

E-learning Experience of Nguyen Trai High School Students


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Abstract

With the rapid spread of the COVID-19 pandemic and the fact that most students of all grades in Vietnam were not fully vaccinated in 2021, the students had to study online for the first semester of the school year. Therefore, the students at all levels, in general, and the high school students, in particular, had a fully online learning experience. This research investigates the experience of the high school students in e-learning in the case of Nguyen Trai High School in Ninh Thuan Province. The data was collected via online questionnaires toward the end of the first semester of the 2021-2022 academic year to find out about the e-learning experience of the students at Nguyen Trai High School in Ninh Thuan Province. One hundred seventy-four participants were involved in the study by responding to the online questionnaires. The study's findings revealed that most students had a favorable experience with e-learning. However, some drawbacks need to be considered for further development in e-learning education in high schools.

Keywords: experience, high school students, E-learning

Introduction

To reduce the adverse effects of the COVID-19 in the case that high school students were not fully vaccinated against COVID-19, the Ministry of Education and Training of Vietnam ordered schools at all levels to switch to online learning. To prevent high school students from being severely impacted by the pandemic, schools, universities, and institutions were placed on lockdown until widespread immunization occurred. Educational institutions across the country had to shift from traditional education modes to online modes of education. Therefore, students, as well as teachers, must adapt to fully remote online learning. Although many felt unprepared during the transitional period, they did not have an option but to use online learning. Because of the inexperience of both students and teachers in online learning, this quick transition can be difficult (Barbour & Reeves, 2009). Even with high school students in industrialized nations where online learning is fast expanding, there was still 10% of high school students with no experience in e-learning (Barbour & LaBonte, 2017). Teachers must be capable of using technological tools for education and a variety of applications along with conducting e-classroom-sessions so that the students will have scaffolding in technology for e-learning and

have a good online learning experience. In fact, the feelings and experiences of insiders or learners are central to determining the effectiveness of e-learning. Therefore, it is critical to understand students' online learning experiences to help educational authorities and institutions better understand students' challenges and improve their online learning experiences. Although we have a good understanding of students' characteristics and outcomes in online courses, we have little understanding of their overall experiences in such contexts. (Blackmon and Major, 2012). Additionally, the majority of recent research was limited to students in high school education. With the motivation of unveiling the truths regarding the students' readiness and satisfaction with e-learning, the research is to find out the feedback of high school students regarding their experience with e-learning in the case of Nguyen Trai High School.

Literature review

Theoretical background

E-learning, often known as online learning, is the term commonly used all over the world, especially during the COVID-19 pandemic. However, the term has different meanings with various descriptions and opinions based on many authors' research fields or experiences. According to Tamm (2019), e-learning or online learning or electronic learning is the acquisition of knowledge by instruction and content delivered primarily through electronic technologies and media. Online learning is the application of the Internet and other significant technologies in creating materials for program management and educational objectives. (Fry, 2001). Bates (2016) claims that online learning is a type of distant education in which a program is designed to be delivered entirely online. In addition, a few experts describe e-learning as the education given entirely through the Internet or web-based media. Online education, on the other hand, is defined as education offered exclusively through web-based media or through the Internet (Lee, 2017). Online education is described as the application of internet-based technologies to bridge the gap between teachers and students (Ryan & Young, 2015). Traditional educational institutions all around the globe have long made use of Internet-based learning, sometimes known as remote learning or online education (Bartley & Golek, 2004). E-learning is defined by Singh and Thurman (2019) as the experience of learners in either synchronous or asynchronous scenarios utilizing a variety of devices (e.g., mobile phones, computers, and so on) that can connect to the Internet. The timing and location of teaching and learning activities change between asynchronous and synchronous learning. According to Alqurashi (2019), one key difference between asynchronous and synchronous online learning is the interaction between the learner and the material, as opposed to the teacher or other students.

