THE DIFFERENCE BETWEEN SYNCHRONOUS AND ASYNCHRONOUS ONLINE LEARNING COMMUNICATION DURING COVID-19 PANDEMIC

Muji Endah Palupi[1]
Universitas Bina Sarana Informatika
muji.mji@bsi.ac.id

Abstract: Online learning is available in various ways and methods. To find out the difference between online communication and material presented, it must be appropriate so that it can be well received by students. For that, every university must prepare well. Learning online communication that is not ready can automatically disrupt the course of teaching and learning activities. Differences in Synchronous and Asynchronous Online Learning Communication. Synchronous communication is a learning communication carried out in a real time communication system. Lecturers can deliver material in class directly to students. Synchronous online, lecturers can still do virtual learning by online class media. Asynchronous communication is learning communication that is not limited in time. In the meaning lecturer provides material that can be used as a reference for students. The material can be learn by students in the form of PPT files, PDFs, and videos. The Covid-19 pandemic has affected almost all aspects of human life, to break the chain of virus transmission, Indonesian government take of health protocol regulations. The condition of education has huge impact. However, education must continue. Learning process during in emergency is carried out by Synchronous and Asynchronous learning

Keywords: *Synchronous, Asynchronous, Covid-19 Pandemic*

INTRODUCTION

The Covid-19 pandemic has forced the world community to define the meaning of life, the purpose of learning and the nature of humanity. If all this time, humans have been forced to live in a fast-paced situation, endless work, and the pursuit of economic growth targets in a competitive system. However, the spread of the Corona virus which has become a major crisis for modern humans, forces us to breathe for a moment, stop from the vortex of the system, and look back at life, family, and the social environment in its truest sense. Humans are forced to 'stop' from their routines, to interpret what they really seek from life. Education systems must be ready to respond to transform online learning for all students and all lecturers. We are entering a new era to build creativity, student skills, and improve ourselves by changing systems, perspectives, and patterns of interaction with technology.

[1] Corresponding Author

Online education make trend and will continue to grow in years to come. The Ways of teaching and learning by the web can be divided into two groups are: synchronous and asynchronous both have advantages and disadvantages in learning communication online.

Synchronous Learning is learning in real time students and lecturers can talk to each other by online media. This can only happen anywhere and at a certain time because all must be present at the time the interaction takes place.

There are several methods that allow synchronous learning such as video conferencing, live chat, or live streaming. An example of a tool that can be used is Zoom. All can watch via link, see each other via webcam and share or take over the screen.

Asynchronous Learning is learning that does not occur directly and is not interactive. It can happen anytime and anywhere by online content and can access it whenever. Just log in and start learning! There are many ways to provide asynchronous learning. Examples include online videos, self-study modules, and posted articles or papers. Many online courses. Asynchronous learning is done flexibly.   In learning communication, online learning must be balanced in integrating learning communication online between Synchronous and Asynchronous.

According to Chaeruman (2017), in synchronous learning, students and lecturers are in the same place at the same time. This is the same as a face-to-face class. One example of synchronous learning is when students and lecturers participate in class through a web conference application. It creates virtual classrooms that allow students to ask questions and lecturers to answer instantly. Overall, synchronous learning allows students and lecturers to participate and learn directly and engage in hands-on discussions.

While Asynchronous learning is an independent learning approach with asynchronous interaction to encourage learning. Email, online discussion rooms, Wikipedia, and blogs are resources that support asynchronous learning. Some common asynchronous learning activities are interacting with the Learning Management System (LMS), communicating using email, posting on discussion forums and reading articles.

In addition, it is important to maintain timely feedback and clear communication to engage students in learning. Overall asynchronous learning provides advantages such as convenience, flexibility, more interaction and make to responsibilities and professional.

The difference between synchronous and asynchronous learning is that synchronous learning involves a group of students engaging in learning at the same time similar to a virtual classroom whereas asynchronous learning involves student-centered learning similar to a self-directed learning and online learning resources available.

During the pandemic, Learning from Home Activities aims to break the chain of transmission of corona virus. Students can access material from learning resources without limitation of time and place. It is hoped that distance learning activities in this pandemic era can support learning process and make it easier for students. Therefore, the learning process that is usually carried out on campus face-to-face cannot be carried out during in pandemic era. The process of delivering material in a lesson in a class. Generally, the delivery of material communication is done with an online system.

