

Analysis of Education Infrastructure during the Covid-19 Pandemic in High School Indonesian Islamic University

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Abstract: The author's purpose in making this article is to review online learning methods, especially in learning infrastructure at the Indonesian Islamic University Yogyakarta Senior High School. The result of this research is the implementation of learning in the Senior High School of the Islamic University of Indonesia using information technology. The information system used by the Indonesian Islamic University Senior High School is e-learning. Online learning activities cannot be separated from electronic devices and internet networks so that in their implementation there are obstacles such as the availability of inadequate infrastructure, namely: 1) Unstable internet connection, 2) Large quota requirements.

Keywords: Infrastructure, Online Learning, descriptive qualitative.

Introduction

Learning is the interaction between students and their environment so that behavior change occurs. This is in line with Pane's opinion (2017) which states that the learning process is an activity that has been planned to influence a person to be able to learn well so that there is a change in behavior by students. Meanwhile, according to Fakhurrizi (2018) learning is a combination that includes human elements, materials, facilities, and processes that influence each other to achieve learning objectives.

Of course, in the learning process, interaction between teachers is needed with students which is usually done at school or through direct interaction without any intermediary media. However, in the last few months the learning process is a little different from usual.

This is due to by an epidemic that attacked the whole world, including Indonesia. The outbreak is currently known as COVID-19 (Corona Virus Disease 2019). COVID-19 is a dangerous virus because its transmission is very fast and it is

difficult to detect people who are exposed to this virus, because the incubation period of the people who are exposed to it is approximately 14 days Putri (2020). According to Haerudin, et al (2020) to stop the spread of the COVID-19 virus, the government has issued several policies, one of which is in the field of education, namely by carrying out learning from home through a network or often referred to as online learning.

Online learning is distance learning with using the internet network and assisted with several other supporting tools, Putri (2020). This is in line with the opinion of Isman (2016) which states that online learning is a learning process that uses the internet network in the delivery of learning materials. Based on some of the opinions that have been conveyed, it can be concluded that: that online learning is learning assisted by using the internet network, so that learning can take place even at a distance.

The Covid-19 pandemic has attacked all aspects of human life. The education sector is no exception. A pandemic like this is a situation that brings wisdom to the world of education. In any case,

education must continue, even making the pandemic situation one of the materials and learning resources. During a pandemic, which is very different from normal conditions, education management faces big challenges. The education unit must be able to manage the new model of education process well. With distance learning patterns and learning with new habits, schools are required to be able to carry out the educational process effectively and efficiently. Infrastructure is one of the factors that must really be considered in order to provide optimal educational services.

Materials and Methods

Study Area

The research location is the object of research where research activities are carried out. Determination of the research location is intended to simplify or clarify the location of the target in the research. The reason for choosing the research location at the Indonesian Islamic University Senior High School as the research location is because the Indonesian Islamic University Senior High School in the learning process during the COVID-19 pandemic implemented government policies using the blended learning method.



Figure 1. Indonesian Islamic University High School

Types of research

This study uses a qualitative approach with a descriptive method. Researchers use descriptive methods because these events or phenomena must be explained as they are based on data in the field. In this study, researchers concentrated on

educational infrastructure during the COVID-19 pandemic. Descriptive method with a qualitative approach, namely research that intends to understand the phenomenon of what is experienced by the research subject such as behavior, perception, motivation, action, and others, holistically and by way of description in the form of words and language, at a time. natural context and by utilizing various scientific methods. Moleong J Lexy (2014)

Procedure

There are several methods of data collection carried out by researchers in this study, namely:

a. Observation

The observation method is not just paying attention to something using the eyes, but in psychological research, observation is also an activity of loading attention to an object by using all the senses. So, observing can be done through sight, smell, hearing, touch, and taste. Suharsimi Arikunto (2013)

Researchers conducted participatory observations. According to Husaini, Participatory Observation is an observation made with the observer being actively involved in the object under study. Husaini Usman (2008)

