

2_Lecturer Quality Assessment In Online Learning

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Lecturer Quality Assessment In Online Learning: Study Case In The Pre Pandemic Period

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ABSTRACT : *The task of an educator is to teach and impart knowledge to students. In this case the ability and quality of educators in providing or delivering material in teaching is very important. During the current pandemic, the learning process is mostly carried out online. In relation to this teaching method, this study tries to see and measure the performance of educators in teaching online during the COVID-19 pandemic. This research was conducted using qualitative methods and for data collection was carried out by distributing questionnaires to 100 students. The results of the instrument used have a good validity value with the reliability of Cronbach's alpha value on average more than 0.6. The factors used to assess the quality of lecturers are the complexity of the learning process, communication between educators and students and the skills of educators in using online media.*

KEYWORDS: *online, reliability, learning, quality, validity.*

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I. INTRODUCTION

At the beginning of January 2020, the world was hit by a disaster, with the outbreak of the corona virus known as covid-19. This virus spread rapidly throughout the world, including Indonesia. So that on March 14, 2020, the Government of Indonesia declared the emergency status of the Covid-19 National Disaster. This policy has had an impact on all aspects of life, including education. All campuses in Indonesia have closed down since March 2020 until now. The learning system which was originally carried out face-to-face, with conditions requiring the campus to lock down, face-to-face learning is not allowed. However, learning must still be carried out online. With these conditions, it is urgent to innovate and adapt related to the use of available technology to support the online learning process. The practice requires both educators and students to be able to interact and transfer knowledge online.

Electronic learning (e-learning) or online learning is part of distance education that specifically combines electronic technology and internet-based technology [1]. However, to get optimal results in the learning process, of course, not only by using technology, but a lecturer is required to be an active and creative person so that the quality of learning can be well established and get optimal results. Many things will have a positive impact if a lecturer is able to always be active and creative. Active and creative is meant that a lecturer must be able to provide something new and can be useful for students. For a lecturer, this pandemic situation is a challenge for each individual's creativity in using technology to develop the world of education. The quality of learning is determined by the ability of the lecturer to simplify difficult concepts to be easily understood by students. Students feel that a good lecturer should be able to explain important concepts in an easy way, knowledgeable and always willing to hold consultations either physically (face to face) or virtually (email, mobile messages etc.) to improve the quality of learning [2]. Another form of learning that can be done is by using a didactic strategy. Didactic strategy is the science of teaching in general, either online or face-to-face. Didactic strategies are used to improve teacher-student relationships in the learning system either face-to-face or online so that learning gets optimal results [3].

During this pandemic, online or distance learning systems make it easier for teachers to provide knowledge and information through several online media. Some of the media that can be used include zoom, google meet, classroom etc. The benefit of the ease of online learning that has been supported by various platforms is being able to provide lectures or knowledge without face to face, so that the material presented is even more varied and with online media lectures in the form of discussions can also be carried out virtually

[4].When conducting online learning, some educators may experience problems when conducting distance learning. Because it is not optimal in overcoming trouble shooting while using technology. But this does not reduce the enthusiasm and work ethic of educators in providing knowledge during the covid pandemic, while still completing work assignments to meet better quality and to be able to provide the best for their students [5]. The teaching profession emphasizes the educational process and teaching practice. Teachers are also expected to be motivators and controllers of education. Therefore, it is very important to improve the quality of teachers and the quality of education [6].

From the results of several studies related to the ability of an educator to provide or convey knowledge through online/online learning, there are several factors that want to be investigated to see the quality of educators in teaching virtually. The factors to be investigated include the complexity of the learning process, communication between lecturers and the skills of educators in using technology.

