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STUDENT PERCEPTIONS IN THE APPLICATION OF HYBRID LECTURES WITH COGNITIVE ABILITY IN LEARNING INNOVATION COURSES

Fitria Wulandari[1]

[1]Universitas Muhammadiyah Sidoarjo

e-mail: fitriawulandari1@umsida.ac.id

ABSTRACT

The purpose of this study is to determine student perceptions in the application of Hybrid lectures and the relationship between hybrid lectures and students' cognitive abilities in the Learning Innovation course.This type of research uses mixed methods research methods. The designs in this study were sequential explanatory designs. The sampling technique used purposive sampling. The sample in this study was the 3rd semester students of class A3 in the PGSD study program, Muhammadiyah University of Sidoarjo, totaling 40 students, consisting of 92.5% female and 7.5% male. The instruments used in this study were observation sheets, interview sheets, questionnaire sheets, student cognitive ability test sheets. From the findings of qualitative data, it shows that students' perceptions in Hybrid lectures are in the good category with an average value of 2.91. As much12.5%, strongly agree, 72.5% agree, 13%, disagree and 2.5% disagreewith the implementation of hybrid lectures on campus. Student perceptions in Hybrid lectures get understanding of the lecture material with the percentage of student answers strongly agreeing 12.5%, agree 70%, disagree 18%, and disagree 0%, with resultsan average of 2.95 categories of good student responses. Further research related to students' cognitive abilities was obtained. The result of simple correlation (r) of 0.479 has a relationship with a moderate level of relationship. In addition, it has a positive and significant relationship between Hybrid lectures and students' cognitive abilities. It can be concluded that the more students' perceptions of hybrid lectures increase, the more students' cognitive abilities in learning innovation courses will increase.

Keywords: Student Perception; Hybrid Lecture; Cognitive Ability

1) INTRODUCTION

The Corona-19 virus pandemic has hit the world right now. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV 2) is a new virus that was first reported in Wuhan City, Central China and has spread to several countries (Erlina Burhan, 2020, p. 1). On December 31, 2019, in the city of Wuhan, the first reported case of this coronavirus was found.At the end of January 2020 WHO declared a Global Emergency status for cases of the corona virus and on February 11, 2020 WHO named it Covid-19 (Handayani, et al., 2020)

In Indonesia, the handling of the Covid-19 pandemic has shown developments in a positive direction. Throughout August 2021, positive cases have decreased. On August 29, compared to cases on July 15, daily cases nationwide had decreased by 86.9 percent. Cases in August 2021 when viewed in one month showed 664,829 cases or had decreased by 45 percent

from the previous month, namely July (Adisasmito, 2021). The decline in the number of COVID-19 has also affected the world of education.

The Minister of Education hopes that all schools in Indonesia can carry out face-to-face learning (PTM). The Minister of Education and Culture provides conditions and guidelines for implementing face-to-face schools during the COVID-19 pandemic(Makarim, 2021). The policy for implementing face-to-face schools is contained in a Joint Decree (SKB) of 4 Ministers, namely the Minister of Education and Culture, the Minister of Religion, the Minister of Health, and the Minister of Home Affairs (Minister of Education and Culture et al., 2021). In addition to education units, this policy is also implemented in several PTN and PTS in Indonesia, one of which is at Muhammadiyah University Sidoarjo. In the odd semester 2021/2022, face-to-face lectures have been implemented in accordance with the regulations contained in the 4 Ministerial Decree by using the Hybrid method of online and offline lectures.

Online learning has taken place almost all over the world during the COVID-19 pandemic (Goldschmidt, 2020, p. 3). Teachers and educators as important elements in teaching are required to make major changes in the teaching and learning process so that traditional face-to-face education becomes online education or distance education.(Bao, 2020). One of the learning methods applied during the COVID-19 pandemic using a mixed method, namely face-to-face and online, which is called hybrid learning

Hybrid learning is learning that combines face-to-face teaching methods with computer-assisted teaching methods both offline and online to form an integrated learning approach (Verawati & Desprayoga, 2019).*Hybrid learning*is learning that combines online learning with face-to-face learning regularly and effectively (Boyle & Guthrie, 2003). Furthermore, Hybrid learning is a combination of conventional learning (synchronous) by combining internet-based learning (asynchronous). Hybrid learning is seen as a combination of various approaches in learning(Ali Massoud et al., 2011). According to Ana Sutisna Hybrid learning is a learning method that combines two or more methods and approaches in learning to achieve the objectives of the learning process (Fauzan & Arifin, 2017). Hybrid Learning is a knowledge and skill acquisition process (learner centered) fostered by instructional design that integrates digital (internet and mobile), printed, recorded and traditional face-to-face classroom activities in a planned, pedagogically valuable way; facilitate students to direct their own learning process by choosing the available learning methods and materials that best suit their individual characteristics and needs that are oriented towards achieving curriculum learning objectives (Chirino-Barceló, 2011).

