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# Audio Insert Camera Based Presentation to Increase the Effectiveness of Geography Online Learning During the Covid-19 Pandemic

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## ABSTRACT

This study aims to determine the effectiveness of the use of audio insert camera-based presentation media during the Covid-19 pandemic. The research was conducted by experimenting with 78 students of the Geography Education study program and divided into 2 groups, namely 38 students in class A as the experimental group, and 40 students in class C as the control group. Collecting data using questionnaires, observation sheets, and tests. Different test to see learning outcomes using independent sample t-test. The results showed that the Sig count is 0.001 <than 0.05, which means that H1 is accepted, thus there is a difference in the average learning outcomes between class A and class C. The average value of class A is 86.79, higher than the average value of class C of 83.48. Thus, it can be said that learning using an audio insert camera at a zoom meeting can significantly improve student learning outcomes. Therefore, this paper aims to discuss the implications of using an audio insert camera at zoom meetings, specifically discussing it on student learning outcomes.

**Keywords:** audio insert camera, geography online learning, covid-19

## 1. INTRODUCTION

The world is currently faced with a global problem, namely the Covid-19 pandemic which has hit 107 million people, and 60.1 million people have been declared cured, while 2.36 million people have died. Indonesia also experienced a similar situation where the number of patients who tested positive for Covid-19 continued to increase. Data from Committee for Handling Covid-19 and National Economic Recovery as of 12 February 2021 as many as 1.19 million people tested positive for Covid-19, and 993 thousand were declared cured, while 32,381 people were declared dead. The spread of covid-19 occurred in 496 districts / cities in 34 provinces in Indonesia. This data was obtained from the Covid-19 Handling Task Force which obtained data from the Health Research and Development Agency with a new all record system which was then verified by the Public Health Emergency Operating Center (PHEOC) and sent through the Ministry of Health's Data and Information Center.

The impact of this pandemic has affected all aspects of people's lives, not only on social and economic aspects but also on other aspects including culture and education. Almost all educational activities are carried out online,

using various virtual platforms that are attractively packaged. This condition cannot be avoided, because learning still has to take place even though it is not done face-to-face or offline. Seminars and conferences are mostly conducted online, because there is no other choice [1].

To reduce the risk of wider transmission, the government has taken policy steps such as the PSBB (Large Scale Social Restrictions) and several agencies have also implemented work from home policies. In higher education students have been closed from campus activities, they learn from home until an undetermined time limit. Learning has shifted rapidly from conventional face-to-face learning routines, now it has to switch to online or network-based learning systems. This pandemic condition certainly does not stop the learning process, but it must be done by adapting to existing conditions by using effective and efficient media. When society is struggling with a new way of life, education must continue [2]. The conditions of learning in Indonesia are not much different from those in Russia. The result of research from [3] stated that 99.2% of learning in Russia was carried out online, only 0.8% used offline learning.

Various types of online learning applications and platforms are used to facilitate learning during the Covid-19 pandemic, such as Moodle, Google classroom, Edmodo, LMS, and so on. One of the efforts to provide effective and efficient learning services for students is to use audio insert cam-based presentation media. The use of this media is effective because it does not require high costs compared to lectures such as v-learning or zoom meet media, google meet, where the required internet quota is quite large and it is too burdensome for students in the midst of this pandemic. Communication to the audience can only be done through audio or visual senses. Therefore, in any presentation, the technical mastery involved in using effective audio-visual aids is paramount [4].

The period of the Covid-19 pandemic requires creativity and innovation from lecturers so that it is effectively given to students. Lecturers must be able to design or design lightweight online learning in accordance with the material being taught. It will precisely suit the needs of each student. Education is said to have succeeded in implementing online learning media, and students are also urgently needed a culture of independent learning by following learning via computers or gadgets. Research conducted by [5] stated that during the Covid-19 pandemic the effectiveness of online learning was strongly supported by technical competence. Online learning also provides a great opportunity to be able to explore the material presented that can be stored for a long time. However, application selection needs to be precise by adjusting learning methods, economic conditions, and geography. The use of presentation media with an audio insert camera can make it easier for teachers to prepare material better, and this is part of the tips for teaching in a fun way. The use of audio insert camera-based presentation media is an effective step to avoid student boredom, lecturers can prepare material well, can be edited, and can be used unlimited time and place.

Based on the above conditions, the problem that will be used as the basis of this research is how to apply online-based learning media that is effective and can adapt to the needs of students with all the obstacles that exist. Researchers chose to develop an audio insert camera-based presentation media because this media is very effective in explaining the material, and students can use their smartphones or laptops to receive material and explanations from the lecturer. Likewise, in terms of financing, this learning media does not require a large internet quota, because the material is in the form of power points that can be shared on WhatsApp or zoom meetings so that students can listen and see explanations anytime and anywhere. In addition, learning during a pandemic must still aim to increase student learning motivation. Research conducted by [6] shows that the pandemic has a very large influence on learning, both on

learning motivation and on the learning and learning process.

