

## Implementation of Team Teaching Learning through the Collaboration of Zoom Cloud Meeting and Live Broadcasting Technology during the Covid-19 Pandemic

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### Abstract

Online learning is the choice of higher education managers during the Covid 19 pandemic. Higher education managers must be able to manage online learning. One of the universities that innovates learning systems by combining zoom cloud meeting technology and live broadcasting at UGTV is Gunadarma University. Through these two platforms, lecture materials are distributed to students. Learning materials are prepared by Team Teaching, a learning strategy in which learning activities are carried out by one or more lecturers according to their respective roles and responsibilities. The shortcomings of online lectures using zoom are related to network constraints, the availability of internet quotas, and display quality. By combining zoom cloud meeting and broadcasting, network constraints, quotas, participant capacity and on air look better and more attractive to students. This study aims to determine how the implementation of learning through the collaboration of zoom and broadcasting technology. The method used is descriptive qualitative method. The results showed that through online learning distributed through zoom and UGTV, with learning materials prepared by team teaching it could facilitate student learning, both using zoom and UGTV.

**Keywords:** Implementation; learning; team teaching; collaboration of zoom and broadcasting technology

### Introduction

March 2020 is the starting point for the spread of Covid 19 in Indonesia. The government has officially announced that the spread of this virus is so dangerous that it asks people to do activities from home, study from home, work from home, and worship from home. The coronavirus disease 2019 (Covid 19) outbreak has swept across the world (Singarimbun, 2021; Nabila, 2021; Amanda et al, 2020). The world community is forced to change according to these conditions. The government of each country is striving for the

best solution to overcome the spread of Covid 19 as well as the best solution to continue to lead life in society. This is a challenge for stakeholders, including higher education stakeholders in Indonesia. Universities are required to provide online education (Fitriyani et al, 2020; Putri et al, 2020; Guzacheva, 2020).

Gunadarma University is one of the universities affected by this condition. Gunadarma University is one of the leading universities in Indonesia that runs lecture programs using the online method or the

distance lecture method. Online learning uses or utilizes the internet network with flexibility, connectivity, accessibility and the ability to generate various interactions in learning.

Zhang et al (2004) in their research states that the use of the internet and multimedia technology is able to change the way knowledge is delivered and can be an alternative to learning carried out in traditional classrooms. Online learning is carried out by bringing together lecturers and students virtually but still communicating, interacting or collaborating (directly/synchronously and indirectly/asynchronously). Online learning is a form of distance learning that utilizes telecommunications and information technology (Molinda, 2005).

This online method is not easy to implement due to limited distance, network, student and lecturer quotas. Many preparations must be made by students and lecturers in conducting online lectures, such as preparing supporting devices, good networks, and the availability of internet data packages so that learning can take place smoothly. According to Sari (2015), the advantage of online learning is to build a new learning atmosphere, changing from the learning atmosphere that was originally carried out directly in the classroom.

Gunadarma University carries out various learning innovations to produce the right learning scheme. One of them is by forming the so-called Team Teaching. Team Teaching is a learning strategy carried out by several supporting lecturers according to their respective roles and responsibilities. This definition is in keeping with what was explained by Martiningsih (2007) that "Team teaching learning method is a teaching method in which there are more than one teacher who each has a task.

Ahmadi and Prasetya (2005) stated that Team teaching is a learning method that is carried out in teams or groups with their respective divisions of tasks. The teaching team or lecturers who present lesson materials with this team teaching method present the same teaching materials at the same time with the same purpose. Lecturers in team teaching together prepare, implement, and evaluate student learning outcomes. The learning can be carried out in rotation with the lecture method or together with the panel discussion method and assignments.

## **Theoretical Framework**

The implementation of learning that has been prepared through team teaching will be more effective and efficient if delivered using the right media. Gunadarma University tries to make innovations in the form of learning by using the collaboration of zoom cloud meeting technology with live broadcasting, which is a facility provided by Gunadarma University as the main tool for delivering effective learning information to convey messages in two dimensions at once, namely the dimensions of sound (audio) and images (visual) via UGTV. This activity is intended to complement "blended learning" which combines and harmonizes the "face to face" learning method in the classroom with learning using electronic media online. Virtual Class and broadcasting are very useful for Gunadarma University students to improve learning, and tend to have greater opportunities to explore themselves.

UGTV is a digital educational television with Jabodetabek coverage. According to Badjuri (2010), television is a viewing medium as well as a listening medium (audio visual), where people do not only look at the images shown on television, but at the same time hear or digest the narration of the images. Audience or the public becomes easier to get information because it is delivered audio and visual.