The process of acquiring knowledge of hybrid learning can be seen from the cognitive abilities of students after implementing hybrid lectures. Cognitive ability is the achievement/ability of individuals or groups that can be observed as a result or process of acquiring knowledge through learning experiences. Bayamin, S. Bloom's six cognitive domains are knowledge, understanding, application, analysis, synthesis, and evaluation (Mudjiono, 2009). Before knowing students' cognitive abilities, of course, students' views or perceptions of students about hybrid lectures are needed.

Perception is the process of interpreting or interpreting information obtained using the five human senses(Suharman, 2006). Furthermore, there are three aspects of perception that are relevant to human cognition, including sense recording, pattern recognition and attention. Perception is an impression obtained by a person through the use of the five senses then analyzed (organized), interpreted and then evaluated, so that someone gains meaning, then someone who gains a perception of something through a process analysis and evaluation (Robbins, 2008, p. 97). There are two kinds of perception indicators, namely: 1) Acceptance or absorption, namely the occurrence of perception in the physiological stage the functioning of the senses to capture stimuli from outside, 2) Evaluation, namely evaluating external stimuli that have been captured by the senses.

2) METHODS

This type of research uses mixed methods research methods. The focus of mixed methods research as a method is on collecting, analyzing, and mixing quantitative and qualitative data in a single or follow-up study (WJ Creswell & Creswell, 2018). Combined research method (mixed methods) is a research method that combines or combines quantitative methods with qualitative methods to be used together with a research activity in order to obtain more comprehensive, valid, reliable and objective data (Sugiyono, 2011, p. 404).

The types of mixed methods research designs are divided into three, namely sequential explanatory designs, sequential explanatory designs, and concurrent triangulation designs. The designs in this study are sequential explanatory designs (Creswell, J., & Plano Clark, 2007). *sequential explanatory designe*d qualitative data collection is carried out first and analyzed, then quantitative data is collected and analyzed. In the first stage, it will be filled with qualitative data collection and analysis, then quantitative data collection and analysis (JW Creswell, 2010). The main objective at this stage is more emphasized in the first stage, and the merging process between the two occurs when the researcher connects qualitative data analysis with quantitative data collection.

The sample in this study used purposive sampling technique. According to Sukamdinata, 2007:252) sampling is a process of selecting and determining the type of sample and calculating the size of the sample that will be the subject or object of research. The sample in this study was the 3rd semester students of class A3 in the PGSD study program, Muhammadiyah University of Sidoarjo, totaling 41 students, consisting of 38 women and 3 men.

Data collection techniques in this study used: observation, interviews, questionnaires, and tests of students' cognitive abilities. The instruments used in this study were observation sheets, interview sheets, questionnaire sheets, pre-test sheets and post-test students' cognitive abilities.

The data analysis technique in this study used two approaches, namely qualitative and quantitative. Qualitative data obtained from data reduction, data display and conclusion drawing/verification (Sugiyono, 2011, p. 334). This qualitative data analysis is intended to answer the problem formulation regarding student perceptions in Hybrid learning to find out whether they have implemented Hybrid learning and how students think about the effectiveness of Hybrid learning. After analyzing the data, then proceed with conducting the validity of the data using triangulation techniques. In this research, the triangulation technique used is the technical triangulation technique. Questionnaire of student perceptions in the application of Hybrid learning can be seen from the calculation of the value by referring to the rating scale scoring guidelines, as follows:

1. Strongly Agree (SS) = score 4
2. Agree (S) = Score 3
3. Disagree (KS) = Score 2
4. Disagree (TS) = Score 1

(Arikunto, 2006)

After knowing the score of each item, it will then be interpreted in categories with the following formula:

$$M = ZFx/N$$

Description:

M = Average you want to find

ZFx = The sum of the results of multiplying each score with its frequency.

