



## **The Perception of Physics Education Students towards the Use of Online Lecture Applications during Covid-19 Pandemic**

**Elmi Mahzum<sup>1</sup>, Rahmati<sup>1\*</sup>, A Halim<sup>1</sup>**

<sup>1</sup>Departement of Physics Education, Syiah Kuala University, Banda Aceh

\*Corresponding email: [rahmatirahma59@gmail.com](mailto:rahmatirahma59@gmail.com)

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### **ABSTRACT**

This study aims to determine the perception of physics education students on the use of online lecture applications during the covid-19 pandemic. The approach used in this research is a quantitative approach with descriptive research type. The population in this study were all students majoring in Physics education at USK FKIP who were active in the Even Semester of the 2020/2021 Academic Year and the sample in this study was 80 students of physics education. The sampling technique used is simple random sampling technique. Data collection was carried out using a closed questionnaire based on google form. The data analysis technique used in this study was the Likert's summated rating procedure. The results showed that physics education students gave positive perceptions regarding the use of online lecture applications during the covid-19 pandemic. The results of this study can be used for the implementation of online lectures and teachers can find applications that are easy to use in online lectures.

**Keywords:** Perception, Online Lecture, Application

### **INTRODUCTION**

The corona virus emerged at the end of 2019 in the city of Wuhan, China. This virus is spreading very fast throughout the world, including in Indonesia. The number of positive cases of corona has increased significantly. In connection with the Covid-19 outbreak, various efforts have been made by the government to deal with the corona virus. Based on the Regulation of the Minister of Health of the Republic of Indonesia Number 9 of 2020, the Minister of Health established PSBB (Large-Scale Social Restrictions) regulations to accelerate the handling of the Corona Virus. Education is the most important aspect to educate the nation's life (Rosmani & A. Halim, 2017).

Based on the Letter of the Minister of Education and Culture of the Republic of Indonesia Number 3 of 2020 concerning the prevention of Covid-19 in the Education unit. All higher education in Indonesia requires students to study from home which is carried out online/remotely. Online lectures are carried out to break the chain of the spread of the corona virus and maintain the security and safety of students and educators from the covid-19

outbreak. According to Mustofa, et al (2019) Online lectures are one of the online learning methods that are carried out through the internet network. The internet is one of the technologies to get information quickly and easily (A. Halim, et al., 2019). Internet usage in progress learning will affect student learning outcomes. The use of the internet as a learning resource will affect student learning outcomes, interests, and motivation in learning (A. Halim, 2021; Susanna, et.al., 2021). High motivation can increase interest in learning, so that with interest students will excel (Suwa, et al., 2020). Students need practice directly related to the theory they are learning, so students will be motivated to learn (Oktaviani, et al., 2020).

In connection with the Covid-19 outbreak, the Chancellor of Syiah Kuala University also issued a circular letter number B/1491/UN11/KP.11.00/2020 "Lectures are not closed but the face-to-face implementation method is replaced with other methods, without having to face to face to prevent the corona virus. With this, all faculties at Syiah Kuala University conduct online lectures, including the Faculty of Teacher Training and Education (FKIP) for the physics education study program. Online lectures, teachers must be able to master technology so that the learning process can run smoothly (Fajriana & Safriana, 2021). Physics education lecturers at Syiah Kuala University generally use various applications for conducting online lectures such as e-learning applications, Google Meet, Zoom, Whatsapp Group, Google Classroom, You Tube and E-mail.

E-learning applications are used by students to access lecture materials and collect assignments. The google meet and zoom applications are used by lecturers for online class meetings with students. Through the Whatsapp Group application, students get information about the technical implementation of online lectures. The Google Classroom application is used by students for attendance, accessing lecture materials and collecting assignments. You Tube is used by students to access videos related to lecture material. E-mail is used by students to collect lecture assignments.

The use of various applications in online lectures gives rise to different student perceptions. Perception is the interpretation of an object, event or information based on the life experience of someone who does that interpretation (Tarniji, et al., 2016). Student perceptions related to the use of online lecture applications can be in the form of positive perceptions or negative perceptions.

