An Investigation of Students' Perceptions on the Effectiveness of Online Learning and Their Attitudes towards Online Learning

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Abstract

The COVID-19 pandemic has disrupted education worldwide. It has accelerated the development of digital platforms for teaching and learning and unleashed a variety of new technology in education. One of remarkable changes in educational practice is the shift from face-to-face learning in traditional classrooms to virtual classrooms. Such sudden shift has brought a challenge to educators, teachers and learners. Online learning is considered a useful learning tool which offers more flexibility and a number of benefits for learners. However, the effectiveness of online learning can be affected by various factors and some researchers expressed concerns over several issues. Thus, this study aimed to investigate students' perceptions on the effectiveness of online English courses and their attitudes towards online learning. Student questionnaires with open-ended and close-ended questions are used to collect quantitative and qualitative data. The participants were forty-two third-year English major students studying in six online English courses in English Program, Faculty of Liberal Arts. The findings revealed that the participants perceived online learning as effective for learning. It facilitates student learning in terms of flexible study location and time, providing online learning materials for self-revision to students. The participants also had positive attitudes towards online learning at a high level; however, negative attitude were found. Some concerns over online learning and suggestions for more effective online learning were discussed. Implications, limitations and recommendations for further studies are also included.

Keywords : online learning, online platforms, effectiveness, students' attitudes, English
language learning

1. Introduction

The coronavirus disease 2019 (COVID-19) pandemic has been a global health crisis in a century, which has led to impacts and changes in many aspects of people life. In particular, the outbreak has disrupted education in over 150 countries and substantially affected around 1.6 billion students (The World Bank, 2022). Lockdowns, closures of educational institutions and social distancing have interrupted traditional educational practices resulting many schools, colleges and universities to discontinue face-to-face teaching. Learning in traditional classrooms has shifted to online learning (Inthason, 2020). These changes have caused many effects on teaching and learning including confusion and stress among learners, teachers and educators. In the meantime, the COVID-19 outbreak has accelerated the development of new forms of teaching and learning and unleashed a variety of new technology in education.

In response to the COVID-19 infection prevention policy, many universities in Thailand and in other countries have implemented online learning approach. After the COVID-19 outbreak, online classes have become more prevalent, and in many educational institutions, online courses have taken over traditional classroom-based courses. Online learning come in various forms such as synchronous or asynchronous virtual courses, hybrid learning, blended

learning and hyflex learning. A number of online platforms are used for teaching and learning are, for example, Microsoft Teams, Zoom, Google Classroom,
E-learning, Edmodo and Webex. A number of advantages of online learning have often been addressed, for example, allowing students to access their learning with flexible schedules, stimulating and motivating students to learn, including promoting self-directed learning.

However, online learning has posed a challenge for teachers and students. Several researchers have voiced concerns about online learning and factors that can impede students' learning and lead to unsuccessful online learning (Mohd Basar, Mansor, Jamaludin, & Alias, 2021; Muhammad and Kainat, 2020; Das, 2022; Yang, & Cornelious, 2004).

The first concern is about the quality of online learning platforms and learning tools / features (Mohd Basar et al., 2021). It has been found that some currently used online platforms have limited or unsupportive features / tools and not convenient as they require high-speed Internet connection to access (Das, 2022). Technical problems about using learning platforms and learning tools (Mohd Basar et al., 2021) are also mentioned by students.

The second concern is the limited classroom interaction. In some teaching contexts, a lack of proper interaction and contact with students and instructors was found affecting group collaboration and student learning (Muhammad, & Kainat, 2020). Britt (2006) found that real-time sharing of ideas, knowledge and information is partially missing from the digital learning world. This lack of social interaction has made it difficult for students to do group work via online learning platforms (Adnan, & Anwar 2020).

Students' negative attitudes have also affected online learning. Hazwani et al. (2021) contend that optimistic students who are enthusiastic to learning will not find online learning an obstacle to their academic success. On the other hand, those who have opposing views feel online learning completely different from face-to-face learning (Adnan, & Anwar, 2020). Students may feel unfamiliar to online learning environment. In some online learning contexts where students are highly demanded to perform tasks or activities they need to be responsible to direct their own learning. Such demanding tasks may discourage some students and affect motivation to learn.

In addition to the abovementioned concerns, there are many factors that can intervene students' process of learning. The existing literature discuss a number of intervening variables such as lack or inadequate electronic devices resulted from economic or financial problems of learner families (Sathientharado, Paicharoen, Buranawanna, Teeranon, & Jakkaew, 2021), instability or slow connection of Internet WIFI (Sathientharado et al., 2021; Funchian, 2021), unfamiliarity or problems of using online learning platforms (Baltà-Salvador et al., 2021; Mahyoob, 2021; Thandevaraj et al., 2021; Thonghattha, 2021), unreadiness or lack of preparation for online class (Sakdapat, 2021), student learning styles, their class attendance and motivation (Jeenapak, 2021), and lack of teachers' feedback or assistance in real time (Sathientharado et al., 2021). These variables can impede students' learning and bring about negative impacts on their achievement and skill development.

