical orientation vision is based on the Pancasila Value

The manifestation form as a Pancasila value has a role as a unifying tool and becomes a procedural reference in resolving conflicts in Indonesian society. Pancasila has been accepted by all Indonesian people as a unifying tool, meaning that it is a collective agreement that the values contained in it are agreed as common property and become a kind of social ethics in heterogeneous Indonesian society. One of the applications of Pancasila values during the Covid 19 pandemic is related to the development of Science and Technology which is currently accelerating. This must be accompanied by strong Pancasila basic values so that by developing of science and technology in the Covid 19 pandemic did not become the cause for the destruction of the Indonesian nation, especially in terms of morality and mentality. Based on the value of Pancasila, science and technology has a cohesive relationship shown in the 3rd precept, namely in maintaining Indonesian unity which means that in developing Science and Technology one must continue to use the principles of Pancasila values so that there is no disintegration caused by the rapid development of science and technology.

Science and technology, culture, religion, and the values of other life are always side by side and have a close relationship that provides signs for their development. Indonesia has Pancasila as the basis of the state and guidelines for life. Pancasila is the spirit for every pulse of society and constitutional activities because Pancasila is seen as a medium for acculturation of various kinds of thoughts ranging from religion, education, culture, and politics to economics.

The development of science and technology (IPTEK) is an effort to improve the welfare of society by increasing the competitiveness and quality of life of a nation. Philosophically, the orientation of the vision for the development of science and technology in Indonesia is based on the values of Pancasila, Indonesia is entering a new world order or the "New Normal" era in the COVID-19 Pandemic Era. COVID-19 brings great lessons to the world of science, especially in producing a number of innovations that were previously unthinkable. Various innovations and breakthroughs by academics and researchers were carried out to develop science and technology.

Consequently, scientific developments will continue to occur and adapt to the ongoing conditions and realities, including that the world is currently facing the Covid 19 pandemic which has brought the world to this day a worry, fear, and a challenge which must be passed. In facing this challenge, it is relevant to Koento Wibisono Siswomihardjo's opinion in his work entitled "Science of birth and its development", its classification and development strategy should be oriented to the philosophical values of Pancasila in dealing with problems that must be solved as data or objective facts in one integrative unit.

3.2. Teleology in the sense of Science and Technology is not only a means, but also to achieve goals and ideals as in the Preamble to the 1945 Indonesian Constitution

The importance of the development of Science and Technology and the available Human Resources is also an effort to realize the goals and ideals of the Indonesian people by what is written in the Preamble to the 1945 Constitution, especially in the sentence "... protect the entire Indonesian nation and all Indonesian blood and to advance the general welfare, to educate the nation's life,… "then the effort to utilize, develop and

master science and technology and human resource development absolutely must be done by all nations wishing to be advanced and civilized. Efforts in advancing science and technology can be done in various ways, including through the expansion of educational services, building competitiveness, and being able to prepare critical and innovative Indonesians to face tougher competition. This is also relevant to the current condition of Indonesia where the Covid-19 Pandemic is occurring to increase the development of science and technology which functions as a link or bridge between public services and health procedures/ protocols that must be carried out to suppress positive numbers of suspect Covid-19, such as updating everything, tool systems in public facilities available with touch less technology, improving facilities in the education system with digital technology and various other Science and Technology concepts that can be implemented in the face of the Covid 19 pandemic.

Operationally, the development of science in Indonesia must be placed in a teleological dimension, which means that science and technology are only means or tools which must be used to achieve the goals and ideals of the Indonesian nation. This is as stated in the Preamble of the 1945 Constitution of the Republic of Indonesia which states to achieve One Godhead, civilized humanity, Indonesian unity, democracy led by wisdom in deliberation and /representation, and Justice for all Indonesian people so that the development of science and technology must be a tool in achieving goals in the framework of the Preamble to the 1945 Constitution. Regarding the current situation and conditions, the development of science is directed at completing and breaking the Covid-19 chain through various research and studies. This is one of the efforts to realize the goals and ideals of the Indonesian nation. From here the role of intellectuals is very important in a transitional society. First, there is a need to erase the distinction between manual labor and intellectual work that has been going on for a long time. Secondly, the relationship between knowledge and power, the existence of monopoly by the ruling class, is necessary. Fundamental change has the relationship between humans and knowledge. Open–ended scheme of Thomas Kuhn's means an end is always open to improvement [5]. The development of science and technology is not only a means to achieve goals, but also more than useful for achieving national ideals.