Previous studies on learners' experience in e-learning

As Talidong & Toquero (2020) point out, most schools still face difficulties in virtual learning because not all instructors and students are familiar with the applications of e-learning. As a result of the COVID-19 pandemic, students' online learning experiences have also revealed

numerous difficulties, such as connectivity issues (Basuony et al., 2020), IT equipment problems (Bczek et al., 2021), a lack of opportunities for collaborative learning (Bczek et al., 2021), and a lack of motivation for schoolwork (Niemi & Kousa, 2020). Basuony et al. (2020) found that 13.9% of Cairo students had internet connection concerns. In some rural cities in Indonesia, however, about two-thirds of the students complained about unreliable Internet, limited data, and improper study tools (Agung et al., 2020). Another factor is the accessibility of appropriate technological devices to satisfy the requirement for online learning. Nearly 76% of college students reported utilizing inadequate technology for online learning, with 15% using a laptop and 85% using a smartphone (Agung et al., 2020). Although online learning is still a difficult time, educators, teachers, and experts debated whether online learning could benefit all students. Kurucay and Inan claimed that (2017) there is some proof that online courses can boost students' achievement. According to Clark (2007), there is little evidence from the previous studies suggesting that well-prepared traditional learning is more effective than well-prepared online learning and vice versa. In addition, Navarro & Shoemaker (2000) confirmed that students are quite satisfied with their online learning experiences, and their learning outcomes are comparable to or better than those of conventional. Another discussion, as stated in the study of Hoa Sen University in 2021, revealed that the university students favored e-learning due to its flexibility and convenience. (Hoang & Tran, 2021). Beamish, Armistead, Watkinson, and Armfield (2002) also claimed cost efficiency, access, and flexibility as advantages.

A great deal of evidence exists showing that no significant differences should be expected regarding the effectiveness of well-designed online learning compared with well-designed in-person learning (Clark, 1983; Russell, 1999). However, not many students are willing to admit, adapt as well as respond positively to the implementation of online learning. According to Joshi et al. (2020), students consider that the most significant weaknesses of online learning are the lack of hands-on experience and lower quality of instruction, while the most significant threats are the vulnerability to scams or academic dishonesty, as well as societal skepticism about the quality of online education. In addition, according to Grundmann (2010), one important drawback of online courses is the lack of laboratory and hands-on experience. Students have different levels of acceptance of changes in the learning process. Age, cognitive capacity, and the students' interest in technology can impact this. Students tend to behave differently in online learning, with mature students expressing higher enthusiasm. Gender and the number of online experimental courses students take in a semester are two characteristics that substantially impact students' barriers to online learning (Muilenburg and Berge, 2005).

Many teachers argue that online education is not a replacement for classroom instruction or other methodologies. It is only a temporary solution to our difficult situations. According to Pham, N. T., & Nghiem, H. V. (2022), while educators in the research acknowledged online education's benefits, they also reported that blended learning provided safer, better quality results for their students. Sigh & Thurman (2019) mentioned that online learning might also be seen as a way of utilizing technology to make the teaching-learning process more student-

centered, inventive, and adaptive. It has been discovered that technology employed as teaching tools or supportive media in education cannot replace the physical interactions between students and teachers. (Miller, 2020). In fact, Derouin et al. (2005) found in a review of prior research that it is difficult to determine that e-learning is more, less, or equally successful at the learning level as traditional classroom-based training.

Research Questions

1. What is the high school students' experience on E-learning at Nguyen Trai High School?
2. How are Nguyen Trai High School students' readiness and satisfaction with e-learning?

Methods

Pedagogical Setting & Participants

The research was conducted at Nguyen Trai High School in Ninh Thuan province (former Duy Tan High School, built-in 1954) with a total school area of 15,000 m². Over 60 years of establishment and development, the school has trained many generations of successful alumni and contributed to creating human resources for the development of the province.

During the first semester of the school year 2021-2022 (September 2021 - January 2022), due to the impact of the COVID-19 epidemic, the whole school learned online. Specifically, all teachers and students had accounts on Microsoft Office's Teams system. On Teams, each class was divided into a group, and the teachers assigned to that class were added to that group. All teachers and students were guided to use Teams for learning and teaching with files and videos. An online period lasts 35 minutes instead of the usual 45 minutes.