According to Uwes Anis Chaeruman, in supporting online communication, the learning it can be divided into several learning quadrants. The learning quadrant is an extension of synchronous and asynchronous online communication.

In this method Students are required to study from home for that lecturers are also required to prepare learning tools that allow students to be able to learn from home. This condition makes lecturers have to change their teaching and learning strategies and use of appropriate teaching methods as well of lecturers in managing the teaching and learning process is very much needed in learning during the learning from home program. All of this is done to

provide access to learning that is not limited by space and time to students during the Covid-19 emergency period.

The main difference between synchronous and asynchronous learning is that synchronous is direct and interactive whereas asynchronous is not. Both methods are valuable when it comes to online education and I believe that using a combination of two is the best way to do it.

This research discusses about The Difference between Synchronous and Asynchronous Online Learning Communication during Covid-19 Pandemic. Based on the research hope that readers will be interested in knowing more about Differences in Synchronous and Asynchronous Online Learning Communication. The Covid-19 pandemic has affected almost all aspects of human life, to break the chain of virus transmission it is a good solution and effective in the learning online. In the research that will be questions are: (1). Is the online learning system effective and practical? (2). How to effectively combine synchronous and asynchronous communication in learning?

LITERATURE REVIEW

Online learning process in technology education can be done with various learning methods. Since Covid-19 pandemic, online learning has become increasingly popular. Starting in 2020, more schools and universities implements an online learning system to prevent the transmission of Covid-19 virus. When online learning was first implemented this system was considered ineffective. In fact, online learning can be applied effectively and advantages.

According to Munir (2009), distance learning implemented because of limitations of distance, place and time in the process of implementing learning. In additions, distances learning can also means face to face in direct learning. In overcoming limitations that in this era can take advantages of technology that will bring together lecturers and

students even if they meet face to face in virtual online.

Advantages of Online Learning

1. Technology Era

The development of technology many changes in life and changes in the world of education. Online learning method to be close to student life in this era. Students able to adapt to new learning systems, in addition to face-to-face system. Technology as well as computer and internet access owned by students, it is easier to adapt to online learning methods which generally rely on sources available on the internet.

2. Effective and Practical

Face-to-face learning requires teachers or lecturers and students to be present in the classroom to participate in the teaching and learning process. Online learning methods provide more convenience for this. Online learning methods can provide benefits that are not obtained through a face-to-face system. These benefits can be felt in terms of time, cost, and even experience. The implementation of online learning methods, lecturers and students have more flexible time in carrying out learning activities. The existence of an easy online communication process makes the learning system more flexible. Online learning also make benefits in terms of costs. Only need to pay internet cost. In terms of experience, Lecturer and students will get more experience in the teaching and learning process through online methods. This can happen because of the many sources and variations of how to learn and teach online methods.

3. Increase Creativity.

Online learning offers more variety of resources in the teaching and learning process. Online learning methods, lecturers and students must to create more effective learning strategies. Examples of assignments or quizzes, additional materials such as learning videos. Online learning methods, lecturers
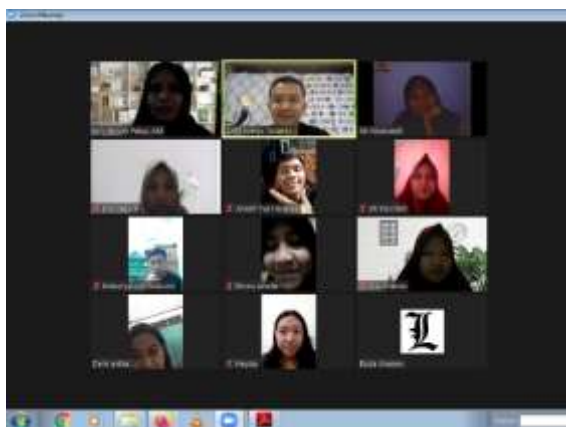
and students must to create more effective learning strategies. Examples of assignments or quizzes, additional materials such as learning videos. In addition, online learning methods use journals, e-books, and even online discussion forums.

