Analysis of Students' Satisfaction Levels in Hybrid Learning

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Abstract. The realm of education cannot be separated from the impact of the COVID-19 pandemic that still exists today. Technological advances and the current pandemic conditions force us to adapt quickly to changing work and study environments. The form of learning involving internet is transformative. Although the practice of blended learning in higher education and related studies has increased in recent years, the investigation into students' engagement in hybrid learning experiences is limited and requires further research. Satisfaction is a crucial indicator in assessing the effectiveness of a course. The research was conducted at the Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Semarang. The research approach used was quantitative. The instrument used was a questionnaire with Likert scale. The results showed that the average score for each dimension was as follows: 1) the tangibility dimension score was 3.1496 out of 4, meaning the students were satisfied; 2) the average score of the reliability dimension was 3.3062 out of 4, meaning the students were satisfied; 3) the average score of the responsiveness dimension was 3.356 out of 4, meaning the students were satisfied; 4) the average score for the assurance dimension was 2.6899 out of 4, meaning the students were fairly satisfied, and 5) the average score for the empathy dimension was 3.1008 out of 4, meaning the students were satisfied. Overall respondents gave average score of 3.1206 out of 4 as highest score in terms of satisfaction, meaning the performance of hybrid learning is satisfactory. This should be appreciated considering that hybrid learning has been held since the third week of the even semester of 2022 along the COVID-19 pandemic. The advice given is based on the results of the study, there needs to be efforts to improve the evaluation aspect and the determination of time and participants in hybrid learning.

Keywords: Hybrid · Learning · Students · Satisfaction

1 Introduction

The pattern of human life always changes as a result of the development of science and technology. Technology is increasingly being created to simplify aspects of human life. Technological advances have also penetrated the realm of education which cause various

behavioural changes in learning activities, learning resources, and learning technology. Some changes regarding the pattern of human life, especially in learning behaviour, are caused by the development of increasingly sophisticated digital technology so that connecting with the global world is easier and more affordable.

Over the past 2 years, the world has been hit by the COVID-19 pandemic. All human activities must adapt to the new norms of life to be able to pass the COVID-19 pandemic safely. The realm of education cannot be separated from the impact of the COVID-19 pandemic that still exists today. With the change in new norms of life in human life and the realm of education, all aspects of supporting education must be willing and able to deal with changes that occur quickly.

The reality that is currently happening is in the form of changes in the place of life, the use of digital technology, the global connections, and the understandings of learning (Dharma, 2012). With that being said, humans are forced to adapt quickly to changing work and study environments.

The form of learning involving internet is transformative (Greenhow, Robelia, & Hughes, 2009; McCutcheon, Lohan, Traynor, & Martin, 2015). The boundaries and methods of learning have been broadened along with the increasing popularity of the internet and the rapid development of network technology (Cheng & Chau, 2016), in that, online education has been growing rapidly. Since both online education and traditional face-to-face learning methods have their own advantages, it is necessary to combine the advantages of both learning forms and test the effectiveness of the hybrid learning approach (Bailey & Morais, 2005).

Although the practice of blended learning in higher education and related studies has increased in recent years, the investigation into students' engagement in hybrid learning experiences is limited and requires further research (Halverson, Graham, Spring, Drysdale, & Henrie, 2014). Satisfaction is a crucial indicator in assessing the effectiveness of a course (Chen & Yao, 2016). Consequently, understanding the key factors that affect students' engagement and satisfaction in hybrid learning is very important for the effective design of hybrid learning courses in the future (Graham, Henrie, & Gibbons, 2014).

An efficient online learning platform is becoming a significant auxiliary tool for hybrid learning in higher education, demonstrating its strong advantages. As educators expect to obtain better learning results through the combination of online learning techniques and traditional face-to-face learning in classroom, it is necessary to understand how the online platform influences the learning process.

The continuity of hybrid learning needs to be evaluated to get good quality. One indicator to see how good the quality of hybrid learning is the level of student satisfaction. Students must be satisfied with the form of hybrid learning that is applied.