In the context of Huachiew Chalermprakiet University, the third-year English major students have encountered a change to online classes since 2019. The students have learned through online platforms such as MS Teams, Zoom, E-learning, Google Classroom, Edmodo and Webex. However, it has been observed that some students have faced undesirable online learning experiences and difficulties in learning through online platforms. Sources of difficulties and

undesirable experiences were varied such as inadequate Internet access, students' unfamiliarity and problems of using online platforms, distractions caused by unsupportive learning environment, and poor study habits. As online learning has become a key mode of instruction that students take to achieve learning outcomes of the Program, it is crucially important to seek for ways to improve the quality of online learning and to help students overcome their difficulties in learning. Therefore, this study aimed to investigate students' perceptions on the effectiveness of online English learning and to provide some insights and implications for successful online teaching in the Thai EFL context.

1.2 Review of Literature

Online learning

Online learning refers to "an instruction that is delivered electronically through various multimedia and Internet platforms and applications" (Maddison, Doi, Lucky, Kumaran, 2017, p.13). 'Online learning' is used interchangeably with other terms such as web-based learning, e-learning, computer-assisted instruction, and Internet-based learning (Maddison et al., 2017). Currently, there are a wide range of online platforms used for online learning such as Microsoft Teams (MS Teams), Zoom, E-learning, Edmodo, Google classroom, Webex and Google Meet.

Learning effectiveness

According to Blicker (2009), learning effectiveness is defined as "the degree to which learning objectives or outcomes have been achieved or that learning is effective" (p. 973). The achieved learning outcomes are reflected in the "evidence of learning occurred, the performance which has changed in knowledge, attitudes, behavior, skill levels or a condition, status or situation" (p. 973).

The notion of measuring the online learning effectiveness in higher education has originated since the advent of Web-based distance education for over the past decade. As the traditional quality measures involve accreditation, these measures did not match with quality evaluation in the context of Internet-based teaching and learning (Parker, 2004). The quality models have been developed to measure the quality of online courses. Those models are, for example, " Standard for Quality Online Courses" developed by Michigan Virtual University, and "Sloan-C's Quality Framework Learning Effectiveness" developed by Sloan Consortium in 2003 (Blicker, 2009). One of the known quality models among online practitioners, Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education" proposed a taxonomy for the effectiveness of the educational process consisting of seven principles: 1) encouragement of instructor-student communication, 2) development of student–student cooperation, 3) use of active learning techniques, 4) offering timely feedback, 5) emphasis on student time on task, 6) communication of high expectations, and 7) respect for student differences.

The recent models have been developed based on the quality framework that embrace pedagogical practices and creating student-centered constructivist learning environment (Blicker, 2009). Based on the constructivist learning theory, learning involves knowledge-building processes where knowledge is constructed by students. With the facilitation of course structure and supportive learning environment which provide opportunities for "teacher-student and student-student interactions, students construct knowledge and formulate newly learned concepts" (Tsang et al., 2021). The criteria for quality evaluation of learning include issues of

accessibility, learning styles, student engagement and collaboration, course design, layout, appearance, and technologies used.

According to the Criteria and standards used in evaluating web-based instruction and Delivery Guidelines, the Electronic Learning Institute developed six broad criteria that consists 96 quality process standards used in evaluating online instruction and delivery (Electronic Learning Institute, n.d. as cited in Blicker, 2009, p. 966). The six criteria includes:

1. Flexibility of learner interaction and communication with faculty, peers, and course materials,
2) Attention to detail in the course and its materials,
3) Attention to detail in the Web design,
4) Detailed faculty communication to learners,
5) Clear timelines and due dates and
6) Creating a sense of collaborative teamwork and "groupness"