Variety of Online Learning Methods

- ✓ Synchronous Learning
- ✓ Asynchronous Learning
- ✓ Blended Learning

Definition of Synchronous

Synchronous communication is learning communication that is carried out with a real time communication system. So, lecturers can deliver material in class directly to their students. Thus, even though it is done online, lecturers can still do virtual learning through online class media.

synchronous communication on zoom meeting

synchronous communication in material presentation

According to Uwes, learning through synchronous communication is divided into two,

1. Face-to-face learning room

Live-synchronous learning is learning process that occurs simultaneously, or commonly referred to as face-to-face learning. All teaching and learning activities are held in the same room.

2. Virtual synchronous learning room

Teach room Virtual face-to-face learning is learning that is carried out at the same time but in a different space.

According to Hartanto (2016), there are two types of distance learning, namely: synchronous and asynchronous learning. Synchronous means that the implementation of learning is at the same time. On Synchronous learning is required between lecturers and students access the internet at the same time. This matter allows direct interaction between lecturer and students online. Synchronous learning more briefly described as a real class but is virtual. Synchronous learning usually can in the form of video conferencing Whereas Asynchronous means the implementation of learning does not occur in the same time while "On learning" asynchronous, students can access learning materials with more flexible and able to implement learning and completing time span that has been determined by the lecturer. Learning can in the form of giving readings, videos, simulations, educational games, quizzes, and assignment collection.

Learning Communication in Synchronous Online

Synchronous learning is learning oriented and facilitated interaction with direct, real-time and usually scheduled instructions. Synchronous learning is different from ordinary lectures but by utilizing electronic devices, especially computers or laptop and internet. Synchronous learning can be implemented with various strategies, one of which is by implementing Virtual Classroom (VC) concept.

Synchronous learning requires lecturers and students to access internet simultaneously at the same time. Lecturers can deliver material with synchronous media with zoom media, google meet, or with other media so that interaction between

lecturers and students can be carried out directly. Synchronous learning is

a picture of a real class, but it is virtual all students are connected by internet. So to support students to be enthusiastic active in teaching.

Synchronous learning is a solution in teaching and learning activities. Moreover, teaching and learning activities are in the form of practicum of course Synchronous learning is a mainstay in teaching and learning activities. Implementing Synchronous learning in order to increase student activity in teaching and learning activities, student activity and learning will be interesting and not boring.

Advantages of Synchronous Learning Online
1. Interactive: can carry out active discussions and direct personal feedback.
2. Motivation: When with classmates and lecturers, motivated more focused and productive way.

Disadvantages of Synchronous Learning Online
1. One time frame: Since synchronous learning requires everyone to listen at the same time, the entire class must be online at the same time.
2. Technical requirements: For a successful synchronous learning must have a proper Internet connection and laptop a charged battery or stabile connected to Wi-Fi. If on the way can be a problem on internet signal.

Learning videos for each meeting in asynchronous communication

Definition of Asynchronous
Learning communication that is done asynchronously. Lecturer provides material that can be used as a reference for students. The material can be re-studied by students in the form of PPT files, PDFs, or videos.

According to Uwes, this form of learning through synchronous communication is divided into two:

1. Self-directed Asynchronous Learning While independent learning or commonly known as self-directed Asynchronous Learning is independent learning that can be done by students anywhere and anytime according to their respective conditions.
2. Collaborative asynchronous learning while learning room is a process and teaching and learning activities that can be done anywhere and anytime. Which can be obtained from other sources.

Asynchronous Learning
This method does not occur directly and is not interactive. It can happen whenever want, content is online, and access any time. There are many ways to provide asynchronous learning. Examples include online videos, self-study modules, and posted articles or papers.

Advantages of Asynchronous Learning

1. Flexibility: can access content whenever want, no need to be in a quiet room with perfect conditions and can easily watch it with earphones.
2. Learn with own abilities: can take material yourself, don't compete with other students, and review a specific subject 10 times before continuing if wish.
3. Many types of choices: There are many content options. If want to know more about a particular topic can search on the web for answers.

Disadvantages of Asynchronous Learning
1. Impersonal: While asynchronous learning has many advantages, lacks the personal touch that

many students need. It is less collaborative, motivating, and unable to receive immediate feedback.
2. Requires discipline: If want to learn as much as do in class, it will take a lot of discipline to pull

through the material. It's much easier to give up studying if there's no one to guide.