Observations carried out by researchers are non-participant types of observations, meaning that researchers come to the place of the observed activity, but are not involved in the activity. The observation method was used to observe how the covid-19 pandemic educational infrastructure at the Indonesian Islamic University Yogyakarta High School

b. Interview

Interviews are data collection techniques with an oral question and answer process between two or more people with the aim of assessing a person's condition, for example to find data about students' background variables, parents, education, attention, attitudes towards something. Suharsimi Arikunto (2013)

This interview method was used by researchers to dig up information related to educational infrastructure during the COVID-19 pandemic at the Indonesian Islamic University Yogyakarta Senior High School.

c. Documentation

Documentation: Documentation is looking for data about things such as notes, transcripts, books, minutes, newspapers, magazines, agendas and so on. Suharsimi Arikunto (2013)

The documentation method was used to collect several documents, photos, books related to educational facilities at the Senior High School, Universitas Islam Indonesia Yogyakarta.

Data analysis

In his book, Muhadjir explains that data analysis is compiling interview notes, documentation and observations so that researchers' understanding of the case under study increases and is used as findings for others. Muhadjir, Noeng (2002)

The principle of data analysis is to analyze and process data to be systematic and meaningful. In their book, Sugiyono, Miles and Huberman said that interactive and continuous activities until the data is saturated are activities in qualitative data analysis. Sugiyono (2014)

In the field, researchers are guided by the following steps:

- a. Data reduction, one that sharpens, selects, focuses, discards, and organizes data in a way and describes the final conclusions and is verified as data reduction. Emzir (2010) In addition, data reduction is the activity of summarizing everything that is important, focusing on the important things, based on patterns and themes and deleting what is not important.
- b. Data Presentation, Presenting information systematically and ending with conclusions and taking action. The data is grouped according to the problem and its presentation is in the form of matrices, graphs, networks and charts so that researchers can easily see the pattern of data relationships with other data.
- c. Conclusion Drawing and Verification, Efforts to draw conclusions from the problems studied, data that has been processed can be concluded and verified by data by tracing the data obtained is the meaning of drawing conclusions and verification. Suprayoga, Imam, (2001) Data inference is a further step in data reduction activities for data presentation. Data that has

been reduced and presented systematically will be concluded temporarily. In addition, verification is a review of notes in the field and exchange of ideas during writing. So that conclusions that were initially floating or fuzzy become relevant.

Results and Discussion

Educational Facilities During the Covid-19 Pandemic

The pandemic condition is a situation that is enough to bring wisdom to the world of education. In any case, education still have to run, even make the pandemic situation as one of the materials and learning resources. Therefore, the educational process must be able to adapt to changing situations, in order to continue to give meaning to the journey of human life.

With the Covid-19 pandemic, the learning process does not can be done face to face. Even though you can carried out face-to-face, it must be done with the correct procedure very tight. Therefore, schools can carry out the process learning with various appropriate models. A number of learning models include: (1) In the Network (Online), (2) Off-Network (Offline), (3) Blended (Combination of Online and offline) or other learning activities carried out in the context of the school. Especially in situations where there is no direct face-to-face interaction between students and educators.

During the pandemic, the need for educational infrastructure is very different from normal conditions. Adjustments to support the learning process have been added and even enriched in several fields. Not only related to supporting infrastructure that is physical, but also supporting facilities based on information and communication technology.

Definition of Educational Facilities and Infrastructure Educational facilities and infrastructure are equipment and supplies that are directly used in the educational process, especially the teaching and learning process such as buildings, classrooms, desks and chairs, learning tools and media. Infrastructure is a facility that

indirectly supports the educational process, such as yards, gardens, school gardens and roads leading to schools.

Educational facilities and infrastructure are all movable and immovable objects, which are needed to support the educational process, either directly or indirectly, in order to seek educational goals effectively and efficiently.

In times of a pandemic like this, the need for educational infrastructure is very different from normal conditions. Adjustments to support the learning process have been added and even enriched in several fields. It is not only related to supporting infrastructure that is physical, but also supporting facilities based on information and communication technology. Therefore, the education unit must be able to optimize the function of infrastructure, including making adjustments and even adding the facilities needed for the learning process to take place.