In this study, the researcher adopted Blicker's (2009) definition of online learning effectiveness and applied the criteria for assessing the quality of online instructions in terms of six dimensions: 1) accessibility of online learning platforms, 2) flexibility of learner interaction and communication with teacher, peers, and course materials, 3) detailed course and materials, 4) teacher communication to learners, and 5) creating a sense of collaborative teamwork.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is currently used as a model for understanding people's acceptance of information technology (Gefen, & Staub, 2000; Wang et al., 2003). It is theoretical framework developed by Davies (1989) for investigating "how perceived usefulness, and perceived ease of use of a new technology or service affect its acceptance" (Tsang et al., 2021, p. 404). According to Davies (1989), the TAM lies on the two components 'perceived ease of use' and 'perceived usefulness' which are used to explain online users' intention to use the information technology. Perceived ease of use is the degree to which a user feels that the system is easy to understand and use. It is a variable that influence the acceptance and adoption of a particular information technology. The perceived usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance his or her work performance (Davies, 1989). Within the TAM, perceived ease of use (PEU) is a variable that precede perceived usefulness (Davies, 1989) as the easier a user feels it is to use a new technology or service. TAM has a relationship with satisfactions and directly affect factors for the use of information technology. In this research context, the researchers adopted Davies (1989) two concepts of Perceived ease of use and Perceived usefulness and applied the TAM model adapted by Tsang et al. (2021) was used as a framework for investigating students' attitudes of online learning. The model of TAM is illustrated in Figure 1.
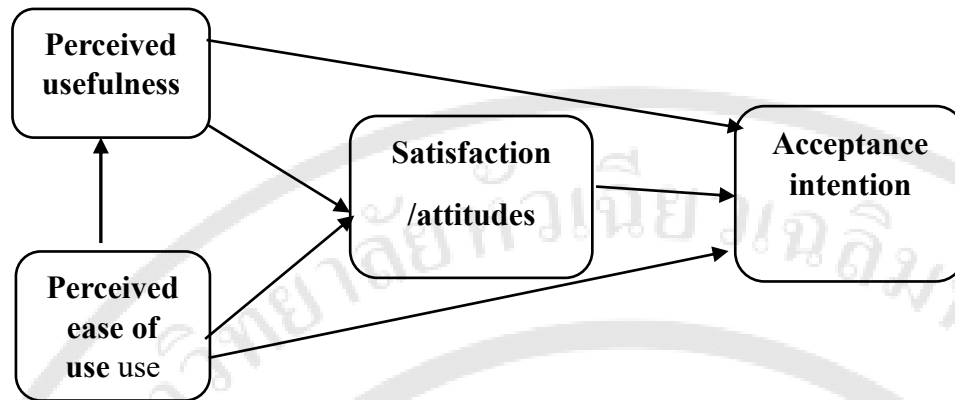
Figure 1 The model of TAM are Perceived Usefulness (PU) and
Perceived Ease of Use (PEU)

Tsang et al.'s (2021, p. 406) model of TAM adapted from Davies (1989)

To determine the perceived usefulness of a product, use the guidelines for rating the usefulness of technology on the following six points:
1. Using this product at work would help me complete tasks faster.
2. Using this product would improve my job performance.
3. Using this product would increase my productivity.
4. Using would increase my effectiveness at work.
5. Using this product would make it easier to do my job.
6. I would find this product useful at work.

To measure the Perceived Ease of Use, use the guidelines for rating the ease of the technology on the following six points:
7. Learning how to handle the product would be easy for me.
8. I would find it easy to let the product do what I want it to.
9. My interaction with this product would be clear and smooth.
10. I would find this product flexible to work with.
11. It would be easy for me to become agile with the product.
12. I would find it easy to use.

Issues to be concerned and factors affecting the effectiveness of online instructions

In the recent years, several researchers (Mohd Basar, et al., 2021; Muhammad & Kainat, 2020; Das, 2022) have discussed issues to be concerned in providing online instructions. The first concern is about the quality of online learning platforms and learning tools / features. To facilitate student learning, online learning platforms should be easy to access, up-to-date and fit for the teaching and learning context. In practice, however, teachers may make choices of different online learning platforms / applications, and some of those may have limited or unsupportive features / tools and require high-speed Internet connection to access (Das, 2022). This can cause students taking online classes at home or dormitory to strive for high-speed Internet WIFI. Also, the know-how of using platforms and technical support for losing connection and other technical problems bring about challenges in online learning. When students encounter technical problems during their online classes, those who do not know how to

get technical support may face difficulties in using the platform and learning tools. With these limitations of online platforms, online learning may become less effective and students may have undesirable online learning experiences.

Social interaction in online classrooms is another concern to be addressed. Online classes where physical interactions between teachers and students and among students are limited can make some students experience a sense of isolation. Yet, a lack of proper interaction and contact with students and instructors was found in some teaching contexts (Muhammad, & Kainat, 2020). However, Garrison (2009) highlights social presence as a crucial component of online learning theory and model. Social presence involves the way the students adjust themselves to be part of the community, communicate purposefully in a trusting environment, and develop interpersonal relationships with other members. Therefore, in online classrooms, teachers should provide interactive online instructions and promote interactions to build a sense of community among students, help them develop interpersonal relationship with others, motivate their learning and engagement.