3.3. It is ethical that science and technology are to increase human dignity, then science, and technology must be responsible

Ethical responsibility is a matter related to activities and uses related to Science and Technology. The application of Science and Technology requires an ethical dimension as a consideration which will then influence the process of developing Science and Technology in the future. The development of science and technology is an important thing that must be done by humans to create welfare and increase their dignity. The development of science and technology must pay attention to human nature, human dignity, maintain the balance of the ecosystem, be responsible for the public interest, the interests of future generations and must be universal because basically science and technology are an effort to develop and strengthen human existence.

Ethics is one of the dimensions of the vision and operational orientation of scientific development. Ethical means science is used to increase human dignity and responsibility.

The development of science and technology must pay attention to human dignity, maintain the balance of the ecosystem, and be responsible for individuals and the public. The development of science and technology is to strengthen human existence. Responsibility for the development of science and technology also relates to sciences that have already existed, what happened in the present, and what will happen in the future. For this reason, the development of science and technology must be based on scientific matters so that it will benefit life and can be further developed by future generations. The development of science and technology must be carried out by scientifically examining things that happen in the field so that in this pandemic era, it can be done by meeting in person, they are absolutely forced and also must use the right health protocol to prevent the spread of the coronavirus.

The ethical dimension, in the context of the development of science and technology, emphasizes how to operationalize science to increase human dignity, where humans must be in a central position. Therefore, the development of science and technology is applied responsibly. According to Amsal Bakhtiar, scientific responsibility concerns the activities and use of science and technology. This indicates that in developing science and technology, human dignity must be considered by maintaining the sustainability of the ecosystem, being responsible for the public interest, and oriented towards sustainable development concerning future generations. The development of science and technology is universal, namely by developing and strengthening human ecosystems, not destroying them. An academic has a social responsibility to bear under him, not because he is a citizen whose interests are directly involved in society, but more importantly because he has a certain function in the continuity of society [6]. Therefore, science and technology are operationalized to increase human dignity.

3.4. Integrative, that the application of science and technology can improve the quality of humans and their structures

The application and development of science and technology are considered very important in creating quality human resources who are capable of driving the nation's competitiveness. Through Science and Technology, it must be able to improve the quality of human life both now and in the future, help the expansion of the human community (both Ande, national and global), must be open to society, especially those that have a direct impact on the living conditions of society, and science and technology should create a more just society. Especially in the era of the Covid pandemic, experts are required to be able to find a vaccine immediately, by relying on advances in science and technological sophistication. Technology is dialectical, offering ways and means to solve practical problems, but generally solving problems with technology creates new problems that are often bigger and require new and more sophisticated technologies [7]. The role of scientists/ academics is very important in developing science. Knowledge and technology not only pursue practical goals but also create excitement in cultivating knowledge or metaphysical musings [8].

To improve the quality of humans and the structure of society in a pandemic era like this, the realization of the vision and orientation can be done by using information and communication technology (ICT) and available internet networks. The method used in the use of ICT and the internet is known as the online method (in the network). This online method can be done in writing or orally to improve the quality of people and the structure of society. The online method in writing is done by using WhatsApp Group and Google Classroom. Through this written online method platform, teachers can provide materials, assignments, and answer regarding the material. The orally online method is carried out using video conferencing which is conducted between the teacher and the students through various existing platforms such as zoom meetings or Google meet. The use of this video conference platform is an effective step to take and sustain learning and teaching activities because the teachers and those being taught will find it easier to convey and receive learning material by communicating orally and face-to-face through the video conference platform compared to writing through WhatsApp Group or use Google Classroom.