The need for infrastructure during the Covid-19 pandemic can be divided into 2 categories, namely:

1. *Facilities for learning from home*

In accordance with the times, learning from home will be more optimal when using digital infrastructure. The infrastructure needed include:

- a. Availability of adequate devices that are personal in nature, must be owned by everyone involved in learning activities, namely teachers and students, for example mobile phones or laptops.
- b. Internet quota to access online learning.
- c. Support network signal and telecommunications infrastructure that is evenly distributed.

In the learning process from home, there are several challenges that can hinder the learning process, namely:

- a. Not all students have smartphones
- b. The ability to buy people's internet quota is not the same
- c. This economic incapacity is a common condition, not only in rural areas but also in urban areas
- d. Limited digital literacy
- e. The telecommunications infrastructure network (internet) is not evenly distributed throughout Indonesia.

2. *Facilities for learning the new habit period*

In line with the ongoing development of the COVID-19 pandemic, the government through the Ministry of Education and Culture allows schools in the green zone to carry out face-to-face learning by implementing strict health protocols. The reference that forms the basis of the policy is the Joint Decree of the Four Ministers on Guidelines for the Implementation of Learning in the 2020/2021 Academic Year and the 2020/2021 Academic Year during the Covid-19 Period. The focus of infrastructure facilities in the new customs period is:

- a. Completely available cleaning tools. Schools must provide all cleaning equipment to ensure classrooms are always sterile. Such as a mop or vacuum cleaner so that all dirt can be cleaned quickly and periodically
- b. Good school sanitation, starting from the availability of clean water, dirty water disposal, toilets, hand washing facilities, and waste management
- c. Sinks must be available in various places so that students and teachers can easily wash their hands with soap
- d. Medical equipment as complete as possible to anticipate sick school residents
- e. Since physical contact is highly discouraged, schools also need PPE for emergencies; Sterile classrooms according to regulations. All classes must be sterilized with disinfectant before use
- f. More classrooms to avoid the spread of Covid-19. The capacity recommended by the government is 50 percent per class
- g. Personal lockers and dedicated shoe rack. Cabinet or locker facilities are intended to anticipate the pattern of the spread of the Covid-19 virus which is still uncertain. Another suggestion that must be considered is the prohibition of wearing shoes or footwear in class. Therefore, schools must also provide adequate number of shoe racks for students and teachers.
- h. School health workers. Schools must provide health workers for emergency situations as well as for educational purposes. During a pandemic, all actions must be carried out according to proper health standards

- i. Body temperature checker. A device to check body temperature or a thermo gun must be provided by the school. This tool is a mandatory health protocol instrument in schools. Everyone must be screened before being allowed into the building or school premises.
 - j. Healthy canteen that provides healthy, clean, hygienic and nutritious food. Yeni Heryani, et al (2020)
2. Clean and sterilize school facilities regularly at least twice.
 3. Regular monitoring of the health conditions of school residents by the school is related to corona symptoms.
 4. The provision of hand washing facilities using soap by the school must be provided.
 5. Implement other health protocols such as maintaining proper distance and etiquette for coughing and sneezing.
 6. Establishment of liaison by schools related to security and safety in the school environment.

Analysis of Educational Facilities during the Covid-19 Pandemic in High Schools, Islamic University of Indonesia

The results of the analysis show that the new normal in the midst of the covid-19 pandemic can affect the world of education, namely school institutions, in the realm of school management and students. Thus, the process of teaching and learning activities cannot be carried out as usual before the presence of the COVID-19 pandemic. During this pandemic, towards the new normal, teaching and learning process activities are supported by the presence of technology and the internet where online learning activities can be carried out by teachers and students by means of applications that can provide interaction between teachers and students, among others by using applications such as: zoom, google classroom, whatsapp, e-learning and other applications. This aims to implement social distancing towards the new normal by using the pandemic curriculum in the learning process, besides that students can take part in webinar activities via video or chat and actively participate in these activities. In addition to technology and the internet, the learning process towards the new normal will still be carried out face-to-face even though it is not usual, using the pandemic curriculum which is once 45 minutes and students will enter school on a scheduled basis based on the schedule that each student gets,

The Ministry of Education and Culture issued Circular No. 15 of 2020 concerning Guidelines for Organizing Learning from Home in an Emergency Period for the Spread of Covid-19. Circular No. 15 of 2020 contains the following:

1. Arrangement of the student pick-up mechanism by the education unit.

Thus, the decree is very influential for the continuity of education in Indonesia by implementing the new normal. so that the government can work together with educational institutions to choose the right cuts in the curriculum in this epidemic pandemic to get to the new normal.