Apart from the abovementioned concerns in online teaching, there are many factors that can intervene students' process of learning. The first factor that is inadequate or limited Internet access. It is often mentioned as one of significant factor affecting the effectiveness of online learning (Hazwani et al., 2021). Many students experience slow Internet connection, fail to access Internet WIFI or get disconnected while studying via online learning platforms. The sources of Internet problems are varied, for example, poor network caused by Internet providers, bad weather, geographical locations and unaffordability of online learning devices and internet packages as well as limited finance for Internet services. In the study of Sathientharado et al.(2021, slow or poor quality of Internet connection causes delay or interrupts online classes. This also caused some students to miss online classes and fail to catch up the lessons (Funchian, 2021)

Students' unfamiliarity and problems of using online learning platforms is another factor affecting students' learning. The shift to virtual classrooms requires students and teachers to learn how to use various learning platforms-MS Teams, HCU E-learning, Webex, Google Classroom, Facebook Live, Google Meet and Zoom. Students need to adapt to new technology and learn how to use tools and functions on those online learning platforms. Those who lack familiarity, the know-how of using online platforms and have inadequate trainings about learning platforms tend to experience difficulties in online classrooms. Without the know-how for dealing with technical problems, students may lose their learning opportunities such as being unable to attend classes or join class activities on time, submitting their works late, and missing the exams. Such negative learning experiences have potential to impact students' academic performance and their psychological states (Baltà-Salvador et al., 2021; Thandevaraj et al., 2021; Thonghattha, 2021). Therefore, students should prepare for online learning, for example, by getting familiar with the learning platforms before the class time. As Sakdapat (2021) points out, online learning preparation behaviors affect the effectiveness of their online learning. When students come in online class before the class time for preparation, study the learning materials, set their learning goals, and get their mind ready for learning, they can gain a lot of benefits from online learning.

The third factor is distraction resulting from unsupportive learning environment and part-time job. Distraction plays a role in affecting the students' online learning. While paying attention to class, many students are distracted by several distractors. One source of distractors is unsupportive learning environment. As online learning offers flexible learning opportunities in

terms of place, students can make their own choices of location to study. Although this is very convenient for students, some locations may not be supportive to their learning and bring about distractors. While studying at their home, dormitory, in a car or other places outside the classrooms, students can be distracted by nearby people such as family members, roommates and friends. Loud noise, uncomfortable rooms and seating, inadequate light and bad weather can also distract student attention from online classes. Such unsupportive learning environments and distractors can produce negative impacts on student learning and their academic achievement.

Lastly, online learning can bring on poor study habits among students. As students are allowed to access learning platforms equipped with ready-made learning materials such as lecture videos, online homework and online supplementary materials, they can study those materials at any time and at their own pace. The availability of learning resources can be beneficial to students' self- practice and revision. On the other hand, this may turn out to be a drawback causing students to have poor study habits. Students may become less active in class, shift their attention away from online classes, be more likely to miss classes, and not pay attention to lectures or join learning activities during the class time, frustration, stress, and demotivation in language learning. These poor learning habits can subsequently affect student learning. For example, students may lack clear understanding of the lessons (Inthason, 2020).

Previous studies on the effectiveness of online learning

Previous studies on the effectiveness of online learning were varied in research focus and scope of the study. Some experimental research which focus on examining the effectiveness of online instructions compare the means of test scores or performance of students who took face-to-face learning and online learning. Meanwhile some studies found significant difference in test scores of students, some found mixed results.

Jeenapak (2021) used the semi-experimental methods to examine the effectiveness of online learning. Ninety macroeconomics undergraduates were divided into 2 groups: the regular study group and the online study group. The T-Test results revealed a significant difference between the scores of the two groups of students. It is concluded that the students studied in the classroom had performed better than those in the online study group with a slightly lower average. To gain a comprehensive data of the effectiveness of online learning, Nguyen (2015) compared the evidence obtained from several studies. Based on the findings of Nguyen, most studies found that distance and online education were effective, but there was no significant difference in the effectiveness of distance and online learning. However, some studies found that traditional face-to-face learning was more effective than the distance and online learning while some reported inconclusive results,

Sawangsri and Gerdpanyal (2021) investigated the effectiveness of online learning, learners' achievement and satisfaction towards online learning management of 37 first-year Business major students. The findings showed that online learning management was efficient at a moderate level. The participants were highly satisfied with the online learning management. However, the academic achievement of students on online learning were lower than the required criteria.