Measurement of student satisfaction dimensions can be seen from 5 dimensions of satisfaction, namely tangibility, reliability, responsiveness, assurance, and empathy (Sukmanasa, et al, 2017). The five dimensions of satisfaction have the following meanings: (1) tangibility which is a physical dimension. A service cannot be touched so that physical evidence becomes important as a measure of service. In this case, tangibility is the ability to provide campus physical facilities and adequate lecture equipment regarding the appearance of lecturers and public facilities; (2) reliability which is a dimension

that measures the reliability of higher education in providing services to students; (3) responsiveness which is namely dynamic service quality dimensions. Responsiveness relates to the willingness and responsiveness of lecturers to help and provide learning according to student needs; (4) assurance which is namely the dimension of quality assurance related to the behaviour of lecturers in instilling trust and confidence in students; and (5) empathy which is namely the attitude of the lecturer in providing wholehearted service, such as personal attention and understanding that each student has different abilities and needs.

Based on the above background, it is necessary to conduct research on the level of student satisfaction in hybrid learning. The purpose of this study is to determine the level of student satisfaction in hybrid learning and is expected to be an input for institutions in improving the quality of their learnings.

2   Methods

The research was conducted at the Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Semarang. The research approach used was quantitative. The instrument used was a questionnaire with Likert scale and packaged in Google Form which was then distributed to the sample students. The research sample was all students of the Mechanical Engineering Department who were selected through cluster random sampling.

The measurement of the level of student satisfaction with hybrid learning was seen from five dimensions of satisfaction, namely tangibility, reliability, responsiveness, assurance, and empathy. Each dimension had three questions with four alternative answers, namely score of 1 = unsatisfactory, score of 2 = fairly satisfactory, score of 3 = satisfactory, and score of 4 = very satisfactory. Furthermore, the data obtained from the assessment of students as respondents was analysed using SPSS software. Analysis of the data used was descriptive quantitative analysis.

3   Results and Discussion

3.1   The Validity and Reliability Test of the Instrument

Based on the results of testing the validity and reliability obtained 15 valid and reliable questions from all dimensions of satisfaction to be measured. Table 1 shows the results of testing the validity of the instrument with a Pearson correlation value or rcount greater than the rtable value for 22 data with a significance level of 5%, which is 0.3, it can be concluded that the questionnaire is declared valid. Furthermore, reliability testing with Cronbach's Alpha value of 0.92 or greater than 0.6, it can be concluded that the instrument is declared reliable.

3.2   Student Satisfaction

The level of student satisfaction was based on quantitative descriptive analysis. The instrument was questionnaire consisting of 15 questions in which 3 questions for each

Table 1. The result of validity instrument test

Dimension	r_{count}	r_{table}	result
Tangibility			
X1	0.873	0.300	Valid
X2	0.655	0.300	Valid
X3	0.632	0.300	Valid
Reliability			
X4	0.550	0.300	Valid
X5	0.450	0.300	Valid
X6	0.929	0.300	Valid
Responsiveness			
X7	0.509	0.300	Valid
X8	0.818	0.300	Valid
X9	0.378	0.300	Valid
Assurance			
X10	0.667	0.300	Valid
X11	0.907	0.300	Valid
X12	0.618	0.300	Valid
Empathy			
X13	0.777	0.300	Valid
X14	0.591	0.300	Valid
X15	0.714	0.300	Valid

Table 2. Students' satisfaction on tangibility dimension

Questions		Means
X1	Well-prepared learning materials.	3.6047
X2	In terms of politeness of dressing.	3.7326
X3	Determination of time and participants in the implementation of hybrid learning.	2.5465

dimension of satisfaction. Scoring range was from 1 to 4 as highest score in terms of satisfaction.