This study has a specific objective, namely to determine the use of audio insert camera-based presentation learning media in increasing the effectiveness of online learning during the Covid-19 pandemic. The urgency of this research is to be able to facilitate the needs of students during learning from home by minimizing costs, but the results can be more effective and optimal during the Covid-19 emergency.

## **2. METHODS**

This type of research is quantitative descriptive with a quasi-experimental approach. Experimental research, which departs from the framework of scientific realism, is considered by many to be the only type of research that can produce findings that suggest a causal relationship. What makes experimental research different from other forms of quantitative research is that the researcher controls or manipulates how groups of participants are treated and then measures how that treatment affects each group. An experiment is a part of the scientific method that helps determine the fate of two or more competing hypotheses or explanations for a phenomenon. In other words, experiments produce empirical knowledge [7].

This is because researchers are not able to condition, control and manipulate research subjects [8]. In quasi-experimental research the role of the researcher is to provide treatment to the group with a design that is tailored to the research objectives to be achieved, either using a control group or a single group design without using a control group. Research like this is very common in the field of education, especially to measure the success of student learning outcomes. The focus of this research is to find out how the effectiveness of the application of learning using audio insert camera based presentations in terms of: 1) learning outcomes, 2) activeness, and 3) student responses.

The subjects in this study were students of the 2018 class from Department of geography Education FISH Unesa who were programming the social geography course. The determination of the research subjects was carried out on the basis of purposive sampling, where the researcher took one class for the implementation of the experiment, namely the 2018 A class, which amounted to 38 students, and one control class, namely class C, which amounted to 40 students. The consideration for selecting these two classes is based on the results of the LASSI (Learning and Study Strategies Inventory) test. The test results show the existence of data independence between class A and Class C, especially on the following components: a) time management 22,98 and 21,75, b) concentration 23,71 and 22,95, c) selecting the main idea 15,81 and 15,80. In the experimental class, learning is carried out using an audio insert cam-based presentation,

while in the control class learning is carried out conventionally by providing material downloaded in google classroom. The research period is 5 months, starting from September 2020 - January 2021.

Data collection in this study used several instruments, namely: 1) Observation sheet, which is used to determine the activity of the research subject, which is measured by observing the frequency of the subject's activity by placing a check mark on the observation sheet that has been prepared, 2) Student Response Sheet, used by researchers to ask the opinion of research subjects related to the learning that has been implemented, the distribution of student response questionnaires via google form using the Gutman scale category: agree and disagree, and 3) Tests, used by researchers to measure the effectiveness of learning, namely knowing the average difference in student learning outcomes between classes control and experimental class using t-test. The hypothesis of this study is that there is a difference between the average student learning outcomes between the experimental class using audio insert camera presentation-based learning and the control class using conventional learning through google classroom.

**3. RESULTS AND DISCUSSION**

Student activeness during online learning between the control class and the experimental class can be seen in the following table.

**Table 1.** Student Activeness

Activities	Frequency (%)	
	Class A	Class C
Ask and answer question	73	56
Convey ideas	42	34
The effectiveness of communication	41	40
Using of chat forums	28	43
The accuracy of the collection of coursework	87	92
Total	54.2	53

In the table above, it is known that the effectiveness of students using audio insert camera-based learning with zoom meetings obtained 54.2% results, while the control class was 53%. The difference in student activeness is not too much different, even in the component of the use of the control class chat forum is higher, namely 43% compared to the experimental class which is only 28%. Likewise, the components regarding the accuracy of collecting the control class assignments were 92% higher than the experimental class, 87%. In this component the researcher does not measure the difference in influence between the two media, but only looks at the frequency of student activity in the experimental class and the control class through then percentage. The results of this study indicate that online learning, which involves more sensory activity, can encourage students to be more

active in participating in learning, even though the difference is not too far between the two groups.

Student responses related to the use of insert cam audio-based presentations in online learning can be seen in the following table.

**Table 2.** Student Responses

Indicator	Audio Insert Cam presentation (zoom meeting)		Google Classroom	
	Agree	Disagree	Agree	Disagree
Make it easy to receive lecture information	67	23	59	41
Increase student productivity	76	24	62	38
Increase students' enthusiasm for learning	54	46	57	43
Easy to access	92	8	90	10
Communicative	84	16	76	24
Speed get feedback	88	12	35	65
Learning satisfaction	47	53	54	46
Effective	56	44	47	53
Relevant for online learning	83	17	62	38
Online learning is interesting	95	5	89	11

Based on the explanation of table 2, the two groups gave different responses. The ease of accessing the media occupies the highest response, namely 92% for the experimental class and 90% for the control class. Thus, it can be said that the use of online learning with the zoom meeting platform and google classroom is the same and can be easily accessed by students. The very high difference is in the component of the speed of receiving feedback, the experimental class is 88% while the control class is only 35%. This difference is of course very basic where learning in conventional control classes using google classroom does not allow students to be able to interact directly, but there must be a pause from the lecturer to respond to questions sent in the chat forum. On the other hand, the level of student enthusiasm and student satisfaction in the control class was higher, namely 57%: 54% and 54%: 47%. This is influenced by student saturation in doing online learning face-to-face. Students feel that online learning with presentations based on audio insert camera through zoom meetings is too monotonous and boring.

