The Correlation between Students' Satisfaction with E-learning and Their English Achievement

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Abstract. This research aimed to find out the correlation between students' satisfaction with e-learning and their English achievement. This was a quantitative study that used descriptive and correlational research designs. The instruments used in this study were a questionnaire adopted from Liaw (2007) and the students' final English class grades. Seventy-nine 11th-grade students enrolled at one of the private high schools in North Sulawesi in the first semester of the academic year 2020/2021 participated in this study. It was found that the students were satisfied with e-learning (M=3.48) and their English achievement was very good (M=91.62). Regarding the correlation between the two variables, a significant correlation was found between students' satisfaction with e-learning and their English achievement with p=.000 < 0.005, r=.441. Thus, teachers should always ensure that students are satisfied with their e-learning so that their English achievement can also be maximized.

Keywords: e-learning, English achievement, students' satisfaction

Abstrak. Penelitian ini bertujuan untuk mengetahui hubungan antara kepuasan siswa dengan e-learning dan pencapaian bahasa Inggris mereka. Penelitian ini merupakan penelitian kuantitatif dengan desain penelitian deskriptif dan korelasional. Instrumen yang digunakan dalam penelitian ini adalah angket yang diadopsi dari Liaw (2007) dan nilai akhir siswa di kelas Bahasa Inggris. Responden dari penelitian ini adalah 79 siswa kelas XI yang terdaftar di salah satu SMA Swasta di Sulawesi Utara pada semester I tahun ajaran 2020/2021. Hasil yang diperoleh adalah siswa puas dengan e-learning (M=3,48) dan prestasi bahasa Inggris mereka sangat baik (M=91,62). Berkenaan dengan korelasi antara kedua variabel, ditemukan korelasi yang signifikan antara kepuasan siswa dengan e-learning *dan prestasi bahasa Inggris mereka dengan p=.000 < 0.005, r=.441. Oleh karena itu, guru perlu selalu memastikan bahwa siswa puas dengan* e-learning *mereka sehingga pencapaian bahasa Inggris mereka juga dapat maksimal.*

Kata kunci: e-learning*, kepuasan siswa, pencapaian bahasa Inggris*

INTRODUCTION

E-learning systems are needed for all students at this time. It is also supported by the current situation which requires all activities to be carried out online; thus, making many educational institutions continue their teaching and learning activities online. Suryati et al. (2019) described the meaning of e-learning and the way of using e-learning as follows:

> E-learning is a learning medium that utilizes electronic media as a tool in the process of teaching and learning activities to improve. E-learning can help teachers in teaching and

learning activities, as e-learning can be used at any time even if the lesson hours are up, and can be used without having to face the teacher with learners (p. 155).

Additionally, Hammad et al. (2018) stated that e-learning makes students feel as if they are in the classroom. E-learning proffers the capability to share various types of material such as video, word documents, slideshows, and PDFs as well as the capability that allows students to ask several questions by chatting or using the voice call which is conducted in online virtual classes. However, when using e-learning, it is necessary to connect the internet. As pointed out by Rusman (2012), to convey the content of the interaction, learning, or guidance with e-learning in connection learning, the use of electronic networks such as the Internet, LAN, and WAN is required. Therefore, in the e-learning process, a good network is needed in its implementation to create a comfortable learning atmosphere and students can be satisfied with the use of e-learning.

Furthermore, it is important to consider how students perform in class for teachers to help them achieve their best. By evaluating students' academic achievement, teachers may gain insights into how well the students can understand the lesson. According to Zargar and Ganai (2014), academic achievement is attaining knowledge and developing skills in school subjects which are usually designed by test scores or marks assigned by the teacher. Liu, Peng, and Luo (2019) suggested that in evaluating student's performance at school, academic achievement is one of the prominent elements that teachers need to consider. Moreover, to improve students' achievement even in situations that do not support conventional learning, e-learning is carried out to help improve students' achievement.