II. VALIDITY AND RELIABILITY

Online learning is currently still being carried out during the pandemic. Many criteria or factors will be examined to determine the extent to which the quality of educators is able to carry out online learning. The factors to be studied are the complexity of the learning process, communication with students and the skills of educators in using technology. In this study, a questionnaire with a Likert scale was used which was distributed to 7th semester students. The factors that will be examined to assess the quality of educators during the learning process include:

1. The complexity of the learning process is the accuracy of the lecturer in teaching, the level of clarity in providing material, the suitability of the task and the material presented.
2. Communication between lecturers and students. The ability of lecturers to liven up the classroom atmosphere and motivate students, and to provide time for sharing and consultation outside of lecture hours.
3. Skills and abilities of lecturers using technology.

Validity Test

Validity test is used to determine the extent of the feasibility of the instrument to be used. If the instrument is feasible to use, the research using the instrument can be continued by using a different sample. For the criteria for the validity of the instrument test, if the value of $r_{count} > r_{table}$, then the instrument is valid. To find the validity of the instrument using the Product Moment Correlation formula. The validity test formula can be seen in the following formula:

$$r_{xy} = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} \quad (1)$$

with

r_{xy} is the correlation coefficient between variable x and variable y

x_i is the i-th data value for the variable group x

y_i is the i-th data value for the variable group y

n is the number of data

For the value of the Pearson correlation coefficient / Pearson table (r_{table}) using a significance level / error level is 5% (0.05). The instrument is valid, if r_{count} is greater than or equal to r_{table} . And the instrument is not valid, if r_{count} is smaller than r_{table}

Reliability Test

Reliability test is used to determine whether the research questionnaire that will be used to collect data is reliable or not. The questionnaire is said to be reliable if the Cronbach-Alpha value is greater than 0.6. To calculate reliability using the Cronbach-Alpha formula as follows:

$$r_{11} = \left(\frac{k}{k-1} \right) \left(\frac{V_t - \sum pq}{V_t} \right) \quad (2)$$

with

r_{11} is the instrument reliability

V_t is total score variance

k is number of questions

p is proportion of subjects who got a score of 1

q is proportion of subjects who score 0

III. ASSESSMENT INSTRUMENTS

The method used in this study is a quantitative method. Quantitative methods can be used to examine populations or samples using measuring instruments or research instruments, data analysis is quantitative or statistical in nature with the aim of testing the hypotheses that have been made. Generally, quantitative methods consist of survey methods and experimental methods. The flow chart that describes the steps in this research is shown in Figure 1.

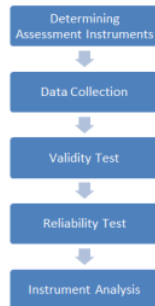


Fig.1. Research Step

In this study, the object of this research is the active student of Stikubank University, especially the Faculty of Information Technology who is currently studying in 7th semester. The number of respondents is 90 students. The instrument used in the study was a questionnaire which was distributed to students using the Likert scale rule. The Likert scale is a scale used to measure the data obtained quantitatively, so as to produce accurate and proven data. The format of a typical five-level Likert item are as shown in Tables 1.

Table 1. Likert Scale

<i>Likert Item</i>	<i>Score</i>
Strongly Disagree (SD)	1
Disagree (D)	2
Neither agree nor disagree (N)	3
Agree (A)	4
Strongly Agree (SA)	5

The instrument used in data collection is complexity of the learning process, communication between lecturers and students, also lecturer skills on using online media. The type of data used in this research is quantitative data and data collection is done through a questionnaire. Questionnaires were distributed to Stikubank University students who took part in the learning process during the covid-19 pandemic. The data sources used in this study are based on primary sources, which are obtained directly from the research object. The data that has been collected is then processed using Microsoft Excel. The first test is to determine the validity test, then the reliability test and the last is the correlation test.

IV. RESULT AND DISCUSSION

The results and discussion that will be presented are in accordance with the results of the validity test, reliability test and correlation test. Validity test is a measure that shows the level of validity of an instrument. The principle of validity is a measurement or observation which means the principle of the reliability of the instrument in collecting data. From the results of the validity test values for measuring the validity of the instrument and the rules that have been set, the results of the instrument are valid. So with valid results, it means that the instrument can be used for research. The instrument validity value uses the Product Moment Correlation rule. Because the number of respondents is 90, then the R-Table for the calculation of the R-Count is 0.207. The results for the three instrument groups are as shown in Tables 2, 3 and 4.