In addition to utilizing UGTV, online learning at Gunadarma University also uses cloud meetings which are used in team teaching learning using zoom. Zoom is a communication application using video, or an application that can support communication needs anywhere and anytime with many people without having to meet physically or directly. The application can be used on a variety of mobile devices, desktops, to phones and room systems. Zoom itself is an application made by billionaire Eric Yuan, and released in January 2013. The Zoom application can be accessed through the Website, Windows, Linux, iOS and Android.

It is interesting to see further the implementation of team teaching learning at Gunadarama University during the Covid 19 pandemic by using the collaboration of zoom cloud meeting technology and UGTV broadcasting.

## **Material and Methodology**

This study uses descriptive qualitative method. The purpose of the research is to understand the views and opinions of individuals in order to get in-depth information

from a limited background (Putra, 2013). The purpose of this study is to provide an overview of the implementation of team teaching learning at Gunadarma University by using the collaboration of zoom cloud meeting technology and live broadcasting. The research was carried out by conducting in-depth interviews with several informants who were included in the Team Teaching and Learning System Development at Gunadarma University. The research subjects are several parties involved in the management of online learning at Gunadarma University.

This study uses instruments in the form of interview guidelines and documentation, both written documents, videos from UGTV managers and data on YouTube social media (team teaching learning shows will be re-broadcast on UGTV official YouTube). The data collection technique is realized by conducting in-depth interviews with several parties involved in online learning at Gunadarma University.

The data analysis technique used by the researcher is an analytical technique from Miles and Huberman. Miles and Huberman (in Sugiyono, 2015) stated that qualitative data analysis activities were carried out continuously and interactively and lasted to completion, so that the data was saturated. There are three activities in data analysis, namely, data reduction, data display, and conclusion drawing/verification. Reduction of data obtained in the field will be analyzed and used according to research needs. Not all of the information provided by the informants concurs with the research needs. Thus, if data does not concur with the theme, it will be scrapped.

The selected data will provide a clearer picture, and make it easier for researchers to conduct further data collection, and look for it when needed (Sugiyono, 2015). The data display aims to make it easier for researchers to find out what data is obtained and where it will be used. The last stage is the conclusion drawing/verification in qualitative research that can answer the research questions posed in the formulation of the problem or not. This happens because qualitative research is still temporary and will develop after the research is in the field.

## **Result and Discussion**

The online learning carried out by collaborating zoom cloud meeting technology and live broadcasting received a positive response from students. In terms of technology support, this learning system uses zoom cloud meetings and live broadcasting. Zoom is a communication application using video, or an application that can support communication needs anywhere and anytime with many people without having to meet physically or directly. The application can be used on a variety of mobile devices, desktops, to phones and room systems. The Zoom application can be accessed through the Website, both for Mac OS, Windows, Linux, iOS and Android.

Based on the Circular of the Chancellor of Gunadarma University Number: 086.1/REK/UG/III/2020 regarding the sustainability of online services related to preventing the spread of COVID 19 at Gunadarma University, dated March 17, 2020 and responding to the latest developments in situation, Gunadarma University implemented: (1) distance learning in Gunadarma University; (2) Distance learning according to the previous technical implementation, including academic services and learning information that can be accessed online by lecturers and students on the university's official website equipped with online helpdesk/chat.

The circular then serves as the basis for online implementation from their respective homes, including thesis, thesis and dissertation guidance. The implementation of online lectures is not easy to do, due to a lack of laptop or computer facilities and internet networks. Also not all lecturers and students are ready to operate the online learning system quickly, including preparing lecture materials digitally. This policy encourages students to be more innovative and creative in learning (student centered learning).

To complement the online learning, Gunadarma University has several Information Technology-based services such as: online BAAK, Studentsite, Staffsite, Virtual Class, UG Library. This service has been implemented at Gunadarma University for a long time, so lecturers and students are used to communicating virtually in the learning and teaching process. Prof. Dr. Budi Hermana, MM, the head of the Planning and Information System Administration Bureau (BAPSI) at Gunadarma University, stated that virtual class

is a learning that involves lecturers and students in a lecture using multimedia computer facilities through internet media without using classrooms. Virtual classes at Gunadarma University have been conducted since 2008.

Virtual class complements "blended learning" which combines and harmonizes face-to-face learning methods in class with online learning using electronic media. Prof. Dr. Budi Hermana, MM recalled the implementation of team teaching in the virtual class of Gunadarma University as follows:

“.....In the period of transition from face-to-face to online lectures, the lecture system is carried out alternately between virtual classes and virtual conferences through zoom cloud meetings, google meet and UGTV. Online learning does not have to be online, but how the curriculum is designed to collaborate between v-con and v-class as well as independent assignments.”

