

Independence in Learning, Education Management, and Industry 4.0: Habitat Indonesia During COVID-19

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Abstract

COVID-19 is the biggest pandemic of the 20th century and has hurt humans. Apart from death, this virus also has an impact on the social, economic, and educational fields. Like it or not, COVID-19 causes most schools and campuses to change their learning patterns. This paper tries to discuss freedom of learning, educational management, and challenges in industry 4.0 for Indonesia during this outbreak. With these 3 objectives, we use a literature review approach. The first conclusion is that the independence of learning in Indonesia has not been optimal so far, because in general many teachers and lecturers still use the old pattern (they are the centers of learning). The second affirmation is that education management in Indonesia is still traditionally based, meaning that the use of learning media (for example online) is not fully used. Third, in terms of Industry 4.0, education in schools and campuses, there is an obligation to take advantage of IoT with the aim that students and students can think critically, develop creativity, hone soft skills to communicate, and train to collaborate with various parties. The biggest job is under the Ministry of Education and Culture of the Republic of Indonesia, to evaluate the education curriculum and make extra policies to accelerate the civilization of education during COVID-19.

Key words: *Learning, Education, Teachers, Lecturers, Curriculum, COVID-19, Indonesia.*

Introduction

The spread of the Corona Virus Disease (COVID-19) is still causing unrest in almost all countries in the world. Although activities are slowly getting back on track, a lot has changed in daily life. The government is still making efforts to deal with the virus that causes COVID-19. The community is asked to be disciplined in implementing a protocol for preventing the transmission of this outbreak. Reports of a new type of coronavirus infection were reported in Wuhan (China) on December 31, 2019. This means that it has been around 205 days since the virus has spread. Hundreds of days on, there is no sign of a decrease in the daily infection rate, although the epicenter of the virus has shifted, from China to Europe than Latin America. In fact, in the last week, the latest data shows the record for additional new cases, the highest in 24 hours, as many as 237,734 cases of infection as of July 18, 2020 (WHO, 2020; Darma, Wijaya & Darma, 2020).

COVID-19 is an epidemic that can cause infectious diseases in the form of infection in the human respiratory tract caused by a virus. The COVID-19 outbreak has hit the world and Indonesia became one of the countries affected by the COVID-19 outbreak in early March 2020. The COVID-19 pandemic that has hit the world, one of which is that Indonesia has had a visible impact in various fields, including the economy, social, tourism, and especially education. The implementation of education in Indonesia during the COVID-19 pandemic has undergone several visible changes (Darma et al., 2020; Darma, Ilmi, Darma & Syaharuddin, 2020; Toquero, 2020; Biswas et al., 2020).

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This is a tragedy that grieves all inhabitants of the earth. All segments of human life on earth are disturbed, without exception of education. Many countries have decided to close schools and universities, including Indonesia (Aji, 2020).

The pattern of education in Indonesia

Education is an endless process and it is a process of forming basic abilities that are fundamental both in terms of intellectual power and emotional feelings directed at human nature and towards others. Therefore, the learning process is the key to the success of education so that the quality learning process requires quality service management (Sagala, 2013; Dewey, 1963).

The Indonesian government actually always pays more attention to the education sector. This is evidenced by the stipulation of several government policies in the education sector, ranging from compulsory education programs, scholarships to underprivileged people and programs that seek to improve the quality of education, and budgeting 20% of Indonesia's State Revenue and Expenditure Budget (APBN) for the education sector. However, the big question is where is the direction of Indonesian education at this time, and why then education in Indonesia is still far behind other countries in the world. In relation to "Free Learning" proclaimed by the Minister of Education and Culture of the Republic of Indonesia, understands and changes The perspective of education with the perspective of progressivism philosophy needs to be done. This is because progressivism is a school of educational philosophy that assumes that humans have unique and extraordinary abilities and can overcome various problems that threaten humans themselves. Progressivism also rejects the authoritarian style of education that has occurred in the past and the present. Authoritarian education is considered to be able to hinder in achieving good goals because it does not respect human abilities in the educational process. Whereas in education all elements are considered as the driving force to achieve progress or progress in the future. Thus, for progressivism, ideas and theories are not sufficient only to be recognized as things that exist (being), but that what exists must be looked for in order to achieve progress (Mustaghfiroh, 2020; Muhmidayeli, 2011; Manan, 2015).

In independent learning, the teacher not only acts as a learning resource but also acts as a learning facilitator. As a learning facilitator, of course, the teacher must design a fun lesson so that students can achieve the expected learning objectives. Freedom to assess student learning with various types and forms of research instruments, free from various burdensome administrative making, independent from the politicization of the teaching profession, and free from various pressures and intimidation against them (Faisal & Martin, 2019; Dragutinovic & Mitrovic, 2019).

Industry 4.0 challenges and opportunities

In the learning process an educational ecosystem is developed which facilitates the growth and development of reasoning, character, innovation, independence, comfort, and student expertise. So freedom to learn has the effect of forming superior or quality resources to complete educational opportunities in the Industrial 4.0 era with the aim of developing the nation and the State (Yamin & Syahrir, 2020).