Several studies have been conducted to determine student perceptions of the use of online lecture applications. Based on the research results of Mulyana, et al (2020) with the title Student perceptions of the use of online lecture applications during the covid-19 outbreak, the results of this study stated that the implementation of online lectures received a positive response from students and students were willing to take online lectures. The limited internet access quota is an obstacle for students to take online lectures. Students also receive support from their families to attend online lectures at home. Students gave positive responses regarding the use of the Google Classroom and Whatsapp Group applications in online lectures because they are flexible, internet quota friendly and easy to use. Then the results of research conducted by Wulandari & Gusti (2020) entitled Dramatic online learning during the covid-19 pandemic (Study on the perceptions of Undiksha PGSD students). The results of this study stated that students gave positive perceptions regarding online learning. Students give positive

perceptions related to the competence of lecturers, learning processes and media, facilities and infrastructure and physiological conditions. Then the results of research conducted by Marlinsa, et al (2021) entitled Evaluation of the science learning process at SMPN 5 Bengkulu based online during the pandemic. The results of this study stated that students were quite happy to take part in online learning, the whatsapp group application was effectively used in online learning, and cellphones were used by students to participate in online learning.

### **Problem of Research**

During online lectures, students experience various problems in the learning process. Students who are not familiar with online lectures will experience problems and need adjustments (Mulyana, 2020). Various obstacles experienced by students in online lectures and expectations that are not in accordance with reality will lead to many perceptions from students (Nurlia, 2021). The use of inappropriate applications in online lectures will also cause problems in online lectures. The use of various applications in online lectures gives rise to different student perceptions.

### **Research Focus**

Based on the description of the problem above, the author conducted a study entitled "Perceptions of Physics Education Students on the Use of Online Learning Applications During the Covid-19 Pandemic"

## **METHODOLOGY OF RESEARCH**

### **General Background of Research**

The place chosen to conduct this research is the Department of Physics Education, Faculty of Teacher Training and Education, Syiah Kuala University. While the time of this research was carried out on May 25, 2021 to June 3, 2021.

### **Subject of Research**

The sample in this study were 80 students majoring in Physics Education at Syiah Kuala University. The sampling technique used is simple random sampling technique.

### **Instrument and Procedures**

This study uses a questionnaire to determine the perception of physics education students on the use of online lecture applications. This research questionnaire consists of two aspects, namely aspects of perception in participating in online lectures and aspects of using online lecture applications. The perception aspect consists of 4 indicators, namely: experience, needs, assessments and expectations in attending online lectures. While the aspect of application use consists of 4 indicators, namely: participation in online lectures, application use, convenience of using applications and availability of online lecture infrastructure.

The approach used for this research is a quantitative approach. The type of research used in this research is descriptive research. Descriptive research was chosen to determine the

perception of physics education students in attending online lectures. The data collection method used in this study was a questionnaire/questionnaire. The type of questionnaire used in this study is a closed questionnaire with alternative answer choices. The type of scale used is the Likert Scale. This questionnaire (questionnaire) was compiled with 5 alternative answers for determining the score of the instrument answers using a Likert scale with the following alternative answers:

**Table 1.** Likert scale scoring criteria

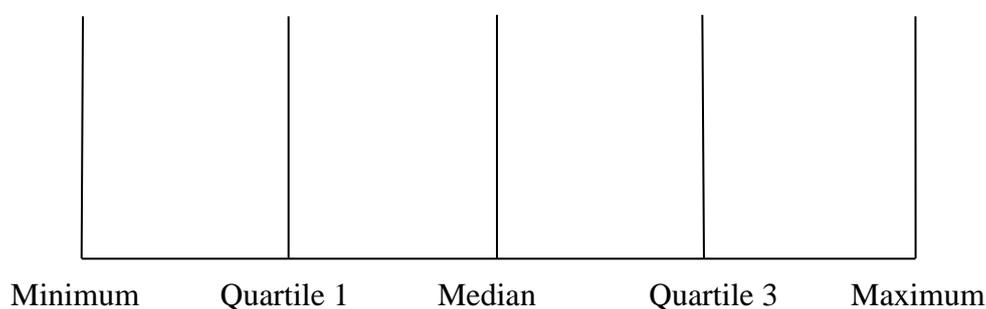
Answer options	Score
Strongly Agree (SS)	5
Agree (S)	4
Doubt - Doubt (RG)	3
Disagree (TS)	2
Strongly Disagree (STS)	1