The difference in student learning outcomes between the control class and the experimental class can be seen in the following table.

**Table 3.** Average Score

Class A and Class C		N	Mean	Std. Deviation	Std. Error Mean
Test results	Class A	38	86.7907	3.91309	.59674
	Class C	40	83.4828	4.15435	.77144

From the results of statistical tests it is known that the Sig Count is 0.001 < than 0.05, which means H1 is accepted, thus there is a difference in the average learning outcomes between class A and class C. The average value of class A is 86.79, which is higher than the average value of class C amounting to 83.48. Thus it can be said that learning using audio insert cam presentations through zoom meetings is better than learning using google classroom.

Learning using audio insert camera based presentation media is significantly more effective and successful. This is evidenced by the higher learning outcomes in the experimental class than the control class. In addition, student activeness is still better in the experimental class compared to the control class. The approach that is centered on student activities is consistent with the study habits of the millennial generation [9]. This expectation is based on the idea that information technology by supporting interactive learning will encourage students to be more responsible for their own learning. In this effort, information technology design must be based on a well-reasoned theory of the learning process. Online learning using an audio insert camera can encourage higher student participation and is active in learning, for example by asking and answering questions, expressing opinions and arguments, and being more active. using communication media through chat forums. The learning environment can be well conditioned, so that students' intrinsic motivation is more enhanced than conventional learning which tends to be passive. This study shows that students find the learning environment with video presentations to be more useful. Moreover, with online discussion forums, a community of learners produces and continually improves on their ideas, which allows knowledge construction to become a social activity.

Learning using media that involves many senses will certainly have different results from conventional learning which only involves our senses a little. Multimedia learning can also increase curiosity [10]. The ability of the media to optimize the listener's senses also affects the response shown. This study has proven that the use of audio insert camera based media has optimized the sense of the listener, so that the ability of students to receive information will be better than the control class, and the impact on learning outcomes will also increase. In the natural environment, our senses provide us with a

lot of incoming information, which must be analyzed and separated to form a correct representation of the perceptual object. In particular, the hearing system needs to separate the information related to the active sound source together to establish a consistent and stable interpretation of the acoustic environment. A number of studies have provided evidence that auditory perception is enhanced by the integration of information from various sensory modalities.

The practice of video-synchronous speaking provides a technology-enhanced communication option to schools when Covid-19 forces offline classes to be canceled [11]. Course satisfaction is associated with higher academic outcomes, plays an important role in increasing motivation [12]), and influences behavioral intention to help learners meet academic goals [13]. Generally, online education studies tend to focus on the effectiveness of online teaching or tend to compare online courses with offline courses [14]. Furthermore, studies in offline education often center on course expectations, learning expectations [15], and course satisfaction [16], but only now in the midst of Covid-19 can we explore Intrinsic motivation on course satisfaction in the context of presentation with audio insert camera.

Effective learning if accordance with the needs of students and is inexpensive, and can be done by all lecturers without requiring complicated applications. This is very effective for teachers to use in classroom learning. In addition, it can be modified by adding a camera in the presentation, so that students can completely see the audio, visual and kinesthetic of the lecturer in providing an explanation when the lecture is conducted. Multimedia-based learning content equipped with videos is very fun because it can be seen and heard, expands sensory and cognitive experiences, and increases learning motivation [17]. However, face-to-face online learning can also cause boredom in students. Saturation can occur because students experience physical fatigue, so it is important for lecturers to combine with other learning media that can stimulate student interest and motivation to continue learning. Attitudes and interests are the main factors to prepare students for online learning. Due to the Covid-19 pandemic, the transition to online learning in higher education institutions has become a very complex process [18]. There is a significant positive correlation between students' online learning attitudes and online learning readiness, and to achieve high readiness in online learning, online attitudes must also be high. Attitudes and high motivation in learning certainly greatly affect learning achievement. This study shows the value of student productivity actually increases by 76%. If the student is motivated, he will be determined to achieve his goals by becoming self-disciplined [19]. Online learning, which is part of a strategy in dealing with the conditions of the Covid-19 pandemic, has at least led to new innovations among universities to make learning innovations. It is possible

that in the future online learning will continue to be maintained, because online learning does not fully have a negative impact on learning outcomes[20]. Universities adapt very quickly by combining synchronous and asynchronous methods[21], and from traditional to digital [22].

#### 4. CONCLUSION

Learning using audio insert camera-based presentation media through the zoom platform can increase student activity and learning outcomes by 86.78, compared to conventional learning using the google classroom platform of 83.48. Thus, there is a difference in the average learning outcomes between students who use learning with audio insert camera-based presentation media and conventional student learning outcomes using google classroom. For this reason, researchers suggest that online learning in higher education should be continued, by using a more varied and interesting platform so as to encourage student motivation to increase achievement.

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