Table2. Validity Result of The Learning Process Complexity

<i>Item</i>	<i>XI. Learning Process Complexity</i>	<i>r-Count</i>
X1.1	Accuracy of lecturers in starting lecture hours	0,795
X1.2	Lecturer's accuracy in ending lecture hours	0,789
X1.3	Lecturer's ability in delivering material	0,876

X1.4	Lecturer's mastery of the diversity of media and learning technology	0,865
X1.5	Compatibility of assignments and exams with course material	0,837

The result of KMO MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) is 0.83. Because the KMO MSA value is greater than 0.5, the instrument for learning process complexity can be continued to be implemented.

Table3. Validity Result of The Communication Between Lecturers And Students

Item	X2. Communication Between Lecturers And Students	r-Count
X2.1	The ability of lecturers to liven up the classroom atmosphere	0,820
X2.2	Lecturers motivate students to study well	0,847
X2.3	Lecturers provide special time to discuss outside class hours	0,711
X2.4	Lecturer communicative level in delivering lecture material	0,844
X2.5	Frequency of lecturers in giving lectures	0,832
X2.6	Lecturer's level of understanding of the subject / learning material	0,922
X2.7	The ability of lecturers to provide examples that are relevant to the learning material	0,926

The result of KMO MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) is 0.84. Because the KMO MSA value is greater than 0.5, the communication between lecturers and students instrument can be continued to be implemented.

Table4. Validity Result of The Lecturer Skills On Using Online Media

Item	X3. Lecturer Skills On Using Online Media	r-Count
X3.1	Lecturer's ability to use discussion forums	0,559
X3.2	The ability of lecturers to upload material through social media (e-learning, YouTube, etc.)	0,351
X3.3	Collaboration between students in doing assignments can be done through e-learning	0,522

The result of KMO MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) is 0.47. Because the KMO MSA value is less than 0.5, the lecturer skills on using online media instrument turns out to be invalid for this study.

Reliability test is important in research. Reliability in research is the extent to which the research instrument used provides consistent results. If the researcher repeats the study using the same instrument, the instrument provides the same reliability. In general, the reliability test can be carried out by looking at the results of Cronbach's Alpha calculations. In Microsoft Excel to get these results using the CORELL function. The following is a discussion of the results of the reliability test for each factor. The instrument for measuring this variable is said to be reliable if the value of Cronbach's alpha is greater than 0.6.

The result of Cronbach's Alpha for the learning process complexity is 0.957 (Table 5). The result of Cronbach's Alpha for the communication between lecturers and students is 1.22 (Table 6). At the last, the result of Cronbach's Alpha for the lecturer skills on using online media is 0.53 (Table 7). So it can be concluded that the three groups of instruments to measure these factors are reliable. So, the overall result for instrument reliability is 0.948. By using the rule that the questionnaire is said to be reliable if the Cronbach-Alpha value is greater than 0.6, then the results of the questionnaire are reliable. The total variance is 13,991 and the total variance is 121.10.

Table5. Validity Result of The Learning Process Complexity

Item	X1. Learning Process Complexity	Variant
X1.1	Accuracy of lecturers in starting lecture hours	0,931
X1.2	Lecturer's accuracy in ending lecture hours	0,939
X1.3	Lecturer's ability in delivering material	1,106
X1.4	Lecturer's mastery of the diversity of media and learning technology	0,957
X1.5	Compatibility of assignments and exams with course material	0,853

Table6. Validity Result of The Communication Between Lecturers And Students

Item	B. Communication Between Lecturers And Students	Variant
X2.1	The ability of lecturers to liven up the classroom atmosphere	1,126
X2.2	Lecturers motivate students to study well	1,300
X2.3	Lecturers provide special time to discuss outside class hours	1,179
X2.4	Lecturer communicative level in delivering lecture material	0,948
X2.5	Frequency of lecturers in giving lectures	0,929
X2.6	Lecturer's level of understanding of the subject / learning material	1,039
X2.7	The ability of lecturers to provide examples that are relevant to the learning material	1,064