What is Asynchronous Communication?
Asynchronous communications refers to communication that occurs without having to be physically present during moment of transmission. This form of connection does not require a response.

Type of Asynchronous Communication Tolls
Asynchronous communication tools give people ability to communicate instantly with anyone. Anywhere in the world without having a face to face conversation. There are many types of asynchronous collaborations tools such as those designed for chat, video or file sharing.

The goals of asynchronous are as follows:
(a). Enable constant discussion on topics.
(b). Improve collaboration and gain more input From people not directly involved in situation or who are not physically in the same meeting
(c). Provide a greater ability to access information on past topics, like documents and images that can review whenever necessary.
(d). Increase productivity among team members colleagues.
(e.) Function as a central hub of communication that is easy to access both in real time and after a discussion takes place.

Learning materials for each meeting in asynchronous communication

The Main Difference between Synchronous and Asynchronous
Online educational learning method using a mixture of both is the best way to apply. Communication learning is done with a real time communication system. Face-to-face learning (live-synchronous learning), virtual synchronous learning, self-directed.

Asynchronous communication is learning communication is carried out asynchronously through intermediary media. Asynchronous learning, and collaborative asynchronous learning. It can be concluded that learning with online communication is indeed one of the suitable methods to be used during Pandemic. If learning through online methods can be done well, maximum results will be obtained in teaching and learning activities.

Synchronous and Asynchronous in Learning Media
In synchronous classes use media communications such as Google Meet or Zoom for presentations and also use WhatsApp group or telegram media as a forum for discussion. The material presented is not much different, the material on how to model a linear program presented in PowerPoint media. Students are given worksheets that are useful for measuring the effectiveness of learning media.

In asynchronous classes, learning is done remotely using online methods. Asynchronous classes use communication media such as WhatsApp groups as a forum for discussion, presentation of learning materials using videos uploaded on YouTube.

Definition of Blended Learning
Blended learning process is a combination of synchronous and asynchronous learning systems. In blended online learning system, lecturers and

students can balance two learning methods respective classes between synchronous and asynchronous learning system, lecturers and students can get a more effective teaching and learning experience.

Advantages of Blended Learning Online

1. Students have more opportunities to understand and learn the learning material.   2. lecturers have more access to help students have difficulty system between synchronous and asynchronous online learning.   3. The balance between synchronous and asynchronous methods makes students more disciplined.

Blended Learning Online System

Corona Pandemic made impact on the Education Sector

Covid-19 is a type of epidemic that spreads very high and fast. The epidemic attacks the human immune and respiratory systems (Rothan & Byrareddy, 2020). Prevention is done by avoiding direct interaction of infected people with people who are at risk of contracting corona virus (Caley, Philp, & McCracken, 2008). Social distance to avoid transmission of the virus (Bell et al., 2006). Lectures are conducted using an internet, making it easier. Lecturers and students to interact by online. Lecturers can create teaching materials that can be accessed by students anywhere and anytime.

According to Stein (2020) social distancing is a good solution to prevent the spread of Covid-19. Students can access lecture materials and send assignments given by lecturers without having to physically meet on campus.   World   Health Organization (WHO) recommend one step the spread of COVID-19 is by impose travel restrictions,   quarantine,   curfew   restrictions, workplace hazard control and closure of public facilities (Gunawan, et al, 2020). This affects various fields ranging from economy, industry, to education.

WHO (2020) recommends that social distancing can prevent the transmission of Covid-19. In areas and do not have good internet access, the implementation of online learning shows a different trend. In dealing with this condition, students who live in areas with internet low signal such as hills and will look for areas sub-districts to be accessible by internet access. But sometimes the weaknesses of students' online learning are not monitored properly during the online learning process. Low internet signal and high quota are challenges for online learning. However, online learning can reduce the spread of Covid-19 in universities.

Nadiem Makarim, as Minister of Education of Indonesia, made transfer policy face-to-face learning becomes Distance Learning or online learning as form of preventing the spread of the virus Corona.