NN = Many individuals

Next are created in the value intervals as follows:

Table 1. Value Intervals and Categories of Student Perceptions

Interval	Category
3.7 - 4	Very well
2.7 - 3.69	Good
2.0 - 2.69	Enough
< 1.99	Not enough

(Arikunto, 2006)

While the quantitative data analysis technique in this study was carried out by conducting correlation and regression tests using SPSS 26. Correlation analysis was used to answer the problem formulation is there a relationship between Hybrid learning and students' cognitive abilities. Followed by a simple regression calculation to find out how strong the relationship between these variables is. To find out the simple regression results are statistically very significant or not by looking at the significance numbers. If the value of sig < 0.05 then there is a significant contribution between variables, and vice versa.

3) RESULTS

The following are the results of research based on qualitative descriptive data and quantitative data:

Results of qualitative data and analysis

Qualitative data were obtained from the results of interviews, observations, and the provision of questionnaires/questionnaires given to students to determine student perceptions after the implementation of campus policies regarding hybrid lectures, previously lectures were conducted online through zoom meetings/google meetings, and e-learning. Observation results show that in the Learning Innovation course, PGSD students in class A3 have conducted hybrid lectures by conducting lectures where half of the class lectures face to face or face to face in class and half of the class takes online lectures using internet media. or mobile learning. Hybrid lectures are effective because of the current situation and conditions during PPKM, hybrid lectures are very helpful, hybrid lectures can understand and understand more quickly in the learning process and can interact directly with lecturers and other students, hybrid learning becomes more understanding about the material being taught. delivered and Hybrid lectures become more fun when the lecturer explains enthusiastically so that learning is not boring.

While the data obtained from a questionnaire containing student perceptions in the application of hybrid lectures in the descriptive analysis carried out on each question item. The results of the questionnaire analysis of student perceptions in the application of hybrid lectures are as follows:

Table 2. Questionnaire recap of students' perceptions of agreeing in Hybrid lectures

Statement Number	Number of Answers And Percentage												Total	M	Category
	Strongly agree			Agree			Disagree			Do not agree					
	X	F	ZFx	X	F	ZFx	X	F	ZFx	X	F	ZFx			
1	4	5	20	3	29	87	2	5	10	1	1	1	118	2.95	Good
2	4	6	24	3	26	78	2	8	16	1	0	0	118	2.95	Good
3	4	3	12	3	29	87	2	8	16	1	0	0	115	2.88	Good
4	4	4	16	3	32	96	2	4	8	1	0	0	120	3.00	Good
5	4	2	8	3	25	75	2	12	24	1	1	1	108	2.70	Good
6	4	4	16	3	31	93	2	5	10	1	0	0	119	2.98	Good

7	4	7	28	3	30	90	2	3	6	1	0	0	124	3.10	Good
8	4	8	32	3	29	87	2	3	6	1	0	0	125	3.13	Good
9	4	4	16	3	22	66	2	14	28	1	0	0	110	2.75	Good
10	4	1	4	3	24	72	2	14	28	1	1	1	105	2.63	Enough
11	4	17	68	3	17	51	2	6	12	1	0	0	131	3.28	Good
12	4	4	16	3	26	78	2	9	18	1	1	1	113	2.83	Good
13	4	1	4	3	28	84	2	10	20	1	1	1	109	2.73	Good
14	4	5	20	3	28	84	2	7	14	1	0	0	118	2.95	Good
15	4	2	8	3	27	81	2	11	22	1	0	0	111	2.78	Good
					Final								1744	2.91	Good

The table above shows that the student responses agree in implementing hybrid lectures on campus with the percentage of answers strongly agreeing 12.5%, agree 72.5%, disagree 13%, and disagree 2.5%, with resultsan average of 2.95 categories of good student responses. Student statement stating hybrid lecture fun with the percentage of answers strongly agree15%, agree 65%, disagree 20%, and disagree 0%, with results an average of 2.95 good category. Student response statements about hybrid lectures can be foster independence with the percentage of answers strongly agree7.5%, agree 72.5%, disagree 20%, and disagree 0%, with result san average of 2.88 categories of good student responses. Hybrid lecture student statements can motivate students to attend lectures with the percentage of answers strongly agreeing10%, agree 80%, disagree 10%, and disagree 0%, with resultsan average of 3 categories of good student responses. The results of student responses regarding hybrid lectures more flexible place in attending lectures with the percentage of answers strongly agree 5%, agree 62.5%, disagree 30%, and disagree 2.5%, with results an average of 2.70 categories of good student responses.

