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The Effect of the Use of Electronic Learning Aid on Student Satisfaction with Online Learning

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Abstract. UNNES (Universitas Negeri Semarang) has developed Electronic Learning Aid (ELENA) as an e-learning tool during the COVID-19 pandemic. The lecturers have tried to innovate in the use of ELENA by conducting many kinds of lecturing activities. This paper aims to explain the effect of the use of ELENA on the student's satisfaction with online learning. The research is conducted at the Economics Education study program, Faculty of Economics, Semarang State University in March-June 2021. We use a questionnaire to obtain the required research data. We also use descriptive statistics to describe the students' satisfaction with online learning. Simple regression analysis is also used to determine the influence of ELENA usage on the students' satisfaction with online learning. The results indicate that some lecturers have been familiar with utilizing some features available in ELENA. The main lecturing activities held in ELENA are sharing files and giving assignments. The research findings also provide concrete evidence that the use of ELENA can significantly affect the students' satisfaction with online learning process.

Keywords: COVID-19 pandemic, the use of ELENA, student satisfaction.

INTRODUCTION

The COVID-19 pandemic has hit various countries and led to the closure of schools and universities [1], [2]. The closure has caused significant changes in the learning system at all levels of education in Indonesia. The Indonesian Government through Circular Letter Number 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of Corona Virus Disease (COVID-19) has taken a policy to implement an online learning system. It means a learning system without having to meet directly between teachers and students, but it is carried out online using the internet network. Through this system, all students and teachers can continue to carry out the learning process even though they are at home.

The implementation of e-learning has become a basic requirement in the implementation of currently urgent education policies in Indonesia. The learning process at both schools and college levels inevitably must implement online learning using various platforms. Many educational institutions develop their e-learning applications and platforms to keep the learning going well. E-learning system has been defined in some ways in various disciplines and has recently been explained as web or cloud-based software programs that assist the teaching and learning processes and delivery of ineffective instruction, training, and development programs. In general, an e-learning system is an information system that integrates human activities (students, instructors, and administrators) and non-human entities (learning management systems) for meaningful educational relationships [3].

Universitas Negeri Semarang (UNNES) is one of the state universities in Indonesia that responds quickly to the implementation of e-learning policies. UNNES has previously developed Electronic Learning Aid (ELENA) as an e-learning platform for the last 10 years. During the pandemic, UNNES has tried to improve the features available at ELENA so that it could be used as an e-learning platform even better. Some latest views and features have been added including ease of access and security. Synchronization of ELENA with other existing information systems is also an important thing to be developed. However, the sudden implementation of the online learning policy due to the

pandemic cause lecturers and students to get a little bit "shocked" in utilizing ELENA. Many lecturers have tried to quickly learn the existing features and try to develop more innovative and interesting learning activities.

The students' satisfaction with online learning is important to evaluate the implementation of online learning, especially the use of ELENA by the lecturers as an e-learning platform. Student satisfaction is a dynamic process and involves many aspects that significantly affect the students learning. Understanding student satisfaction can also help universities to improve the quality of services provided to them [4]. Student satisfaction has been shown to significantly affect the reputation of universities. Therefore, it is very important to note in developing a new and novel learning system [5]. Other findings also confirm that student satisfaction can have a positive and significant impact on a university brand image [6].

Many factors can affect student satisfaction with online learning. One of them is service quality [5]. Student satisfaction can be influenced by e-service quality and e-information quality [6]. Student satisfaction with online learning can also be influenced by learner-content interaction and internet self-efficacy [7]. Contextualization of online learning based on the composition of multi-generational students can be an effective strategy to improve the learning experience and student satisfaction [3]. Other results show that perceived enjoyment and perceived usefulness are determinants of student satisfaction with the online video presentation method [8]. The confirmed quality of the learning experience has a significant relationship with student satisfaction [9]. The determinants of student satisfaction in online learning include the internet, platform, class time, and use of online exams as an assessment [10]. Course attributes, system attributes, interactive attributes, and instructor attributes are also some determinants of student satisfaction [11].