The desired education system is an education system that can lead to a better human civilization. To achieve this, of course, requires a leader's ability to make it happen. We know that the development of education in the world today cannot be separated from the development of the industrial revolution that is taking place in the world, because indirectly changes in the economic order also change the educational system in a country (Bennis & Nanus, 1985; Manz & Sims, 2001; Fairholm, 2013).

Internet of Things (IoT) is unwittingly widely used in various sectors. Identifying an object is done using virtual concepts to display in cyberspace. Included in educational institutions in Indonesia because it can be seen in the interactions that occur in the educational environment. Through its development, the internet can also be used for other purposes that support learning, including by using the internet for theoretical and practical learning activities (Kristanti, 2019; Prihatmoko, 2016).

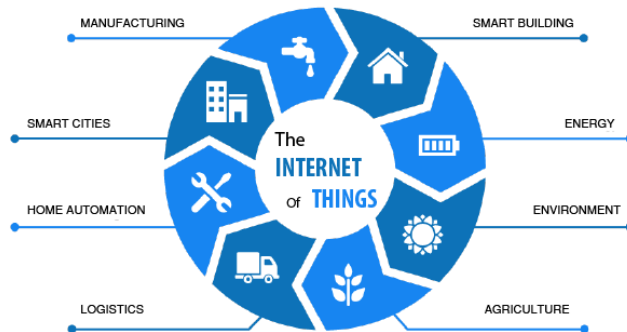


Figure 1: IoT model

(Source: Adapted from Pfeiffer, (2017); The WEF, (2016)

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This conversation caused upheaval for the community that would they be ready to face the golden era of globalization, the technology of the times was growing rapidly, in this position human labor would at times be marginalized if they did not have skilled skills. For success in breaking through the shock of industry 4.0, it is not just a discourse, but there must be proof in all aspects (Maria et al., 2019).

In this way, education is used as the initial foundation or backbone of national development. It happens in terms of one effect, which is the shaping of the human personality. The government's strategy in responding to the industrial revolution 4.0 is quite clear if it is supported by all Indonesian people. An innovative generation will be able to encourage national development in that era. These opportunities and challenges can contribute to the creation of more jobs and new technology-based investments so that a roadmap called "Making Indonesia 4.0" is formed which can create more efficient change.

Responding to the learning process

Education as a provider of skilled, effective, and productive manpower, processes potential sources and natural resources, manages organizational resources and human resource institutions because basically, development in education is a process of positive progressive change that occurs in the life of society and the nation. in various fields, be it socio-cultural, political, economic, or in other areas of life. Every change or development in the life of the nation has consequences in the education system, as well as every change or development in the world of education has consequences in the life of the nation (Awad & Barak, 2014).

Education must run in any circumstances. To reduce the number of COVID-19 spread and education activities that can run, as usual, the government has made several efforts to reduce this number, one of which is implemented in the education system in Indonesia. Teaching and learning activities have been carried out using an online system or a network system (online) since March 2020. The learning system is carried out without face-to-face but is carried out using a distance learning system. With the distance learning system, students are not required or required to come to schools or campuses to carry out learning. Many facilities are eventually applied by educators to carry out teaching and learning activities remotely. This means of distance learning cannot be avoided by the development of information and communication technology. The learning facilities include Google Meets application, Zoom, Google Classroom, Youtube, Television, and Whatsapp. All of these facilities are generated from the development of increasingly advanced information and communication technology.

However, the distance learning system does not rule out some problems in the learning process. With the implementation of this distance learning, of course, students and educators from all walks of life are required to have good internet network access. However, many areas have poor or ineffective internet access, which is one of the obstacles to carrying out teaching and learning activities properly. In addition,

there are not a few students who do not get maximum learning results. Both from the subject matter and the assignments were given by educators during the COVID-19 pandemic.

Conclusion

Education is the key to human resource development. The quality of human resources is the key to the realization of the Golden Indonesia 2045, which is just and prosperous, safe, and peaceful, as well as progressive and global. Education will determine where this nation will meet its future, whether to become a large civilized nation, intelligent and ready to adapt to changing times, or become a sick giant and drown in its own problems. Losing global competition, and even randomizing various short-term interests, both from within and outside the country.

Basically, the global pandemic has impacts that can weaken human activities in general. It cannot be denied that at first many people thought that the COVID-19 period was a difficult time for mankind. However, without realizing it, there are many positive sides that we can learn from this that is currently sweeping the world to this day. The impact that is felt is real and can be felt by everyone. However, the community cannot make problems a cause for not carrying out activities, especially in the field of education.

There are several strategic steps that schools must take during COVID-19, first, review the learning targets to be achieved, so that they are rationally aligned with the new situation and conditions in the new normal. Second, identification of the resources that need to be owned and held so that the new goals that have been set can be achieved with the availability of existing resources. Third, map the situation and condition of each teacher and student who must get ready to undertake a new learning model based on blended learning as designed. Fourth, assess the gap between need and availability to formulate strategic and operational steps that need to be taken immediately to bridge it. And finally, the execution of these steps creatively and innovatively by establishing various partnerships with external parties who care about education.

Conflicts of Interest

Author(s) declare there is no conflict of interest in this article.

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