To support online learning, Gunadarma University utilizes UGTV, a digital Education Television that has coverage of Jakarta Bogor Depok Tangerang Bekasi (Jabodetabek). UGTV can also be accessed via channel 32 digital tv, channel 54 analog tv, can also be accessed via streaming at [www.tv.gunadarma.ac.id](http://www.tv.gunadarma.ac.id) and [www.ugtv.co.id](http://www.ugtv.co.id) or download the UGTV mobile application via Playstore or Appstore. Television itself in Elvinaro's book (2007) has three kinds of characteristics, namely:

*Audiovisuals.* Television has advantages compared to other broadcast media, which can be heard as well as seen. So if radio broadcast audiences only hear words, music and sound effects, then television audiences can see moving images. Therefore, television is referred to as an audiovisual electronic mass media.

*Thinking in pictures.* There are two stages of the thinking process in pictures. The first is visualization, which is translating words containing ideas into individual images. Second, picturization is the activity of assembling individual pictures in such a way that their continuity contains a certain meaning.

*Operation is more complex.* Compared to broadcast radio, broadcast television operations are much more complex, and involve more people. The equipment used is also more and

the operation is more complicated and must be carried out by skilled and trained people.

Television has the same function as other mass media (newspapers and radio broadcasts), namely to provide information (to inform), education (to educate), entertainment (to entertain) and influence (to persuade). According to Effendy in Elvinaro et al (2005), the general function of mass communication are:

*Information Function.* The function of providing this information means that the mass media is a disseminator of information for readers, listeners or viewers. A variety of information are needed by the mass media audience concerned in accordance with their interests. The audience as social beings will always feel thirsty for information about what is happening.

*Educational Function.* Mass media is a means of education for the audience (mass education) since it presents a lot of things that are educational. One way of educating the mass media is through teaching values, ethics and rules that apply to viewers or readers. The mass media does this through drama, stories, discussions and articles.

*Influencing Function.* The influencing function of the mass media is implicit in the headers/editors, features, advertisements, articles, and so on. Audiences can be influenced by advertisements shown on television or newspapers.

Several students who became research informants stated that they were happy with this learning invasion. Student. Television attracts viewers because it has a variety of programs presented using an audio and visual method. Iwan Mauritz as UGTV program manager stated that:

“.....UGTV has various programs, ranging from educational ones such as team teaching, literacy; talk shows such as UGTalks, Afternoon Talks; Entertainment such as music, soap operas, movies; Various other events such as Podcasts, campus info (News) and Exclusive Joint UG which contains activities that are national in nature and involve various parties such as Hatti, Dikti, LLdikti, Director General of Taxes, Immigration Office, GNIK and so on.”

Various programs at UGTV are handled neatly by involving professionals and students

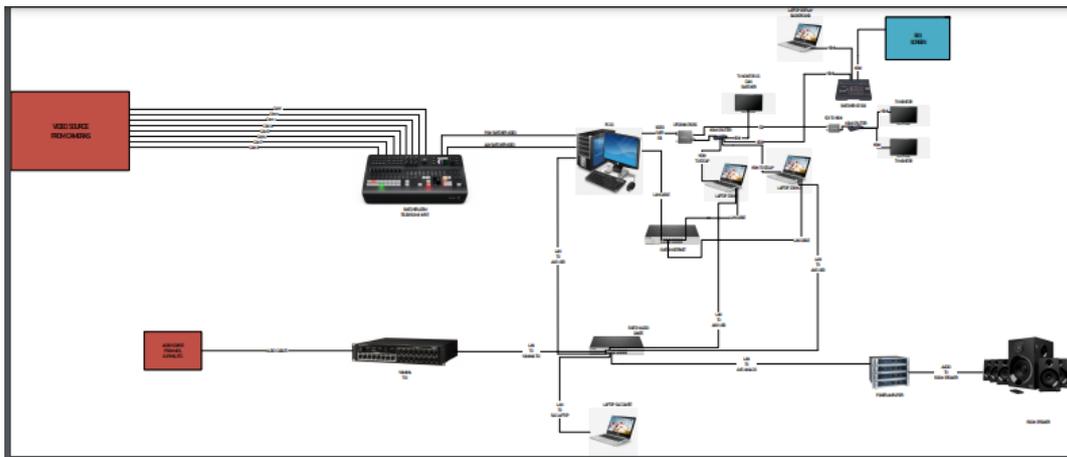
who are doing internships. UGTV produces a variety of information for the public and provides a place to practice or internship for students before entering the workforce. Learning through cloud meetings or learning with synchronous learning is a learning model that occurs virtually, in real time but in a different place (Chen, et, al, 2005). Learning using zoom cloud meetings can be an alternative to distance learning and is carried out appropriately (Pratiwi et al, 2019).