It is interesting to know that students who learn using an e-learning system can perform better than those with the conventional method. Ritonga et al. (2020) pointed out that students with an e-learning system achieve a higher score than the students who adopt the conventional method. This is because e-learning provides the opportunity for students to learn not just in class but also at home. E-learning provides students with opportunities to access the material of the subject that the teacher has provided. In addition to that, students can also adjust their learning speed. For instance, if they do not understand the lesson material well in the classroom, with the e-learning media, such as a video of the material, they can learn it by replaying it until they have fully understood it.

In 2007, Liaw developed research about e-learning. In developing e-learning environments, Liaw suggested that there are four elements: (1) environmental characteristics, (2) environmental satisfaction, (3) learning activities, and (4) learners' characteristics. In an e-learning environment, environmental characteristics such as asynchronous or synchronous interaction create a high-level communicative environment that allows students to share information and determine how to get useful information. In addition, environmental satisfaction, such as an environment that provides electronic devices or internet networks that can support students in the learning process, can easily increase students' perceptions about technology which can increase their participation in the learning process with the current pandemic situation. Moreover, learning activities refer to the ability of the student to share their experience, and the interaction between the student-teacher and student-student in using the e-learning. Lastly, learners' characteristics are to assess how individual characteristics and system quality influence individual affective and cognitive factors.

Liaw (2007) divided the four elements of developing an e-learning environment into four parts, namely: 1. Environmental characteristics include e-learning system quality and multimedia instruction; 2. environmental satisfaction includes perceived satisfaction, perceived usefulness, and

e-learning effectiveness; 3. learning activities including learning activities; 4. learners' characteristics include self-efficacy and behavioral intention.

However, students face problems in terms of their satisfaction with using e-learning. For instance, the direct communication they are used to in the classroom cannot be done in online learning. When students learn through the internet, they are not guaranteed the interaction that usually takes place in the face-to-face learning environment (Osguthorpe & Graham, 2003). The satisfaction of students in using e-learning is important. The need to understand the e-learning program and service is also important. In a study done in Malaysia, Ismail et al. (2012) found that student interest in e-learning is not encouraging because the services provided do not satisfy students in receiving e-learning. The results showed a lack of satisfactory e-learning services, making students less willing to learn. Thus, it takes a teacher who can build students' positive thoughts, so the students could have good results in using e-learning and hence helps improve their achievement. Therefore, students' satisfaction with using e-learning is essential to attain better results in their learning.

However, a study in Pakistan conducted by Ayub and Iqbal (2011) found that the students have a more positive response and are satisfied with e-learning. To have a positive response, students need to have positive thoughts. Moreover, another study by Sundari and Utomo (2020) found that Indonesia has implemented an e-learning system in several schools, universities, institutions, and several industries. By developing several e-learning support platforms, it is hoped that e-learning can help students and teachers in the learning process to achieve more positive results. In addition, in their study conducted at the University of Medan, Ritonga, et al. (2019) discovered that the students' outcomes proved that e-learning impacts their achievement. From previous studies, it has been shown that the use of e-learning by students can produce positive satisfaction and outcome.

Kurniasih and Masduki (2014) conducted research in Indonesia. They found that students prefer to do face-to-face lectures because they feel they still lack the ability to operate online learning. Additionally, the teachers who teach there are mostly rural teachers who are still weak in their mastery of Information and Communication Technology (ICT). Not only that, but it was also found that at UPBJJ Semarang Open University, only a few have computers, laptops, or other electronic devices. Thus, these limitations might be some of the problems which need further investigation as they are still encountered by educators in implementing e-learning in their teaching.

Another study by Liu (2018) conducted in Bali found that student perceptions are higher on social interaction, social presence, and satisfaction using face-to-face learning than online learning. This shows that students are somehow more satisfied learning in the classroom. However, according to Jabeen et al. (2014), e-learning is accessible and can help learners experience an enjoyable and friendly learning environment. Thus, student satisfaction in learning is essential because when the students feel comfortable and happy in their learning, they are expected to improve their achievement. Therefore, whether students are satisfied with e-learning or face-to-face learning is still an issue to be considered.