This research aims to examine the effect of using ELENA on student satisfaction with online learning. The online learning policy has been in place for more than a year. Student satisfaction will encourage improvements in the implementation of online learning using ELENA and other quality services. Online learning through ELENA should meet the needs of users (lecturers and students) so that the quality of learning is maintained. Therefore, it is important to evaluate the use of ELENA to determine the level of student satisfaction in online learning held during the pandemic.

METHODS

This research attempts to analyze the effect of the use of ELENA on student satisfaction with online learning. The research population is the students of the Department of Economics Education, Faculty of Economics, Universitas Negeri Semarang. The research was conducted in March-June 2021. Student satisfaction with online learning is measured by some indicators developed from previous research [3] as shown in table 1 below.

We use the questionnaire method to obtain research data. The questionnaire is developed from the opinion of previous research and used a 7-point Likert scale. The data are analyzed using descriptive analysis to describe the utilization of ELENA by lecturers and student satisfaction. We also use simple regression analysis to examine the effect of using ELENA on student satisfaction with online learning.

TABLE 1. Measurements of Student Satisfaction

No	The dimension of student satisfaction	Indicators
1.	Course design	providing course descriptions, information on learning objectives, delivery of learning outcomes at the beginning of lectures, current and relevant lecture content
2.	Course delivery	enthusiasm in the delivery of material, the sequence of material delivery, the accuracy of course presentation, comprehensive coverage of lecture material, learning outcomes achieved
3.	Course interaction	availability of forums for interaction, there is a coordinator during learning, fair and respect for student's interaction
4.	Course delivery environment	internet availability; computers availability; infrastructure maintenance

RESULTS AND DISCUSSIONS

The Use of Elena During Online Learning

ELENA is an e-learning platform that must be used by lecturers and students at UNNES when the online learning policy is implemented. Existing features are always being improved to create meaningful, fun, and exciting learning. The lecturers can use ELENA's features to create innovative and unconventional learning activities. Figure 1 below shows some features that are often used by lecturers in online learning. These various features show the lecturers' efforts to create student learning activities, such as building good interactions among students and others. ELENA features that can be used to teach include files, labels, forums, assignments, quizzes, books, and attendance.

File and assignment are two of ELENA's most frequently used features. More than 90% of respondents stated that these two features are the most frequently used by the lecturers. The file feature is used by the lecturers to share materials in the form of documents or others. Meanwhile, the assignment is an activity that must be completed by students either in groups or individuals within a certain period. In addition, the label and forum (discussion) are features that are also often used by lecturers. The label feature is used for various materials without having to download it first. Meanwhile, the forum aims to build interactions among students or with lecturers in the form of online discussions. The book is a feature that is rarely used by lecturers. Lecturers may be more comfortable using the file feature to share learning materials.
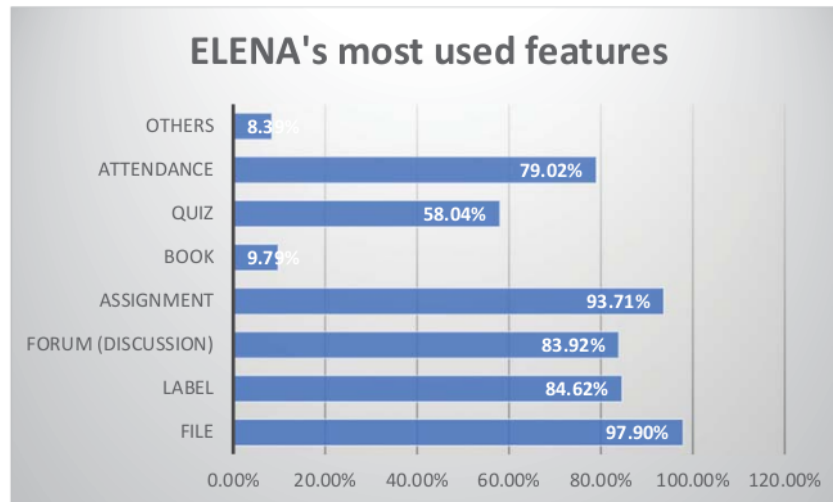