Technological developments in the medical world include rapid tests and software that diagnoses patients with a high degree of speed and accuracy. Apart from the health sector, technology that is required to develop during this pandemic is technology related to information. Social restrictions with the policies of learning, worshiping, and working from home ordered by the government as previously mentioned have an impact on narrow social space, so technology is increasingly playing a big role in this because it can overcome it as in the learning system changes from offline into online or better known as the Learning Management System (LMS) by using learning software such as Google Classroom, Edmodo, and others, as well as software related to meetings or teleconferencing for examples such as Zoom, Google Meet, WebEX, Cloud X and still much more.

In addition, in education and health as mentioned above, a Covid-19 Community Mobility Track Record can also be developed. This technology can help map of the percentage of community mobility based on satellite images and the supporting technology used. The Track Record can detect the transportation sector as well as public facilities or other public facilities. When viewed from transportation, this technology can provide data records in the form of population movements or mobility so that it can be seen which areas are busy and which areas are vacant. Likewise with public facilities where the number of visitors can be detected to reduce crowds that has the potential to emerge in the chain of the spread of Covid-19. The data presentation can be selected based on the desired area for the information to be known and there will be a data recap in the form of a graph of population mobility then it can be analyzed with the number of suspected Covid-19 patients to find answers whether the number of patients can go down or even increase through the track record within a certain period.

The concept of Touch less, touch is one of the ways of Covid-19 transmission, so the concept of Touch less (without touch) is expected to be able to assist in preventing the spread of Covid-19. Especially in public places such as malls, offices, places to eat, or other public places, it is better to use Touch less technology such as struck parking, buttons in elevators, handwashing places, and various other public facilities. By carrying out this concept, people do not need to touch objects in public places because the Touch less concept uses infrared sensors to replace the touch of a button. This is an effective step to reduce physical contact with other people in public places.

The Covid-19 Pandemic Digital Healthcare Platform requires the application of restrictions in various fields including health services. In exchange, the public can consult or find out about the condition of their bodies through digital health services that can be accessed from wherever the community's domicile is located. This facility can reduce the number of patient visits to the hospital directly so as to reduce crowds in public places. This platform is expected to be able to integrate technological innovation into the provision of high quality and patient-oriented health care. This platform will be equipped with a variety of complete service

features and ensure patient safety. Integrated development of science and technology can improve the quality of humans, as well as the quality of the structure of society, because humans always live with the community [9].

Integral/ Integrative in building a new life during the COVID-19 pandemic, the Government of the Republic of Indonesia has stipulated Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions to accelerate the handling of the Coronavirus Disease 2019 (covid -19). The implementation of Large-Scale Social Restrictions is proposed by the governor/ regent/ mayor to the minister who administers government affairs in the health sector (Covid -19). Chief Executive of the Task Force for the Acceleration of Handling Corona Virus Disease 2019 (COVID-L9) can propose to the minister who holds government affairs in the field health to establish Large-Scale Social Restrictions in certain areas. If the minister who administers government affairs in the health sector approves the proposal of the Chief Executive of the Task Force for the Acceleration of Handling of Corona Virus Disease 2019 (COVID-19), Regional heads in certain areas are required to implement Large-Scale Social Restrictions [10]. From this government regulation, it is clear that there is cooperation both horizontally and vertically, all of which form a single unit towards the stated goals. Therefore, it is a system like the Pancasila system as philosophy.

4.CONCLUSION

The theological dimension states that science is a means used in achieving goals and ideals as stated in the 1945 Constitution of the Republic of Indonesia. The ethical dimension means that every scientific development must be carried out responsibly by paying attention to human dignity. Therefore, development of a science and technology requires a foundation so that existing developments can have a clear orientation, namely based on Pancasila, which precepts are the principles of morality for the development of science and technology.

AUTHORS' CONTRIBUTIONS

Hassan Suryono as the first author conceived of the presented idea and developed the theory. Bekti Utomo developed the theory imperically, decided the method, and translate this paper. All author then performed this paper to the final manuscript.

ACKNOWLEDGMENTS

The completion of this paper thanks to the assistance of Adinda Amalia, Tri Wahyuni, Mutiara Ayu Cindi and Muhammad Zainudin, and Aga Prasetya for their logical and constructive thought. Thank Tri Wisudawati ST.,MSc for her critics. Hopefully all of his charity will receive a reward in kind from God lmighty.

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