Next is the perception of students with hybrid lectures that they can take advantage of technology with the percentage of answers strongly agree 10%, agree 77.5%, disagree 13%, and disagree 0%, with results an average of 2.98 categories of good student responses. With student hybrid lecture get face-to-face lectures with the percentage of answers strongly agree17.5%, agree 75%, disagree 8%, and disagree 0%, with resultsan average of 3.1 categories of good student responses. Lectures hybrid can help students interact with lecturers and other students with the percentage of answers strongly agreeing 20%, agree 72.5%, disagree 8%, and disagree 0%, with results an average of 3.13 categories of good student responses. Hybrid student perception save costs with the percentage of answers strongly agree10%, agree 55%, disagree 35%, and disagree 0%, with results an average of 2.75 with a good student response category. Perception Hybrid student does not limit space and time with the percentage of answers strongly agree2.5%, agree 60%, disagree 35%, and disagree 2.5%, with results an average of 2.63 categories of student responses are sufficient.

Student perceptions of Hybrid courses make lectures not boring with the percentage of answers strongly agree42.5%, agree 42.5%, disagree 15%, and disagree 0%, with results an average of 3.28 categories of good student responses. Hybrid Lectures make lectures effective, student perceptions with the percentage of answers strongly agree 10%, agree 65%, disagree 23%, and disagree 2.5%, with resultsan average of 2.83 categories of good student responses. Hybrid Lecture make lectures efficient with the percentage of answers strongly agree 2.5%, agree 70%, disagree 25%, and disagree 2.5%, with results an average of 2.73 categories of good student responses. Perceptions of students with Hybrid lectures gain an understanding of the lecture material with the percentage of student answers strongly agreeing 12.5%, agree 70%, disagree 18%, and disagree 0%, with resultsan average of 2.95 categories of good student responses. And the perception of students with Hybrid lectures can be increased academic value with the percentage of student answers strongly agree5%, agree 67.5%, disagree 28%, and disagree 0%, with results an average of 2.78 categories of good student responses.

The results of the overall analysis of the student perception questionnaire in hybrid lectures show that the average calculation of answers from student perceptions is 2.91 with the category of good student perceptions in hybrid lectures in the Learning Innovation course. From these perceptions, students expressed their perceptions regarding hybrid lectures that they could gain an understanding of the material. The next stage is to follow up on the results of student perceptions about gaining understanding of lecture material, then instrument development will be carried out to determine whether there is a relationship between the application of hybrid lectures and cognitive abilities, so in this study quantitative data collection and data analysis will be carried out.

Results of quantitative data and analysis

At this stage, quantitative data was obtained using a student's cognitive ability test instrument. The test is given when students take the exam. Cognitive ability test data show the following:

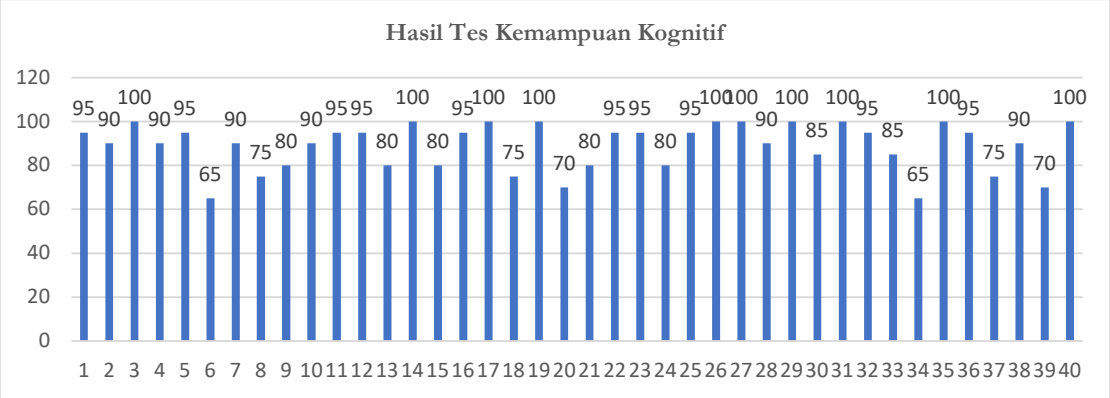

Figure 1. Cognitive Ability Test Results

Based on student perception data about the application of hybrid lectures with the data from the cognitive ability test results above, an analysis test will then be carried out. The stage before conducting the analysis test is to perform a normality test.