Most of the students participating in this study are in grade 11 of the school. In general, they all have average or higher academic ability and are able to use computers or smartphones to study. In addition, in the previous school year, 2020-2021, they were also familiar with online learning due to the COVID-19 epidemic. Although, at that time, online learning did not last for a whole semester like this year, it was interrupted from 1 to 2 weeks intervals.

Design of the Study

The survey was conducted to describe the experiences of high school students during the first semester of online learning. The survey questions were given out in Google form after the end of the 1st semester and the beginning of the 2nd semester when the students returned to face-to-face learning at school. The writers adopted the questionnaire (Obidat, Alquraan & Obeidat, 2020) to illustrate the aspects of the student's online learning experience. Research methods are both qualitative and quantitative. Quality is reflected when students were asked for opinions about the usefulness of online learning or satisfaction. The quantity is shown in tables as numbers and percentages.

Data collection & analysis

The questionnaire consisted of 24 questions and was divided into eight parts. All of the questions were multiple-choice, 23 of which had a Likert scale with values ranging from 1 to 5 (Strongly disagree, Disagree, No Opinion, Agree, Strongly Agree), only the last one asking about students' feelings ranging from 1 to 7 (Absolutely terrible, Very dissatisfied, Dissatisfied, Quite satisfied, Satisfied, Very satisfied and Absolutely delighted).

Results/Findings and discussion

Results in students' experience in E-learning

This study examined factors that characterize students' online learning experiences at the high school level. The data was collected through questionnaires administered to 174 participants who were enrolled in the Nguyen Trai high school. The questionnaire implemented at the end of the 1st semester gave a return rate of 100%. The analysis of the data revealed eight factors that characterize their online learning experiences, including (i) Perceived Ease of Use as (PE), (ii) Perceived Usefulness as (PU), (iii) Subjective Norm as (SN), (iv) Intention to Continuous Use as (IC), (v) Learning Community as (LM), (vi) Learning content as (LN), (vii) Learning Personalization as (LP), (viii) User satisfaction as (US). From the students' perspectives, the experience of taking advantage of the e-learning system reflected users' acceptance and satisfaction, social pressure, and quality of the online learning platform.

Table 1. Perceived Ease of Use

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Learning to operate the e-learning system would be easy for me	12/174 (7%)	17/174 (9.9%)	82/174 (48%)	48/174 (28.1%)	12/174 (7%)
2. It would be simple for me to get the e-learning system to perform what I want it to accomplish.	7/174 (4.1%)	13/174 (7.6%)	76/174 (44.4%)	66/174 (38.6%)	9/174 (5.3%)
3. It would be simple for me to learn how to use the e-learning system.	6/174 (3.6%)	17/174 (10.1%)	73/174 (43.2%)	58/174 (34.3%)	15/174 (8.9%)
4. I believe the e-learning system is simple to utilize.	9/174 (5.3%)	8/174 (4.7%)	73/174 (42.7%)	68/174 (39.3%)	13/174 (7.6%)

Nearly half of the students (48%) chose neutral when being asked whether it was easy for them to operate the system, whereas 28,1% agreed and 7% strongly agreed. The percentage of those who disagree and strongly disagree was slightly lower, at 9,9% and 7%, respectively.

A similar pattern can be observed in the other three categories, with “neutral” making up the largest scale and more people turning to a positive attitude rather than the negative one.