Recently, Batdi, Doğan, and Talan's (2021) investigated the impacts of online learning and its effectiveness to student achievement. Unfortunately, the results are not conclusive as many researchers and scholars note (e.g., Means et al., 2013; Nguyen, 2015; Sun & Chen, 2016)

that the effectiveness of online learning is greatly influenced by the emerging digital technologies and new emergency cases, thus further research syntheses on reexamining its effectiveness is needed.

With a focus on investigating learners' perspectives and attitudes on the effectiveness of online learning, Muhammad and Kainat (2020) investigated the effectiveness of online learning in Pakistan from higher education students' perspectives. Their study also aimed to highlight the challenges and obstacles of online learning faced by the students. Using online survey technique, the researchers collected the data to investigate general attitudes of 126 Pakistani higher education students towards online teaching. The findings reveal that the major challenges of online learning in Pakistan include lack of access to internet facilities, lack of proper interaction and did not contact with students and instructors and ineffective technology.

Muhammad and Kainat (2020) point out that the sudden shift from traditional classrooms and face-to-face learning to online learning has resulted in a completely different learning experience for students. Most students did not have access to high speed or reliable internet services and were thus struggling with online learning. In addition, owing to the limited resources of educational institutions, only several institutions were able to introduce effective online classes during the initial months of COVID-19. The research also reported additional challenges faced by students like lack of campus socialization, group study issues and instructors response time. Based on the higher education students' perspectives, traditional classroom learning was more effective as compared to online learning or distance education. In this study, the researchers concluded that online learning cannot produce effective results in underdeveloped countries like Pakistan, where a vast majority of students are unable to access the internet due to technical and monetary issues.

Mohd Basar et al (2021) examined the effectiveness of online learning and the challenges that it presents to pupils' abilities to learn. This study employed a case study design using a survey questionnaire, administered to 99 students aged 15-16 from a secondary school in Jasin, Melaka. Regarding the findings on students' perceptions about the effectiveness of online learning, the researcher reported that conventional learning (face-to-face) is highly important the majority of respondents felt that learning face-to-face is more effective than online learning. However, the respondents felt motivated by online learning.
Regarding the challenges in online learning faced by the students, the researcher concluded that students' learning was affected by limited internet access because of poor infrastructure and the high costs of internet packages. A lack of interaction in online classrooms between pupils and teachers and the absence of social relationships and this lack of social interaction has made it difficult for pupils to do group work via online learning (Adnan, 2020; Hazwani et al., 2021).

To conclude, it is important to note that the studies on the effectiveness were context-specific. With different research focus and scope, context of study, participants, methods of data collection and research instruments, the findings from previous studies yield context-specific and inconclusive results. Therefore, further investigation on the effectiveness of online learning from students' perspectives is needed. This study aimed to investigate students' perceptions of effectiveness of online English courses and students' attitudes towards online learning so that the findings can shed lights on how to help students learn through online platforms effectively and gain benefits and enjoyable experiences in online learning.

2. Objective of the Study

The objective of this study was two-fold: 1) to investigate students' perceptions on the effectiveness of online learning and 2) to investigate students' attitudes towards online learning.

Researcher question 1: What are the students' perceptions on the effectiveness of online learning?

Researcher question 2: What are the attitudes of students towards online learning?

3. Research methodology

3.1 Research methods & Participants

This research was undertaken using quantitative and qualitative methods of data collection in order to obtain comprehensive data. The research was conducted at Huachiew Chalermprakiet University in semester 1 /2022. The participants were forty two third-year English major students studying in the Faculty of Liberal Arts. The participants were randomly selected and they were homogeneous in experiences of studying English courses. They were voluntary to participate in this study. The participants have had experiences of taking online English courses (12 core courses) for the whole academic year of 2021 (semester 1-2/2021). All of them have had experiences of studying through different online platforms (MS Teams, E-learning, Google Classroom, Edmodo and Webex).

3.2 Research Instrument

Student Questionnaire on Google Form app was used to obtain quantitative and qualitative data. The questionnaire was divided into 3 parts.

Part 1 elicited students' perceptions on the effectiveness of online learning. The statements on the questionnaire cover six dimensions of online learning effectiveness: 1) accessibility of online learning platforms, 2) flexibility of learner interaction and communication with teacher, peers, and course materials, 3) detailed course and materials, 4) teacher communication to learners, 5) creating a sense of collaborative teamwork and "groupness". The participants were asked to respond to 11 statements using a five Likert's rating scale ranging from 1 = strongly disagree to 5 = strongly agree).

Part 2 investigated students' attitudes towards learning online, consisting of 13 statements with a five Likert's rating scale ranging from 1 = strongly disagree 5 = strongly agree). The statements were developed based on the two components : perceived ease of use and perceived usefulness.