Based on Table 2, it is known that the learning materials really were well prepared and made students very satisfied with the score of 3.6047. The appearance of the lecturer had met the standard of politeness of dressing. Students gave very satisfied assessment of the the appearance of the lecturer with the score of 3.7326. Students were fairly satisfied

Table 3. Students' satisfaction on reliability dimension

Questions		Means
X4	Clear and easy to understand presentation of learning material.	3.3605
X5	Classes start and end at the specified time.	3.1744
X6	Distribution of learning material to students.	3.3837

Table 4. Students' satisfaction on responsiveness dimension

Questions		Means
X7	Time availability of lecturer for discussion or question and answer session.	3.2326
X8	Responsiveness of in answering questions from students.	3.5116
X9	Willingness of lecturer to help students facing difficulty in subject being taught.	3.3256

Table 5. Students' satisfaction on assurance dimension

Questions		Means
X10	Learning material delivery by lecturer.	3.7442
X11	The ability of lecturer to use hybrid learning.	3.2791
X12	After-learning evaluation delivery by lecturer.	1.0465

with the aspect of timing and participants in the implementation of hybrid learning with the score of 2.5465.

The level of student satisfaction on the reliability dimension can be seen in Table 3. Overall, students are satisfied with the reliability dimension. This can be seen in the lecturers teach the material clearly and easily to understand. Students feel satisfied in this aspect with a score of 3.3605. The lecture starting and ending according to the specified time with a score of 3.1744. Lecture activities carried out according to schedule make students feel satisfied with this service. Lecture materials (teaching materials) that are distributed to students after lectures are very helpful for students. Students are also satisfied with the lecture material given by the lecturer with a satisfaction score of 3.3837 (Table 4).

On the responsiveness dimension, students gave a satisfied response on the aspect of the lecturer's willingness to help students' difficulties with a score of 3.2326 and on the aspect of discussion and question and answer time with a score of 3.325. Students gave a very satisfied response on the aspect of the lecturer's responsiveness in answering student questions with a score of 3,5116 (Table 5).

Table 6. Students' satisfaction on empathy dimension

Questions		Means
X13	Easiness of lecturer to be contacted by students via various communication platforms.	3.5116
X14	Understanding of lecturer to fulfil students' interests and needs.	3.186
X15	Openness of lecturer to cooperate with students.	2.6047

The assurance dimension is a dimension that provides quality assurance to students. In this dimension, it can be seen that there are quite large differences in student responses in every aspect. Students gave a dissatisfied response to the evaluation aspect after the lecture. This can be seen from the score given which is 1.0465. Furthermore, students gave a satisfied response to the aspect of the lecturer's ability to use hybrid lectures with a score of 3.2791. The aspect of delivering lectures in accordance with the RPS got the highest score of 3.7442 which means that students feel very satisfied (Table 6).

Students responded quite satisfied with the aspect of the lecturer's open and cooperative attitude with a score of 2.6047. The response was satisfied with a score of 3,186 on the aspect of the lecturer's efforts to help understand the interests and needs of students. Finally, students gave a very satisfied response on the aspect of lecturers who were easy to contact with a score of 3,5116.

In the learning process, immediate interaction can increase students' involvement, subsequent to improve students' performance, which is reflected by test result, grades, and satisfaction (Zirkin & Sumler, 1995). Similarly, combined with the above assumptions, we conclude that when students perceive that the blended learning platform is useful, easy to use and interesting, their engagement will be enhanced (Chen & Yao, 2016; Lee et al., 2005; Moon & Kim, 2001), as a consequence satisfaction will also be improved (Cheng & Chau, 2016; Lopez-Fernandez & Rodriguez-Illera, 2009).

4   Conclusion

Based on 15 questionnaire questions asked from 5 dimensions of student satisfaction level related to hybrid lecture performance which includes tangibility, reliability, responsiveness, assurance, and empathy dimensions. The average tangibility dimension score is 3.1496, the reliability dimension average score is 3.3062, the responsiveness dimension average score is 3.356, the assurance dimension average score is 2.6899, and the empathy dimension average score is 3.1008. Overall respondents gave an average score of 3.1206 which means the performance of this hybrid system is satisfactory. This should be appreciated considering that hybrid lectures have only been held in the third week of the even semester of 2022 since the covid-19 pandemic. The advice given is based on the results of the study, namely that there needs to be efforts to improve the evaluation aspect after lectures and the determination of time and participants in hybrid learning.

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