Table 2. Perceived Usefulness

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
5. Using an e-learning system would help my learning.	7/174 (4.1%)	17/174 (9.9%)	81/174 (47.4%)	50/174 (59.2%)	16/174 (9.4%)
6. Using an e-learning system to learn might boost my learning productivity.	10/174 (5.9%)	26/174 (15.3%)	78/174 (45.9%)	39/174 (22.9%)	17/174 (10%)
7. Using an e-learning system might improve my learning efficacy.	8/174 (4.7%)	22/174 (12.9%)	78/174 (45.6%)	48/174 (28.1%)	15/174 (8.8%)
8. I would find the e-learning system useful in learning	9/174 (5.3%)	8/174 (4.7%)	64/174 (37.4%)	71/174 (41.5%)	19/174 (11.1%)

In terms of perceived usefulness, there was an insignificant variable in the table. Specifically, 59.2% of the students agreed that utilizing the e-learning system would improve their learning, making it the first preference. "Neutral" ranked second with 47.4%, while the figures for "disagree" and "strongly agree" were relatively similar, at above 9%, and the percentage for "strongly disagree" was much lower. The same trend was reflected in "finding the system useful in learning".

With regards to the other two measurement scales, the number of people selecting "neutral" was dominant in both, followed by "agree". Surprisingly, more people responded with "disagree" than those who strongly agreed and strongly disagreed.

Table 3. Subjective Norm

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
9. People who influence my behavior would think that I should use the e-learning system for learning online	13 (7.6%)	26 (15.2%)	86 (50.3%)	38 (22.2%)	8 (4.7%)
10. People that important to me believe that I should utilize an e-learning system to learn online.	6 (3.5%)	22 (12.8%)	82 (47.7%)	51 (29.7%)	1 (6.4%)

The writers explored how other people 'people who are important to students and those who have an influence on a student's decision-making) reacted to the implementation of e-learning. While most reported neutral, a mild but obvious trend emerged that people who influence children's behavior agreed more on applying e-learning platforms.

Table 4. Intention to continue the use

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
11. I aim to continue utilizing the e-learning system if I have access to it.	8/174 (4.7%)	17/174 (9.9%)	76/174 (44.2%)	57/174 (33.1%)	14/174 (8.1%)
12. Given my access to the e-learning system, I anticipate that I would continue to use it.	9/174 (5.3%)	9/174 (5.3%)	81/174 (47.9%)	59/174 (34.9%)	11/174 (6.5%)

Some (around 34%) participants agreed to keep studying online, with only less than 10% strongly agreeing, but almost half (42-48%) felt neutral. A minority (10-15%) refused to continue using e-learning platforms in the future. This level of intention seems to reflect a quite high possibility of continuous use.

Table 5. Learning Community

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
13. I can easily discuss questions with other students thanks to the e-learning system.	10/174 (5.8%)	20/174 (11.7)	74/174 (43.3%)	53/174 (31%)	14/174 (8.2%)
14. The system of e-learning makes it easy for me to access the shared content from the learning community	7/174 (4.1%)	6/174 (3.5%)	72/174 (41.9%)	63/174 (36.6%)	24/174 (14%)
15. The e-learning system makes it easy for me to discuss questions with my instructors	8/174 (4.7%)	19/174 (11%)	79/174 (45.9%)	50/174 (29.1%)	16/174 (9.3%)
16. The e-learning system allows me to share what I learn with the learning community easily	9/174 (5.3%)	11/174 (6.4%)	72/174 (42.1%)	63/174 (36.8%)	16/174 (9.4%)

Students were asked to think about the learning community they were involved in when studying online, and most (approximately 45%) neither agreed nor disagreed that the learning community enabled communication with instructors and peers and provided easy data accessibility. A lower but still relatively large proportion of participants agreed that it was simple for them to ask questions and exchange ideas with other students, while only some found it easy to discuss questions with teachers.

Table 6. Learning Content

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
17. The e-learning system delivers current content.	8/174 (4.6%)	14/174 (8.1%)	80/174 (46.2%)	54/174 (31.2%)	17/174 (9.8%)
18. The e-learning system provides content that exactly fits my needs	9/174 (5.3%)	10/174 (5.8%)	86/174 (50.3%)	52/174 (30.4%)	14/174 (8.2%)
19. The e-learning system provides sufficient content	6/174 (3.5%)	14/174 (8.2%)	86/174 (50.6%)	47/174 (27.6%)	17/174 (10%)

When asked about the characteristics of learning content, most students cited “neutral”. 31.2% of the respondents agreed that the content was up-to-date. More people agreed the content was innovative and exactly fits their needs rather than being sufficient, while content adequacy had a higher number of people who strongly agreed.