Part 3 investigated students' learning experience, feelings, problems about online learning and suggestions for effective online learning. This part included 3 open-ended questions.

3.3 Data Collection & Data Analysis

The researchers administered the questionnaires to the participants. The participants were given a link and QR code to access the questionnaire. The quantitative data on demographic information and responses from the five-rating scale on the effectiveness of online English courses and students' attitudes were analyzed using descriptive statistics. The percentages, means, and standard deviations were calculated. The qualitative data from written responses about students' online learning experience, problems and suggestions were analyzed using content analysis and grouped into themes for discussions. The researchers also took ethical concerns and human rights into account.

4. Results

To answer research questions, the quantitative and qualitative results obtained from the questionnaire were presented in the following order: the demographic data of the participants, the effectiveness of online English courses , and the students' attitudes towards their online learning. Regarding the demographic data of the participants, most of the participants are female with 81% (N=34) and male participants were 19% (N=8). All the participants had previous experience of online English learning.

Researcher question 1: What are the students' perceptions on effectiveness of online learning?

The quantitative results from participants' responses regarding their perceptions on the effectiveness of online English learning in terms of teaching and class management were presented. As shown in Table 1, the overall mean score of the effectiveness of online learning was high with $\bar{X}$= 4.08 (SD = 0.76). With the highest mean score ($\bar{X}$= 4.55, SD = 0.51), item 2, most of participants strongly agreed that online learning allows them to take classes anywhere they want. They also viewed that online learning is convenient at a high level ($\bar{X}$= 4.35, SD = 0.59), and that online learning is flexible enabling them to review the lessons and study from the recorded lecture videos any time ($\bar{X}$= 4.3, SD = 0.59). Regarding learning resources, the participants said that they (lecture videos / handout/ worksheet/ other supplementary) are available and accessible on online learning platforms ($\bar{X}$ = 4.2, SD = 0.62) while online platforms (MS Teams / Google Classroom / Edmodo / E-learning) used for online learning are convenient and appropriate ($\bar{X}$= 4.1, SD = 0.8). In addition, with the same mean score of 4.00, the participants agreed at a high level that online learning allows them to study anytime on their own desire (SD = 0.9), online platforms have sufficient features /tools to facilitate online classes and their learning. (e.g., Meeting, video recording, room for small group discussion, where to submit assignment) (SD =0.9), and online tools are easy to use and up to date (SD = 0.7). In terms of class management, the participants agreed at a high level that teachers open their cameras to make interactive online classes and while studying, teachers allow me to interact with them and my classmates with the mean of 3.9 each (SD = 0.7, SD = 0.9) respectively.

Table 1 Mean Scores and Standard Deviations of the effectiveness of online learning

Students' perceptions on the effectiveness of online learning	x	SD	Meaning
1. Online learning is convenient.	4.35	0.59	Very high
2. Online learning allows me to take classes anywhere I want.	4.55	0.51	Very high
3. Online learning allows me to study English anytime on my own desire.	4	0.9	High
4. Online learning is flexible enabling me to review English lessons and study from the recorded lecture videos any time.	4.3	0.8	Very high
5. Online platforms (MS Teams / Google Classroom / Edmodo / E-learning) used for online learning are convenient and appropriate.	4.1	0.8	High
6. Online platforms have sufficient features /tools to facilitate online classes and my English learning. (e.g., Meeting, video recording, room for small group discussion, where to submit assignment)	4	0.9	High

Students' perceptions on the effectiveness of online learning	x	SD	Meaning
7. Online tools are easy to use and up to date.	4	0.7	High
8. Teachers open their cameras to make interactive online classes.	3.9	0.7	High
9. While studying online, I can interact with teachers and my classmates.	3.9	0.9	High
10. While studying online, I can ask questions and ask for help from teachers.	3.7	0.86	High
11. Learning resources (lecture videos / handout/ worksheet/ other supplementary) are available and accessible on online learning platforms.	4.2	0.62	High
Overall	**4.08**	**0.76**	**High**

Researcher question 2: What are the attitudes of students towards online learning?