English achievement is a medium for teachers to see how well the students understand the lesson. There have been previous studies on students' English achievement. For instance, Sarwer (2018) conducted a study on English language achievement in India. The populations are based on secondary students in Rajouri and Poonch districts of Jammu and Kashmir. Quantitative research was used for collecting data. In this study, the multistage random sampling technique was used. Five hundred thirty-two students took part in this study. For assessing the student's achievement in English, the investigator provided a test for the students to fill out. The items of the test consisted of

50 items, and the reliability of it was .90. After calculating the results from the 532 students, it was found that the students who have very high English achievement are eight students; for those high English achievement, there are 91 students. Moreover, for the average English achievement there are 161 students, 105 students with low English achievement, and 167 with a very low level of English achievement. The researchers found that the lack of English achievement was due to a lack of supporting facilities that could support students' English achievement. There is also a scarcity of finding qualified English teachers teaching English. The researcher suggested that the language teaching policy and curriculum should be re-designed to help students perform better in English. Thus, considering that there are still numerous students with low English achievement, this issue needs to be further addressed.

Similarly, in Indonesia, it seems like students have low English achievement. It was found that students' English achievement in Indonesia, more precisely in several regions of Indonesia was still very low. For instance, a study in MAN 1 Gunungkidul by Surini (2018) found that the students had low English achievement. Additionally, another study conducted at SMKN1 Sidoarjo by Choji (2017) found that the lack of student achievement in English made schools think of developing supporting tools so that students' English achievement levels could also increase. However, these studies were conducted outside of North Sulawesi. Therefore, it would be interesting to see whether a similar result would be obtained in North Sulawesi.

Moreover, a study by Cakir and Solak (2014) showed that the learners had a positive attitude toward technology in education and it had a positive effect on the learners' academic achievement. Similar significant results were obtained by Mothibi (2015) and Satuti et al. (2020). However, Usta et al. (2014) found no significant correlation between the preferences of the interaction of the students and their academic achievement. Hence, several researchers obtained different results regarding students' satisfaction with e-learning and their achievement.

Therefore, because students were unsatisfied with their e-learning and the students outside Indonesia and in several regions in Indonesia still have poor English achievement, the researchers were interested to see whether the students at a private high school in North Sulawesi also experience the same problems. Furthermore, since there is also inconsistency as to whether there is a significant correlation between student satisfaction with e-learning and their achievement, this research also aims to determine whether students' satisfaction with e-learning correlates significantly with their English achievement.

METHOD

Research Design

This research was a quantitative research. Abebe et al. (2016) stated that a research strategy using numbers to analyze data is quantitative research. The cause of using quantitative research is enough to explain the causal design and the descriptive. "Quantitative research usually involves a systematic and empirical investigation of phenomena through statistics and mathematics and the processing of numerical data" (Basias & Pollalis, 2018, p. 92). The descriptive method was used in this research to discover the level of the students' satisfaction with e-learning and their level of English achievement. This research used the correlation method to identify whether a significant correlation exists between student satisfaction with e-learning and their English achievement.

Simon and Goes (2011) stated that a correlation study is to verify relationships between variables. Thus, these were the methods applied in this research.

Respondents and Instruments

There were 79 respondents from the eleventh-grade of Science class of a private high school enrolled in the first semester of the academic year 2020/2021. The questionnaire used was based on Liaw's (2007) theory about students' perceived satisfaction, behavioral intention, and effectiveness of e-learning. The questionnaire measured the level of student satisfaction with e-learning. The primary questionnaire comprises 26 items divided into four parts: environmental characteristics, environmental satisfaction, learning satisfaction, and learning characteristics. The original questionnaire used English, so it was translated into Indonesian and three English lecturers validated the questionnaire. Moreover, the students' final grade in English class was used to measure their English achievement.

To find out whether the questionnaire items were valid or invalid, the researcher analyzed the items of the questionnaire by using some statistical tools. According to Taherdoost (2016), there are three types of validity: face validity, content validity, and construct validity. Three English lectures have helped validate the questionnaires. Ghauri and Grounhoug (2005) explained that it is the extent of the area for which the data is taken or is being investigated whose validity will explain how well the data was collected. Moreover, the statistical validity was done using calculations from statistical tools. All the items were found to be valid based on the validity results.