Table 7. Learning Personalization

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
20. The e-learning system enables me to learn the content I need	9/174 (5.3%)	10/174 (5.8%)	78/174 (45.6%)	61/174 (35.7%)	13/174 (7.6%)
21. The e-learning system enables me to choose what I want to learn and content that exactly fits my needs	6/174 (3.5%)	10/174 (5.9%)	84/174 (49.4%)	55/174 (32.4%)	15/174 (8.8%)
22. The e-learning system enables me to control my learning progress	9/174 (5.2%)	12/174 (7%)	86/174 (50%)	51/174 (29.7%)	14/174 (8.1%)
23. My learning progress and performance are tracked by the e-learning system.	8/174 (4.7%)	8/174 (4.7%)	89/174 (51.7%)	56/174 (32.6%)	11/174 (6.4%)

While most participants reported a neutral attitude towards the learning personalization level that the platform offered, for some, it was negative. More than 30% reported the platform worked effectively in assisting students to achieve their goals and better control their learning pace.

Table 8. User satisfaction

	Absolutely terrible	Very dissatisfied	Dissatisfied	Quite satisfied	Satisfied	Very satisfied	Absolutely delighted
25. How do you feel about your overall experience of the e-learning system use?	8/174 (4.6%)	5/174 (2.9%)	10/174 (5.8%)	65/174 (37.6%)	61/174 (35.3%)	18/174 (10.4%)	6/174 (3.5%)

Overall, most of the participants showed a high level of satisfaction in e-learning, 73% were satisfied, and 14% were very satisfied or absolutely delighted when using the system. A minority of students revealed that the system did not fulfill their requirements. 5.8% were dissatisfied, and 7.5% were very dissatisfied or felt absolutely terrible.

Discussion

Perceived Ease of Use (PE) and Perceived Usefulness (PU)

Previous research reveals two critical criteria among the numerous variables that may validate the experience of utilizing an online learning system (Davis, 1989). The first one is PE - Perceived Ease of Use, which is described as the level of confidence a user has about effortlessly using a certain scheme. In addition, Perceived Usefulness (PU) refers to how confident a user is in better performing their job with the support of a certain scheme. The participants in this study evaluated the efficiency of the system in e-learning. The majority of them shared the same agreement and belief that the system is a useful and effective instrument for building their knowledge. Furthermore, the easiness of the online learning platform was also surveyed. A good proportion of learners replied that the platform is straightforward to implement.

According to the technology acceptance model, while there is a lack of rational measurement methods for interpreting user acceptance of e-learning systems (Davis, 1989), Perceived Usefulness (PU) and Perceived Ease of Use (PE) are quite important in terms of user acceptability (Abbad and Jaber, 2014). In other words, these two variables imply usage behavior and determine user technological acceptability. In terms of Perceived Usefulness and Perceived Ease of Use, this study finds that the users have an optimistic attitude toward the usage of e-learning and the system value. This indicates a relatively high level of user satisfaction and user acceptance. Kurucay and Inan (2017) argued that there is some evidence that e-learning may improve students' performance. Whereas Derouin et al. (2005) discovered in a review of existing studies that it is difficult to tell if e-learning is more, less, or equally effective at the learning level as conventional classroom-based instruction. Clark (2007) also stated that previous research has not shown that well-prepared traditional learning is more successful than well-prepared online learning or vice versa.