To answer the research question 2, the quantitative results were from close-ended questions and the qualitative results from the participants' written responses. As seen in Table 3, the overall mean score of students' attitudes toward online learning were high with x = 3.66 (SD = 0.93). The item with the highest mean score was 'There are possibility of being distracted by family members / unsupportive environment' (x= 4.48, SD = 0.86), followed by 'Taking online classes can help me concentrate to learning and perform better' that the participants agreed with x= 4.10 (SD = 0.89), and the participants agreed that they have sufficient IT equipment (smartphone / computer /iPad) to participate in online classes (x= 4, SD = 0.92). The participants said that their home environment is supportive for participating in online classes (x= 3.95, SD = 1.1). Moreover, the participants said that they are comfortable using IT equipment to study online at a high level (x= 3.9, SD = 0.91), and they are enjoyable with studying in online classes (x=3.85, SD = 1.19). Regarding studying online classes, they feel more comfortable studying online classes (x= 3.8, SD 0.9). With the same mean score of 3.7, the participants agree at a high level that they can access to Internet for online classes (SD = 1.03), they can complete group assignment using online learning (SD = 0.98), and they can ask questions and ask for help from teachers via online platforms (SD = 0.86). In addition, the participants said that they can achieve their learning goals of the courses at a high level (x= 3.65, SD = 0.81). Also, the participants said that they can do part-time job while taking online class at a high level (x= 3.45, SD = 1.39). There is the same mean score of 3.35 at moderate level, the participants agreed that they understand the lessons using online learning (SD = 0.91), and they are motivated to learn when studying in online classes (SD = 0.93). 'I am confident to participate (respond to question & share ideas) when learning online' that is the participants agreed at moderate level (x= 3.25, SD = 0.91) respectively.

Table 2 Mean Scores and Standard Deviations of the students' attitudes towards their online learning

Students' attitudes towards their online learning	x	SD	Meaning
1. I have sufficient IT equipment (smartphone / computer /iPad) to participate in online classes.	4	0.92	High
2. I am comfortable using IT equipment to study online.	3.9	0.91	High
3. I find it easy to access to Internet for online classes.	3.7	1.03	High

Students' attitudes towards their online learning	x	SD	Meaning
4. I am confident to participate (respond to question & share ideas) when learning online.	3.25	0.91	Moderate
5. I understand the lessons using online learning.	3.35	0.67	Moderate
6. I feel more comfortable studying online classes.	3.8	0.9	High
7. I am motivated to learn when studying in online classes.	3.35	0.93	Moderate
8. I am comfortable in doing group assignment online.	3.7	0.98	High
9. I am enjoyable with studying in online classes.	3.85	1.19	High
10. My home environment is supportive for participating in online classes.	3.95	1.1	High
11. I am distracted by family members /people around me when studying online.	4.48	0.86	Very high
12. I have more concentration on learning and perform better when taking online classes.	4.10	0.89	High
13. I can achieve my learning goals of the courses.	3.65	0.81	High
Overall	**3.66**	**0.93**	**High**

Based on the participants' written responses on the questionnaires, they expressed positive and negative attitudes towards online learning. It is obvious that the participants perceived ease of use of online learning in terms of convenience and flexibility of online learning. However, the participants addressed some problematic issues of online learning. Those are uncomfortable feelings when opening a camera during taking classes, stress and pressure due to too many assignments and demanding tasks, lose of concentration due to looking at a screen for a long time, Internet WIFI problems, lack of familiarity and how to deal with technical problems about online learning platforms, unsupportive learning environment, distractors, mismatch of learning styles and learners' needs and inconvenience for collaborative tasks /group work.

The majority of participants held positive attitudes towards online learning. Those agreed with the convenience and flexibility of online learning. The students viewed that it's flexible to take online class and learn everywhere. They did not need to spend time for traveling to take classes at university. Following are their excerpts:

"It is very convenient for me. I don't get tired of spending long hours on the road to go to the university." (Participant 13)

"Online learning is convenient because I can study everywhere." (Participant 10 & Participant 17)

"Online learning is convenient. I can study at anywhere and sometimes I can do a part-time job." (Participant 4)

"From my online learning experience, it is more convenient. I can study at anywhere, but interaction with peers is less than face-to-face interaction in classroom." (Participant 7)

However, some participants had negative attitudes towards online learning. They expressed their uncomfortable feelings and undesirable online learning experiences when opening a camera during class time.

"I have quite bad experience about online learning. I feel uncomfortable to turn on the camera every time."   (Participants 29)

Some participants voiced about their stress and pressure from overloading assignments and being given more responsibility of their learning. As they wrote:

"We get stressed and do not get enough sleep because teachers often give many assignments and the deadlines are very close- the same date or week."

(Participants 34)

"I would like teachers to consider that online learning is not easy. It is difficult, just like studying onsite and I want the teachers to give less assignments because we are so tired."

(Participant 11)

"I got pressure in taking responsibility of my own learning."   (Participant 9)

One participant expressed about his/her lose of concentration when looking at a screen for a long time. It might be explained that the students may not have the ability to concentrate on something for a long period of time and it might be personal factor. As the participant wrote.

"I cannot concentrate to online learning so I don't participate much in class activities."