Zoom cloud meeting is an application that is used as a medium of remote communication by combining video conferencing, chat, online meetings and mobile collaboration. In online learning, zoom functions as a learning medium that allows the

learning process to be delivered using the internet. According to Dr.rer nat. Avinanta Tarigan as the person in charge of zoom in team teaching learning at Gunadarma University:

“ .....Zoom technology as a video conference service provider, a kind of extension of broadcasting cameras to homes if there are lecturers or resource persons at home. In the early stages, it is necessary to prepare a common understanding and technical training for Gunadarma University lecturers and students, so that they can carry out this learning well”.

In general, the zoom cloud meeting configuration with UGTV Broadcasting to image distribution can be described as follows:



**Figure 1.** UGTV zoom and live broadcasting configuration  
Source: Agus Turiyono\_UGTV

In Figure 1 above it can be explained that:  
(1) The configuration starts from taking pictures or videos through several cameras in the studio, so that team teaching lecturers can take pictures from at least 3 cameras (front 2 cameras focus on all lecturers, camera 1 from the left side, and camera 3 from the right side) gives an on air look that is great for viewing on TV or zoomed in. This is to provide a nicer and interactive look so that students don't get bored;  
(2) The camera capture goes into the Atem video switcher then the pgm output that has been selected in this switcher is sent to the PC Character Generator (Multimedia PC);

(3) The audio source is connected to the Tio as an analog audio capture from clip on to be transmitted to the digital mixer sac using Ethernet data then processed in the MXer Sac and the audio mixing results are sent to the PC CG or audio input to the Zoom laptop. for

delivery to pc cg is carried out for the embed process (video & audio mixing); (4) Out pgm in the form of sdi video will be converted to hdmi so that the video source can be captured by capture capture laptop zoom and TV input; (5) Installation of HDMI Splitter is done to divide the source so that all sources and tv monitors get the video source as zoom input or tv monitor; (6) Installation of the switcher at the end is used to change the source of the image on the big screen which will be done when the camera is highlighting the big screen stage, it does not display the image from the camera because it will cause the image to accumulate.

The results of the collaboration between zoom cloud meetings and broadcasting (UGTV) in supporting team teaching learning at Gunadarma University can be the right solution in providing learning during the Covid 19 pandemic. Collaboration between live

broadcasting and zoom cloud meetings can result in on air looks both on UGTV and zoomed in that can attract students' attention during lectures. Physical limitations are expected to be overcome by interaction through team teaching learning through zooming and broadcasting. This is even more important when the government re-issues the Micro PPKM policy (Enforcement of Restrictions on Community Activities) which officially applies according to the instructions of the Minister of Home Affairs Number 3 of 2021. Given the instruction, the government bans crowds and restricts the movement of people going into and out of neighborhood association (RT) areas that are in the red zone category. It is increasingly clear that the benefits of team teaching learning carried out by Gunadarma University can be felt as one of the solutions for implementing Micro PPKM.

According to one of the lecturers of the Gunadarma University Team Teaching, Dr. Tri Wahyu Retno Ningsih, MM, team teaching learning through the collaboration of zoom cloud meeting and UGTV broadcasting is the best solution offered by Gunadarma University to carry out learning during the Covid 19 pandemic. Lecturers are tasked with preparing interesting multimedia-based lecture materials. The support of the UGTV creative team in producing several tapping videos (VT) is able to provide attractiveness for students in studying lecture materials. This is also in accordance with the opinion of one of the team teaching participants from the Faculty of Communication, Gunadarma University, Anisa who stated that she was satisfied with the team teaching learning carried out at Gunadarma University. Technical constraints, networks, static teaching materials can be overcome with this new learning model organized by Gunadarma University.

### Conclusions

Implementation of team teaching learning through the collaboration of zoom cloud meeting technology and live broadcasting at Gunadarma University is a learning innovation and a solution to learning problems during the Covid 19 pandemic. The collaboration of zoom cloud meetings and live broadcasting is able to present new lecture models that are more interesting and not boring. Students can choose to attend lectures by using zoom cloud meetings or by watching through

UGTV, while there is still a control mechanism from the Gunadarma University online lecture organizers. Students get alternative college choices during the pandemic without having to use a data package, but can watch on television.

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