Student Satisfaction on E-Learning: Computer Self Efficacy and User Experience

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Abstract— This study aims to examine the effect of computer self-efficacy and user experience on student satisfaction in e-learning. The respondents used in this study were 154 students. Measuring tools used in this study are the computer self-efficacy scale, user experience scale and satisfaction scale. The analysis technique used is multiple linear regression. The results of the study show that there is an influence of computer self-efficacy and user experience on student satisfaction in e-learning. User experience has a greater influence on student satisfaction compared to computer self-efficacy.

Keywords— E-learning, computer, satisfaction, user experience.

I. INTRODUCTION

The use of e-learning in higher education has grown rapidly in Indonesia. The development of e-learning is not only due to the rapid growth of technology but also due to the challenging situation, namely the Covid-19 pandemic. E-learning is an evolving form of diversity, going beyond course (learning) tools and instructions, to form and disseminate information and directly support a performance (Rosenberg, 2001). Through e-learning, students and teachers can interact more easily and practically, especially during the Covid-19 pandemic. In addition, the learning and teaching experience through e-learning during the pandemic has made the learning process more interesting and personal.

One of the things that can determine success in online learning is student satisfaction. Student satisfaction in e-learning is an individual's perception of the learning experience that is carried out. This satisfaction will also determine how individual performance and persistence in conducting online learning (Alqurashi, 2019; Duha et al., 2022). Prasetya and Harjanto (2020) said that student satisfaction is a measure of the quality of online learning (e-learning). It is known that the satisfaction felt by students who use e-learning can show how students enjoy the learning process.

There are several factors that influence student satisfaction in e-learning such as content quality, user interface, learning community, customization, and learning performance (Tarigan, 2011). In addition, it is also known that computer self-efficacy, internet self-efficacy, perceived usefulness, perceived ease of use, student experience, motivation and online readiness (Hettiarachchi et al., 2021; James, 2021; Khalil Omar & Hussein, 2017; Suhandiah et al., 2022) also has an influence on student satisfaction in participating in online learning.

One of many factor that is important and give a positive influence on the online learning satisfaction are computer efficacy. This factor shows some individual to evaluate their capability to use the computer regarding the use of e-learning.

An individual that having high value of this factor (computer self-efficacy) proven to be more confident when tackling any difficulty while attending or interacting with the e-learning to get the desired results. This factor also give influence to the student satisfaction because it gives student more effective learning experience and willingness to continue to learning process (Norman & Kirakowski, 2018)

Otherwise, user experience also give contribution to the user satisfaction of the learning platform such as e-learning. Because user experience involves perception and individual reaction as a result of the use and anticipation when using the product, system or a service (Norman & Kirakowski, 2018)

II. METHOD

This study uses quantitative research. The sample in this study were 154 active students who had used e-learning for at least 1 semester. The data collection technique used by this study was purposive sampling technique. Based on the results of the study, it was found that the distribution of students who filled out the questionnaire consisted of 28.6% male and 71.4% female. It is also known that our respondent are students majoring in psychology (59.1%), English Literature (15.5%), Economics (14.8%), Computing (9%), and Pharmacy (1.6%).

Measuring tools used in this study are computer self-efficacy scale, user experience scale and e-learning satisfaction scale. The student satisfaction scale is modified from the scale developed by Xiao and Dasgupta (2002) based on 5 components namely content, accuracy, format, ease of use, and timeliness. Penilaian skala menggunakan rating scale of 4. This scale consists of 22 items with a reliability value using Cronbach's Alpha of 0.896 which indicates that this scale is reliable.

The rating scale used is 1 to 4 and consist of 10 items with reliability value about 0.840 according to Alpha Cronbach which means this scale are reliable.

The user experience scale that being used are the mollified scale developed by Hinderks, et al (2019) that consists of 6 dimensions: *Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation* and *Novelty*. Differential semantic with value of 1 to 7 are being used to grade the scale. *The reliability of user experience scale are measured using Alpha Cronbach resulting* 0,947 of 26 item in this scale are reliable.

The data analysis technique uses multiple regression analysis to examine the effect of computer self-efficacy and user experience on student satisfaction on e-learning.

III. RESULT AND DISCUSSION

Based on the results of hypothesis testing in table 1 using multiple regression analysis, it is known that there is an effect of computer self-efficacy and user experience on student satisfaction with a p value <0.01. Computer self-efficacy and user experience have an effect of 38.6% on student satisfaction. This is because individuals who have confidence in being able to use a computer have a better experience in using e-learning and will feel satisfaction in using it (Duha et al., 2022; Jan, 2015; Nh et al., 2023).

TABLE I. Regression Test Results.

Model	R	R Square	F	Sig.
1	.621[a]	.386	47.460	.000[b]

The results also show that there is an influence of computer self-efficacy and student satisfaction with a p<0.01 and has a large effect of 23%. This means that the beliefs held by students in using e-learning learning can determine the satisfaction they feel. This is because when students believe that they are able to learn using the help of a computer, the learning experience will be more enjoyable and easier so that it can affect the satisfaction felt by individuals.

Furthermore, there is the effect of user experience on student satisfaction with a p value <0.01 and the effect is 51.4%. These results indicate that user experience has a greater influence than computer self-efficacy. This means that the experience gained by individuals when using e-learning as a learning medium can determine the satisfaction they feel. Basically user experience is the experience felt by someone when using a product. In this study, students as e-leaning users have a lot of experience with their own learning process. The experience in question can include how students use e-learning, such as whether e-learning is easy to use, not difficult to learn its features, to feel pleasant and very helpful when using it. When students assess the experiences, they get as positive, useful and enjoyable, they will feel satisfied using e-learning. This result is aligned with previous research stating that there is significant relation between user experience to the user/consumer satisfaction (Badran et al., 2018)

The descriptive results on the computer self-efficacy variable have a mean value of 29.37 and a standard deviation of 4.18, this indicates that computer self-efficacy is in the high category. An individual that has high value of self-efficacy tends to see a problem as a challenge, this means that they are more likely to develop individual potential to solve or pass on any problem they faced. An individual that having high value of computer self-efficacy tend to be having more enjoyment and less anxiety when they use the computer, so they are more likely to get what they expect from the use of the computer (Chien, 2012)

Furthermore, the descriptive results of the user experience variable have a mean value of 115.45 and a standard deviation of 27.01 which means that the user experience of students is in the medium category. This can be interpreted that the overall experience of e-learning users tends to look attractive, easy to recognize, efficient, safe to use, but on the other hand, users also feel that there are things that are less fun and innovative. (Sahid et al., 2017).

The student satisfaction variable has a mean value of 66.7 and a standard deviation of 7.33 which indicates that student satisfaction is in the high category. This also indicates that if student has a good or high satisfaction to the online learning platform (e-learning), they also had more willingness to use the platform as the more satisfied the student mean the more they see them as something useful for their learning process and experience (Liaw & Huang, 2013).

IV. CONCLUSION

Based on the results of this research, it is known that there is an influence of computer self-efficacy and user experience on student satisfaction in e-learning learning. In addition, it is also known that user experience has a greater influence on student satisfaction compared to computer self-efficacy. In this study it is also known that student satisfaction is in the high category, computer self-efficacy is in the high category and user experience is in the medium category.

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