The readiness of teachers and staff of the Islamic University of Indonesia Senior High School is seen in line with the socialization of the Joint Decree (SKB) of 4 Ministers concerning Guidelines for the Implementation of Face-to-Face Learning in the Covid-19 Pandemic Period. With this decree, the Minister of Education and Culture urges all education units whose teachers and teaching staff have been vaccinated to immediately fill the checklist and offer limited face-to-face learning (PTM) options to parents. This is in line with the implementation of the vaccine for all teachers and staff at the school so that they are ready to start face-to-face learning in accordance with the 4 ministerial decree.

The strategy used to convey learning is to combine the use of online and offline methods. Several high school teachers at the Islamic University of Indonesia have carried out education this semester by implementing several online learning strategies, namely through the e-learning system, all information related to learning is conveyed by educators to students through e-learning using each student's account. Submission of learning and assignments can be delivered via e-learning.

Based on the information obtained by researchers, there are several rules or facilities provided by educational institutions, including:

1. Readiness of facilities and infrastructure such as a place for washing hands with running water, rooms with good air circulation, thermoguns, provision of standard masks, hand sanitizers, regular spraying of disinfectants and so on.
2. Not functioning the canteen and prohibiting merchants around the school
3. Have a list of access to health services, such as Puskesmas or other closest health services
4. Educators who have carried out vaccinations
5. There is consent from parents/guardians
6. Educators, education staff, children and parents/guardians who have traveled out of town, especially from the red zone, are expected to check their health and quarantine if they feel unwell.

However, in its implementation there are several obstacles faced by the Indonesian Islamic University Senior High School, namely:

1. The location of the house is not covered by the internet network, including minimalist student internet quotas
2. The learning media used by teachers are not as effective as before the COVID-19 pandemic, so students feel bored
3. Learning is not yet interactive
4. The character or behavior of the students is difficult to monitor.

Conclusion

The pandemic condition is a situation that is enough to bring wisdom to the world of education. Although it can be done face-to-face, it must be done with a very strict procedure. Therefore, schools can carry out the learning process with various appropriate models. Not only related to supporting infrastructure that is physical, but also supporting facilities based on information and communication technology.

Definition of Educational Facilities and Infrastructure Educational facilities and infrastructure are equipment and supplies that are

directly used in the educational process, especially the teaching and learning process such as buildings, classrooms, desks and chairs, learning tools and media. Educational facilities and infrastructure are all movable and immovable objects, which are needed to support the educational process, either directly or indirectly, in order to seek educational goals effectively and efficiently. It is not only related to supporting infrastructure that is physical, but also supporting facilities based on information and communication technology. Therefore, the education unit must be able to optimize the function of infrastructure,

Availability of adequate devices that are personal in nature, must be owned by everyone involved in learning activities, namely teachers and students, for example mobile phones or laptops. Support network signal signal and telecommunications infrastructure that is evenly distributed. In the learning process from home, there are several challenges that can hinder the learning process, namely digital literacy which is still limited.

In addition to technology and the internet, the learning process towards the new normal will still be carried out face-to-face even though it is not usual, using the pandemic curriculum which is once 45 minutes and students will enter school on a scheduled basis based on the schedule that each student gets, This clearly needs support from the government in order to anticipate the order of learning towards the new normal in accordance with the health protocol appeal that has been set by the government itself and the World Health Organization. Other health protocols such as social distancing and proper coughing and sneezing etiquette. so that the government can work together with educational institutions to choose the right cuts in the curriculum in this epidemic pandemic to get to the new normal.

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Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financials interest (such as personal or professional relationships, affiliation, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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