The determination of COVID-19 Pandemic as a national disaster by the central Government and the policies of each campus related to the response to the COVID-19 pandemic, also affected the academic business Processes at universities in Indonesia, especially some campuses that adopted the policy of eliminating the lecture process directly on campus

Face-to-face teaching learning before corona

The application of online learning or also known as Electronic Learning (E-Learning) is an alternative solution so that the lecture process can continue in the midst of the COVID-19 Pandemic, especially for some campuses that have to eliminate lecture process directly on campus. However, in practice, students experience various obstacles

when participating in e-learning-based process caused by certain factors and reasons. This is the background for study of acceptance of e-learning in the process to students during the COVID-19 pandemic.

Development of e-learning systems education in Indonesia, especially at each campus where students have not yet enjoyed the positive benefits of a comprehensive e-learning-based lecture process.

Difficult internet signal problems in rural areas

Students have to struggle extra to be able to get an internet signal. They are willing to travel two hours and climb trees to get a signal to study online. Students have to bet looking for signals to complete college assignments. Before going up to mountain, they usually collect money first with other friends to buy data credit. Internet signal problems, sometimes they have to find shelter when it rains heavily.

The obstacles experienced were a slow loading network, inadequate internet quota. They have to climb hill during fasting month, so sometimes are body not fit enough. Especially in remote areas it is difficult to get an internet signal. They sometimes have to go outside the village to get internet signal

Students climbed tree on hill looking for signal for study online

METHOD

This research discusses about The Difference between Synchronous and Asynchronous Online Learning Communication during Covid-19 Pandemic. Online education make trend and will continue to grow in years to come. The Ways of teaching and learning by web can be divided into two groups are: synchronous and asynchronous both have advantages and disadvantages in learning communication online.

Synchronous communication is learning communication that is carried out with a real time communication system. So, lecturers can deliver material in class directly to their students. Thus, even though it is done online, lecturers can still do virtual learning through online class media. Synchronous learning is learning-oriented and facilitated interaction with direct, real-time and usually scheduled instructions.

In synchronous class using media Google Meet or Zoom for presentations and also use WhatsApp media group as a forum for discussion. The material delivered is the same no different significantly, namely the material regarding how to model a linear program that presented in PowerPoint media. Students are given Worksheets useful to measure the effectiveness of the media learning.

In asynchronous class, learning is carried out in remotely by online method. Asynchronous class using WhatsApp group media as a container discussion, presentation of the material learning using videos uploaded on YouTube. Asynchronous communication is learning communication that is carried out by intermediary media.

The blended learning process is a combination of synchronous and asynchronous learning systems. In the blended online learning system, lecturers and students can balance the two learning methods of each class between synchronous and asynchronous learning systems, lecturers and students can get a more effective.

Covid-19 is a type of epidemic that spreads very high and fast. The epidemic attacks the human immune and respiratory systems. The World Health Organization or WHO recommends that one of the steps to avoid the spread of COVID-19 is to enforce social distancing regulations. Indonesian Education has made a policy of transferring face-to-face

learning to online as a form of preventing the spread of the Corona virus. The application of online learning or Electronic Learning (E-Learning) is an alternative solution so that the lecture process can continue in the midst of the COVID-19 Pandemic.

E-learning system in universities in Indonesia, especially in every campus, some students have not enjoyed the positive benefits of a comprehensive e-learning-based lecture process, the method in e-learning learning is the best solution by using an online learning media system. Synchronous and asynchronous learning communication systems can be applied during COVID-19 pandemic.

CONCLUTION

In order to break the chain of spread of Covid-19 in the university environment, online learning is an effective learning solution to overcome learning that allows lecturers and students to interact in online classes that can be accessed anywhere and anytime. Online learning can make students learn independently and increase their motivation. However, there is a weakness that students' online learning is not

Properly supervised during the online learning process. Slow internet signal and high quota fees are challenges for online learning. However, online learning can reduce the spread of Covid-19 in universities.

Synchronous learning is a solution in teaching and learning activities. Teaching and learning activities are in the form of practicum, of course Synchronous learning is a mainstay in teaching and learning activities. Implementing Synchronous learning in order to increase student activity in teaching and learning activities, student activity and learning will be interesting and not boring.

Asynchronous communication that occurs without having to be physically present during moment of transmission. This form of connection does not require an immediate response. Advantages of Asynchronous learning are

flexibility. Learn with own abilities and many types of choices application.

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