(Source: Yusrizal, 2016)

### Data Analysis

The questionnaire data obtained from the research results were analyzed descriptively. To calculate the total score of each respondent, that is by adding up the scores of each item obtained using the Likert's Summated Rating procedure. The difference in the number of scores obtained can be interpreted as a difference in attitude, positive or negative. (Yusrizal, 2016). To assess the attitude of individuals or groups (average score), that is by comparing the scores obtained with certain criteria. To determine the category from the aspect of perception and use of the application, that is by calculating the overall score of each aspect. The questionnaire consists of 5 (five) scales so that to determine the category is to determine the maximum, minimum, median, quartile 1 score and determine the quartile 3 score.

After getting the value, then determining the scale of each statement item for each aspect is as follows:



**Figure 1.** *Likert's Summated Rating*

**Table 2.** Of Scoring Category Score Limits

Interval Skor	Category
Quartile 3 $\leq X <$ Max score	Strongly agree
Median $\leq X <$ Quartile 3	Agree
Quartile 1 $\leq X <$ median	Do not agree
Minimum score $\leq X <$ Quartile 1	Strongly disagree

(Source : Yusrizal, 2016:351)

## RESULTS AND DISCUSSION

**Table 3.** Perception Research Data and application usage

Aspect	Indicator	Score Per Indicator	Category
Perception	1. Experience	1.438	angree
	2. Needs	963	strongly agree
	3. Rating	646	strongly agree
	4. Hope	355	strongly agree
Total score		3.402	strongly agree
Application usage	1. Articipation in online lectures	648	strongly agree
	2. Use of online college applications	4.485	strongly agree
	3. Convenience of using online lecture applications	2.250	strongly agree
	4. Availability of online lecture infrastructure.	1.326	strongly agree
Total score		8.709	strongly agree

Source: Data Processing Results, 2021.

### 1. Perception of Joining Online Classes

Based on the results of research on aspects of student perception in taking online lectures, students gave positive perceptions about online lectures. Students give positive perceptions about their experiences, needs, assessments, and expectations in online lectures.

In the experience indicator, students gave positive perceptions regarding the online teaching and learning process. Students have the perception that students are not constrained by the online teaching and learning process. This is supported by previous research which states that students have positive perceptions regarding aspects of teaching and learning in online learning. Students are not constrained to participate in online lectures, both the lecture schedule and the suitability of the material with the lecture contract. Online lectures can also be accessed easily, and make it easier for students to send assignments (Saragih, et al., 2020).

On the indicators of need, students gave positive perceptions regarding the needs of students in attending online lectures. To take online lectures, students need learning media and learning methods that can help students understand the lecture material. Students also need a variety of learning resources in order to master the lecture material. This is supported by previous research which states that students need methods, media and learning resources so that learning objectives are achieved. Students need a variety of learning methods that can provide new knowledge, attitudes and skills. Students also need learning media that can help students better understand the lecture material. Students also need learning resources that are

varied, interactive and directly related to real life. So that learning objectives can be achieved optimally (Alfiriani, 2017).

In the assessment indicators, students give positive perceptions regarding the assessments that lecturers give in online lectures. Students perceive that even though lectures are conducted online, lecturers still provide an assessment of student assignments. This is in accordance with the results of research which states that through online lectures students can get assignment scores and attendance scores. Students also get exposure to lecture material and assignments (Mulyana, 2020).