Furthermore, Cronbach's Alpha is used to measure reliability. According to Gross (2015), all items are declared reliable and acceptable if the value of Cronbach's Alpha is greater than 0.70. Based on the result obtained from the data gathered in the pilot study, the value of Cronbach's Alpha was found to be 0.95. Therefore, the items are reliable to be used in the actual study because the value obtained is greater than 0.70

Data Analysis

The Mean score was used to identify the levels of students' satisfaction with e-learning and their English achievement. Furthermore, the Pearson correlation coefficient was used to find out the correlation between students' satisfaction with e-learning and their English achievement.

RESULTS AND DISCUSSION

The Level of Students' Satisfaction with E-learning

The result shows that the mean score of student satisfaction toward e-learning was 3.48 (see Table 1). In the interpretation, the level of satisfaction toward e-learning of the 11th-grade students at the school understudy was found to be satisfactory. This satisfied level means that students like the e-learning they have; the level shows that they were not very highly satisfied but also not less satisfied. In other words, when it comes to e-learning activity, students feel comfortable and happy with the e-learning they have during the class, including their environmental characteristics, environmental satisfaction, learning activities, and student characteristics that satisfy the result. Dziuban et al. (2015) also found a similar result: students' satisfaction with online learning is generally positively satisfied.

Table 1 The Mean Score of Student Satisfaction Toward E-learning

	N	Minimum	Maximum	Mean	Std. Deviation
Students' satisfaction with e-learning	79	1	4	3.48	.537
Valid N (listwise)	79				

The reason why the students in this study were found to be satisfied with e-learning might be due to some factors. As stated by Pham et al. (2019) students could have a satisfaction level because of several factors such as the quality of the course materials, and e-learning instructor, the quality of the e-learning system, and the quality of support service and e-learning administration. Moreover, as argued by Jabeen et al. (2014), the satisfaction level is due to individuals acknowledging new opportunities and feeling comfortable to have education with the help of new technology platforms; the use of online technology medium helps them to feel more comfortable during the learning process. Furthermore, according to Cole et al. (2014), the other factors that also contributed to the students' satisfaction with e-learning are learning style, interaction which includes communication, platform, the structure which consists of the instructor's facility using online instruction, and convenience. Also, based on research by Kwary and Fauzie (2017), it is stated that students who feel satisfied could be because of the flexible time and place, a fun e-learning system that is easy to access and easy to understand, and because of the interesting learning process. Thus, these same reasons could be the reasons why the 11th-grade students in this present study were also found to be satisfied with e-learning.

The Level of Students' English Achievement

As seen in Table 2, the mean score of students' English achievement is 91.62. Based on the scoring system used by the school understudy, the students' English achievement is between 88 - 94 which indicates that the English achievement of the 11th-grade students was interpreted as very good. This result shows that the students performed well in their English class; in other words, they successfully received the knowledge transferred by the teacher. Yulian (2016) found a similar result wherein the level of students' English achievement was also found to be high.

Table 2 The Mean Score of Students' English Achievement

	N	Minimum	Maximum	Mean	Std. Deviation
English Achievement	79	77	99	91.62	4.773
Valid N (listwise)	79				

The reason why the 11th-grade students at the school understudy were found to be very good could be because of some factors. Some of the factors might be related to their behavior during the class, the lesson, their active interaction in the class, and the interesting or attractive educational tools used. Karabiyik (2019) argued that the factors that may lead to a positive high result could include the behavior of being attentive in class, the course content, English oral behaviors in class, and out-of-class behaviors. Moreover, according to Alhawiti (2017), high student grades were due to the principles of education and psychology in the teaching and learning process centered on attractive educational tools. Using attractive educational tools makes the learners more interested in learning and can improve their achievement immediately. Therefore, these same factors might also explain the very good English academic achievement of the 11th-grade students at the school understudy.