Subjective Norm (SN)

Subjective norms refer to the individual's perception of whether the significant others support their behavior. That is to say, subjective norms indicate a user's intention to use a technology system (Ajzen, 2022). In this study, two-thirds of people who are either important to students or have an influence on students' behavior agree that in current times, the e-learning system is a great source of learning as well as a good practice of knowledge sharing. While educators in the study recognized the advantages of online education, they also claimed that blended learning delivered safer, higher-quality outcomes for their students. (Pham, N. T., & Nghiem, H. V.,

2022). It has been shown that the use of media and technology in the classroom is beneficial but that virtual interactions cannot fully replace face-to-face instruction (Miller, 2020).

Intention to Continuous Use (IC)

There is a correlation between Perceived Ease of Use, Perceived Usefulness, Subjective Norm, and Intention to Continuous Use in this study (Abbad and Jaber, 2014). The participants are shown to have quite a strong intention and motivation to continue using this online learning system in the future. Navarro & Shoemaker (2000) revealed that students are highly happy with their online learning experiences, and their learning results are equivalent to or better than traditional ones. Another debate, as indicated in the research of Hoa Sen University in 2021, demonstrated that university students liked e-learning owing to its flexibility and ease. (Hoang & Tran, 2021).

Learning Community (LM)

The learning community in this study includes conversations between learners and their peers and their instructor and data accessibility. It can be seen that there were effective online communities using technology in interactions and sharing. In this study, a large number of students agreed that they feel free to share their personal ideas and interact with their peers in a meaningful way. The reason why students do not have effective collaboration may lie in the fact that they do not feel comfortable enough to either discuss questions with their teacher privately or pose a public discussion. Ryan & Young (2015) mentioned that the term "online education" refers to the use of various forms of internet-based technology in order to facilitate communication between educators and their students.

Learning Content (LN)

Many (above 30%) participants reported that the system in e-learning provides greater value to the courses. The platform manages to cater to over 50% of online learners' needs despite the challenge that not all online learners have the same expectations, preferences, or learning goals. Moreover, the amount of knowledge was quite well controlled, so learners were made sure not to be cognitively overwhelmed. According to Fry (2001), online learning is defined as the application of the Internet and other significant technologies in the creation of materials for program management and educational objectives.

Learning Personalization (LP)

It is observed from the data that many learners (37,7%) are facilitated to manage his/her own learning progress. Around 42% of participants are able to personalize the experience by selecting the course content and using its multiple types. All of these allow learners to follow their own learning path and, as such, boost the quality and speed of education (Essaid, Hassan, and Adnani, 2011). So that is the reason why Singh and Thurman (2019) stated that e-learning is defined as the experience of learners in either synchronous or asynchronous scenarios utilizing a variety of devices (e.g., mobile phones, computers, and so on) that can connect to the Internet.

User satisfaction (US)

The level of user satisfaction well correlates with the characteristics mentioned all above. Most (nearly 90%) students range from quite satisfied to absolutely delighted, which means that generally, the online learning system fulfills the learner's needs. Ngo, D. H.(2021) stated that an increase in students' motivation to study might be expected if teachers become more skilled at using the Internet's benefits to design more engaging online classes. This means that students are more actively involved in their online education.

Conclusion

This study explored factors that characterize a learner's experience in online learning. The constructive attitude shown in every category suggested that students valued the e-learning tools. Specifically, the learning content and learning personalization have the strongest positive feedback towards the system.

In spite of the perceived advantages of e-learning, this study points out that there is still room for improvement, especially in terms of usefulness. Consequently, operating e-learning courses should be considered with sensitivity to the effect positively on learners' experience of online platforms, particularly for the accessibility of data in the learning community.

Lastly, educators such as the school administrators, policymakers, and course designers may benefit from this study as data samples can assist in measuring students' acceptance, identifying the cause for rejection and determining the following strategy for correction, and speeding up the rate of adoption.

Limitations of the Study

It is thought that this research has certain constraints, reflecting on the sample size. Although the sample size of 174 is statistically significant, it is considered undersized compared to the total number of this high school, which is 1851. In addition, the collection of data was mainly limited to the students who were attending Nguyen Trai high school. As a result, it may not fully represent the diversity of attitudes in other regions. Future research should involve multiple high schools in different areas.

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