FIGURE 1 ELENA's most used features

The Effect of the Use Elena on Student Satisfaction with Online Learning

The use of ELENA as an e-learning platform at UNNES has come its second year on a massive scale. The level of ELENA utilization and student satisfaction in online learning is shown in Table 2 below. The utilization of ELENA is measured by five statements to see how far the level of utilization of ELENA by lecturers in online lectures. The average score (27.55) indicates the use of ELENA for online learning is in a good category. The lecturers are considered capable of utilizing ELENA for learning. Student satisfaction is measured by fifteen statements and shows an average value of 84.53. Student satisfaction is included in the high category. It means that the students are satisfied with the online learning that has been held through ELENA.

TABLE 2. Descriptive statistics of variables

	N	Minimum	Maximum	Mean	Std. Deviation
use of ELENA	143	17	35	27.55	4.255
student satisfaction	143	46	105	84.53	11.451
Valid N (listwise)	143				

Table 3 shows the results of simple linear regression analysis between the use of ELENA on student satisfaction with online learning. The results of the analysis provide empirical evidence that the better utilization of ELENA by lecturers will increase student satisfaction in online learning. The Sig. value is 0.000 (lower than 0.05), which means that the use of ELENA has a significant effect on student satisfaction. Meanwhile, the coefficient value is 2,089 which shows the positive effect of using ELENA on student satisfaction with online learning. The adjusted R square value is 0.600 which indicates that 60% of ELENA's utilization can explain its effect on student satisfaction.

TABLE 3. Result of linear regression analysis

No.	Indicators	Value
1.	Unstandardized Coefficient (B)	2.089
2.	t-value	14.630
3.	Sig. Value	0.000
4.	Adjusted R Square	0.600
5.	F-value	214.031
6.	Sig. Value	0.000

The significant and positive effect of using ELENA on student satisfaction provides empirical evidence that the better the utilization of the e-learning platform used, the more satisfied students will be with online learning organized by the university. The use of ELENA also shows the lecturers' ability in creating online learning through various existing features. They are considered proficient in using ELENA and have no significant obstacles in using the various features available. However, there is dissatisfaction felt by students, namely the availability of good internet connection and their gadgets. This situation can interfere with student learning activities.

Previous research also provides the same evidence that good use of e-learning by lecturers will increase student satisfaction. The level of competence of lecturers in online learning is a significant predictor of student satisfaction [12]. The effective utilization of ELENA also shows that learning at ELENA can create an interesting experience for students in lectures. The quality of experience in online learning has been shown to significantly affect student satisfaction [9]. The use of ELENA also shows the creation of diverse learning activities, in the form of interaction between lecturers and students, and students with their colleagues. Quality interaction is also a determinant of student satisfaction with online learning [7].

CONCLUSIONS

The effective use of ELENA by the lecturers as an e-learning platform shows a positive thing. They can take advantage of the features available at ELENA so that they can create exciting and meaningful online learning. The learning activities created at ELENA fall into quite a variety of categories. The ELENA features that are most often used by the lecturers are files and assignments. The level of student satisfaction with online learning is in the high category. Most students are satisfied with the implementation of online learning so far. The results of the study also provide empirical evidence that the level of utilization of ELENA can positively and significantly affect student satisfaction. That is, the better the use of ELENA by lecturers, the higher the level of student satisfaction with online learning. Student satisfaction will lead to stronger learning motivation. Therefore, the lecturers' ability to utilize various features provided at ELENA must also be improved. They will be able to create many learning activities with many different learning methods so that the students will gain a lot of good learning experiences. They will also feel more satisfied with online learning.

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Paper2