Significant Correlation Between Students' Satisfaction With E-Learning and Their English Achievement

The result shows that p = .000 (see Table 3). This means a significant correlation exists between student satisfaction with e-learning and their English achievement. As McLeod (2019) stated that if a p-value is higher than .05 or 5%, it is considered not statistically significant, and if a p-value is smaller than .05 or 5%, it is statistically significant. Thus, by looking at the result shown in Table 3 which shows that the p = .000, the alternative hypothesis stating that there is a significant correlation between student satisfaction toward e-learning and their English achievement was accepted. The result of this significant correlation shows that students' satisfaction with e-learning which was found to be satisfactory is related to their very good English academic achievement.

Moreover, the output result showed that r = .441 (see Table 3). According to Care et al. (2018), the range value for correlation 0.40 – 0.59 indicates a moderate correlation. Therefore, since r = .441 fell between .40 – 0.59, The result shows that student satisfaction with e-learning has a moderate correlation with their English achievement. Additionally, the r-value also showed a positive correlation coefficient. According to Astuti (2017) the correlation coefficient (r) is positive for the closeness of the relationship between variable X and variable Y which is unidirectional, this means that the increasing the value of variable X, the value of variable Y will be more increasing. This result indicates that student satisfaction toward e-learning positively correlates with English achievement. Hence, the more satisfied the students are, the better would be their English achievements.

Table 3 The Correlation Between Students' satisfaction with E-learning and Their English Achievement

		English Achievement
Students' satisfaction with e-learning	Pearson Correlation	.441**
	Sig. (2-tailed)	.000
	N	79

**. Correlation is significant at the 0.01 level (2-tailed).

A similar result from Satuti et al. (2020) was found wherein e-learning service quality significantly correlates with students' academic achievement. They explained that the reason for this is probably because the good quality of the e-learning service could increase the satisfaction of the students and thus result in the improvement of academic achievement. Their study showed that when students have a good e-learning service, their academic achievement will improve since the results showed a significant positive correlation between student satisfaction with e-learning and their academic achievement. Another study by Mothibi (2015) also found a similar result in which it was found that there was a significant relationship between e-learning and academic achievement. It was explained that this result could be because the content and visuals provided attracted students to learn better.

Thus, the same result obtained in this present study wherein there was a significant correlation found between students' satisfaction with e-learning and their English achievement could also be because the students experienced good quality of e-learning service and felt the content and visuals are interesting. Hence, the good quality of e-learning, including the interesting content and visuals, helped the students do better in their English class. This means, the more satisfied the students are with their e-learning, the better will be their English achievement. Thus, their satisfaction with e-learning significantly helped improve their English achievement.

CONCLUSION

It is concluded that the 11th-grade students at the school understudy are satisfied with the e-learning in learning English since they were found to be satisfied with e-learning. Additionally, it can be concluded that the students perform well in their English class and understand the lesson given by their English teacher since they have a very good level of English achievement based on their final grade in English class. Lastly, based on the result obtained, it is concluded that the students' satisfaction with e-learning can help improve students' English achievement. In other words, the more satisfied the students are with e-learning, the better will be their English academic achievement. Thus, students' satisfaction with e-learning is a significant factor that can contribute positively to students' English achievement.

Therefore, because the students were successful in their English class or had a very good English achievements, they need to maintain their knowledge and skill in English. They can also deepen their skills and abilities in English by doing independent learning on the internet, whether in the form of videos, songs, or educational events or listening to podcasts from motivators and taking webinars related to English so that they not only can maintain their good performance but can even do better and maximize their English skills.

Moreover, English teachers should pay attention to the level of the students' English achievement by considering the vital role of e-learning. Teachers may try to find creative e-learning methods and approaches so that the quality of e-learning teaching can always be maintained. Also, teachers are always expected to think critically and creatively to develop new ideas to help students improve their English achievement through e-learning.

Furthermore, this study can be one of the references for future researchers who are interested in conducting similar research on student satisfaction with e-learning and their English achievement considering each of the components of e-learning. In other words, future researchers can try to find out the correlation between each of the components of e-learning with English achievement or other related factors in different areas, grade levels, or schools, with more respondents to be able to confirm the results found in this study.

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