On the expectation indicator, students give positive perceptions regarding expectations in attending online lectures. This shows that although lectures are conducted online, students have high expectations in online lectures. Students will study hard to get good grades to achieve their goals. This is in accordance with the theory which explains that because of the urge to achieve goals, students will be serious in learning and understanding lessons (Sukmawati, 2019).

Based on the results of research on the perception aspect, students gave positive perceptions about online lectures. Students must take online lectures because of directions from the university leadership to take online lectures. Students must comply with these directives in order to complete their studies. Students also gave positive perceptions regarding the teaching and learning process in online lectures and assignment assessments. Students need methods, media, and learning resources in order to understand lecture material online. Students have high expectations from online lectures so that they can complete their studies on time. This is in accordance with the results of the study which stated that students gave positive perceptions regarding online learning. Students give positive perceptions regarding lecturer competencies, processes, learning media, facilities and infrastructure and physiological conditions (Wulandari & Gusti, 2020).

## **2. Use of Online Lecture Applications**

Based on the results of research on aspects of the use of online lecture applications, students gave positive perceptions about participation in online lectures, the use of online lecture applications, the convenience of using online lecture applications, and the availability of online lecture infrastructure.

On indicators of online lecture participation, students gave positive perceptions regarding student participation in online lectures. This is because the direction from the university leadership must be obeyed by students to take online lectures, so students must comply. This is supported by previous research which states that students have a positive perception of the implementation of online lectures and are always willing to follow it. Families also support students to take online lectures (Mulyana, et al., 2020).

On the indicators of the use of online lecture applications, students gave positive perceptions regarding the applications that lecturers use in online lectures. Students have a positive perception regarding the use of the google meet application, zoom, whatsapp group, google classroom, you tube, e-learning and e-mail in online lectures. Based on the results of the study, the whatsapp group application obtained a higher score than other applications.

Students perceive that the whatsapp group application is often used in online learning because it is flexible and easy to use. This is in accordance with the results of the study which stated that the WhatsApp group application received a positive response from students because it was flexible and easy to use (Mulyana, 2020).

On the indicator of the convenience of using the application, students have a positive perception regarding the convenience of the whatsapp group application in online lectures, the whatsapp group gets a higher score than other applications. Whatsapp Group is convenient to use because it is easy to access and friendly to internet quota. This is in accordance with the results of research which states that the WhatsApp group application is convenient to use for taking online lectures (Mulyana, 2020).

On the indicator of the availability of online lecture infrastructure, students gave a positive perception regarding the availability of facilities and infrastructure to attend online lectures. Students have smartphones and laptops to take online lectures. Parents will try to provide for their children's needs to attend lectures, so that their children can complete their studies on time. Students also have a quota and internet network to take online lectures. Students get internet quota from the government so that students can take online lectures. This is in accordance with the results of research which states that students have infrastructure that supports them to take online lectures (Fitriani, 2021).

Based on the results of research on the aspect of using applications in online lectures, students gave positive perceptions regarding the use of online lecture applications. Students agree to use the whatsapp group application in online lectures because it is convenient to use, flexible and easy to use. Students always take online lectures because of directions from the university leadership and get support from their families. Students also have the facilities and infrastructure that support them to take online lectures. Students get internet quota from the government to take online lectures. This is in accordance with the results of previous studies which stated that students gave a positive response to the implementation of online lectures and were willing to always take online lectures. Students gave a positive response regarding the use of the whatsapp group application in online lectures because it is flexible, internet quota friendly and easy to use (Mulyana, 2020). This is also in accordance with the results of research (Safura, 2021) which states that students give positive perceptions regarding online learning. Online learning can help students improve learning, generate motivation to learn and understand lecture material.

## **CONCLUSIONS**

Based on the results of research and data analysis in this study, it can be concluded that physics education students gave a positive perception of the use of online lecture applications during the covid-19 pandemic. The results of this study can be used for the implementation of online lectures and teachers can know applications that are easy to use in online lectures.

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