Calculation of the normality test between the two dependent and independent variables using SPSS 26, as follows:

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		40
Normal Parameters, b	mean	.0000000
	Std. Deviation	4.65993727
Most Extreme Differences	Absolute	.066
	Positive	.066
	negative	-.051
Test Statistics		.066
asymp. Sig. (2-tailed)		.200c,d

(Source, SPSS 26 Output Results)

The results of the normality test data above obtained a significance value of 0.200. The significance value is 0.200 > 0.05 so it can be concluded that the data is normally distributed. Furthermore, to determine the relationship between the application of hybrid lectures with

students' cognitive abilities, a simple correlation test (Product Moment Person) was carried out.The correlation test aims to determine the level of closeness of the relationship between the variables expressed by the correlation coefficient (r). Following are the results of the correlation coefficient using SPSS 26:

Table 4. Results of Simple Correlation Analysis

Correlations			
		Hybrid	Cognitive
Hybrid	Pearson Correlation	1	.479**
	Sig. (2-tailed)		.002
	N	40	40
Cognitive	Pearson Correlation	.479**	1
	Sig. (2-tailed)	.002	
	N	40	40

Based on SPSS 26 calculations, based on the calculated value of r (Pearson Correlations) it is known that the calculated r value for the relationship between Hybrid Lectures (X) and students' cognitive abilities (Y) is 0.479 > r table 0.312, so there is a close relationship or correlation between Hybrid lecture variables and variable cognitive ability of students. While the significance value of Sig. (2-tailed) from the output table above, it is known that the value of sig. (2-tailed) between Hybrid lectures (X) and students' cognitive abilities (Y) is 0.002 < 0.01, which means there is a significant correlation between Hybrid lecture variables and students' cognitive ability variables. Furthermore, it is known that the calculated r value is positive, namely 0.479, then the relationship between the two variables is positive.

4) DISCUSSION

Based on the data described above, there are several findings in this study. These findings can be used as reference materials for other universities that have not implemented hybrid lectures during the limited face-to-face meeting. The findings in this study, namely in the application of the implementation of hybrid lectures, based on the results of the study showed that students agreed to apply hybrid lectures. This is reinforced by the recap of the questionnaire on student perceptions in the application of hybrid lectures in the good category with an average score of 2.91. With the implementation of hybrid lectures, students can conduct face-to-face or online lectures. Brian and Volchenkova, (2016) explain that the hybrid learning system will allow a combination of face-to-face and computer-mediated experiences.

While in the field of independence student perception results show percentage of answers strongly agree 7.5%, agree 72.5%, disagree 20%, and disagree 0%, with results an average of 2.88 categories of good student responses. This corresponds toThe interpretation of the learning independence of Physical Education students using Google Classroom media Through Hybrid Learning in Professional Education Learning during the COVID-19 Pandemic is generally very strong(Banat & ., 2020).

In addition, with hybrid lectures, students can understand the lecture material as much as they strongly agree 12.5%, agree 70%, disagree 18%, and disagree 0%, with resultsan average of 2.95 categories of good student perceptions. To test the results of student perceptions related to material understanding, a further study was conducted to determine the relationship between hybrid lectures and students' cognitive abilities by using quantitative data collection and data analysis.

From the results of further studies, research shows that the data on student perceptions in hybrid lectures with data on students' cognitive abilities are normally distributed. Furthermore,

the results of the correlation coefficient show that there is a positive and significant relationship with a significance value of 0.002. The level of closeness of the relationship is at a moderate level. Meanwhile, the relationship between hybrid lectures and cognitive abilities shows a positive direction, namely 0.479. So, it can be concluded that the higher the perception of students in hybrid lectures, the higher the cognitive abilities of students. The results of this study are in accordance with previous research entitledHybrid Learning: An Effective Resource in University Education? With the results of the correlation of student scores and evaluations by applying hybrid learning(Alducin-Ochoa & Vázquez-Martínez, 2016).

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