Table7. Validity Result of The Lecturer Skills On Using Online Media

Item	X3. Lecturer Skills On Using Online Media	Variant
X3.1	Lecturer's ability to use discussion forums	0,512
X3.2	The ability of lecturers to upload material through social media (e-learning, YouTube, etc.)	0,567
X3.3	Collaboration between students in doing assignments can be done through e-learning	0,540

Instruments Analysis

This study aims to determine the quality of lecturers in learning activities during the pre-pandemic period. From the results of a survey on the quality of lecturers, the results are shown in table 8.

Table 8. Research Result

Item	Indicator	SD	D	N	A	SA
X1.1	Accuracy of lecturers in starting lecture hours	4%	4%	26%	48%	18%
X1.2	Lecturer's accuracy in ending lecture hours	4%	3%	23%	48%	21%
X1.3	Lecturer's ability in delivering material	4%	4%	22%	38%	31%
X1.4	Lecturer's mastery of the diversity of media and learning technology	4%	2%	24%	44%	24%
X1.5	Compatibility of assignments and exams with course material	3%	2%	17%	49%	29%
X2.1	The ability of lecturers to liven up the classroom atmosphere	6%	8%	31%	37%	19%
X2.2	Lecturers motivate students to study well	7%	2%	24%	30%	37%
X2.3	Lecturers provide special time to discuss outside class hours	2%	11%	37%	21%	29%
X2.4	Lecturer communicative level in delivering lecture material	2%	6%	29%	37%	27%
X2.5	Frequency of lecturers in giving lectures	3%	3%	19%	44%	30%
X2.6	Lecturer's level of understanding of the subject / learning material	3%	3%	18%	33%	42%
X2.7	The ability of lecturers to provide examples that are relevant to the learning material	3%	3%	20%	31%	42%
X3.1	Lecturer's ability to use discussion forums	0%	1%	26%	52%	21%
X3.2	The ability of lecturers to upload material through social media (e-learning, YouTube, etc.)	0%	0%	21%	41%	38%
X3.3	Collaboration between students in doing assignments can be done through e-learning	0%	2%	10%	46%	42%

The results of the questionnaire show that students consider learning process complexity reasonable to very good. Compatibility of assignments and exams with course material can be stated as the best indicator in this group. Communication between lecturers and students also can be stated to good. Lecturer's level of understanding of the subject / learning material and the ability of lecturers to provide examples that are relevant to the learning materials show good or very good grades. For the lecturer skills on using online media, lecturer's ability to use discussion forums shows a high value compared to others. The average assessment results can be presented in the chart in Figure 2.

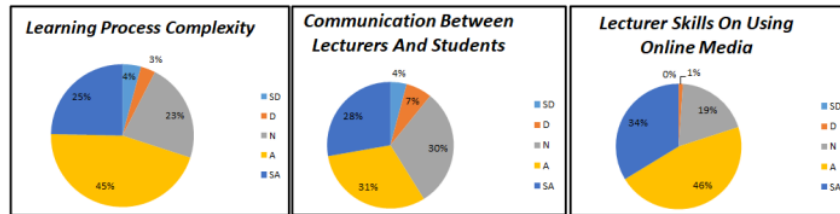


Fig.2. Average Assessment Result

V. CONCLUSION

The conclusion of this study is that the instrument used in this study is feasible because most of the reliability test scores and validity test scores are above the required values. These three factors have a fairly good influence on the e-learning services used by students of the Faculty of Information Technology, Stikubank University. The communication between lecturers and students is the factor that gives the greatest influence in the student learning process. While the less influential is the skill of the educator towards IT (technology), which means that the skill of the educator towards technology is still lacking and needs to be improved. As for the communication and complexity of the learning process carried out, it is quite optimal, but the skills and skills of educators in using technology are still not optimal, so it is necessary to provide training to support the skills of educators to be more optimal in using technology.

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