(Participant 15)

Regarding students' problems in online learning, the majority of participants reported about Internet WIFI problems as a factor that impede their process of learning. The participants complained bout inadequate Internet access, slow /poor Internet WIFI because of bad weather or some geographical locations. Following are their excerpts.

"My Internet access in the apartment makes me crazy. It has errors every time I want to use it."   (Participant 6)

"The Internet at my place is so poor that I cannot use it."   (Participant 8)

"I feel normally with online learning. However, this month my internet in the apartment so bad, that makes me headaches about online learning."

(Participant 16)

"In some areas, the Internet WIFI is poor. This makes me unable to learn effectively."

(Participant 22)

"If the Internet connection is jammed, online learning is interrupted and we missed the lessons at that time." (Participant 2)

" I come in online classes late because the rain caused unstable Internet connection." (Participant 3)

Some students had technical problems of using online tools and features on learning platforms. Below is a list of excerpts from the participants:

"Online learning is convenient, but I have problems with Internet, online tools, applications and people in my house." (Participant 35)

The unsupportive learning environment, particularly loud noise and disturbance caused by people in family were mentioned by the participants. It distracted their attention from online classes. Following are the excerpts:

"I was disturbed by the noise from construction around my place."

(Participant 12)

"Sometimes my family members make loud noise and that makes me lose attention."

(Participant 11)

"There is loud noise in my living environment." (Participant 32)

"Loud noise is from the nearby environment such as construction."

(Participant 4 & Participant 5)

In some participants' perspectives, online learning was not a suitable mode of learning and doing collaborative tasks. Online learning might not match their learning styles and their needs. As the participants wrote:

"Online learning is convenient, but I don't understand whenever I study online."

(Participant 19)

"I don't understand the content taught in online classes."

(Participant 16)

"I feel that some lessons can be easily understood, but some lessons should be taught onsite in the classroom." (Participant 12)

Online learning caused difficulty in doing group work and interact with peers. As the participants wrote:

"Online learning makes it more difficult to work in groups. Online group meeting became more complicated than face-to-face meeting."   (Participant 7)

In addition, the participants gave suggestions for more effective online learning. The participants suggested giving less online homework and assignments, promoting more interaction between teachers and students, making video recording of lectures for students' revision, solving teachers' Internet problems. Following are the excerpts:

"I would like teachers to consider that online learning is not easy. It is difficult, just like studying onsite and I want the teachers to give less assignments because we are so tired."
                                                                    (Participant 11)

"I think online classes will be smoother if the professor records and drops the file of the class before the class schedule. it will help facilitate my learning."   (Participant 6)

"Teachers should make video recordings while teaching online so that we can watch the videos afterwards for our revision."   (Participant 37)

"The files of learning materials used for class activities should be uploaded or posted for students before and after the class."   (Participant 8)

"I think that teachers should have students submit the assignments through a single application."   (Participant 12)

"The teacher should try to improve your Internet connection."   (Participant 18)

"I would like teachers to promote classroom interaction between teachers and students."   (Participant 29)

5. Discussion

5.1 Students' perceptions on effectiveness of online learning

The findings on the effectiveness of online learning reveal that in students' perceptions, online learning is effective at a high level and supports their language learning. It eases them to learn everywhere they want and is convenient, especially when they cannot attend onsite classes at the campus. Moreover, online learning offers opportunities for students to make video recordings of the lectures while studying on online platforms. This enables them to study or review the lessons at any time. Furthermore, online platforms have sufficient features or tools to facilitate online classes and learning. The students found online tools easy to use and up to date. Learning resources (lecture videos, handout, worksheet and other supplementary) are also available and on online learning platforms. These findings are in accordance with the findings of

previous research (Means et al., 2013; Jeenapak, 2021; Mahyoob, 2021), which revealed that online learning is an effective learning approach and the effectiveness of online learning has influence on students' learning and their academic performance (Mahyoob, 2021). However, the participants were undecided about the way teachers allow participants to interact with them and classmates. It is found that some participants did not want to open their cameras and interact with teachers in online classes because they felt uncomfortable and lost their concentration on the lessons. This might be owing to their introverted personality.

5.2 Student attitudes towards online learning

Overall, the majority of participants held positive attitudes towards online learning. Most participants reported that online learning is advantageous to them in many aspects. In terms of benefits to their process of learning, firstly, taking online classes can help students concentrate on learning and perform better. Besides, they can complete group assignment, ask questions, ask for help from teachers via online platforms. Most students also agreed that they understood lessons taught through online classes and can achieve their learning goals. With respect to psychological aspects, the students felt more comfortable and were satisfied with online classes. They were confident to respond to questions and share ideas including being motivated to learn in online classrooms. Regarding the views towards learning environment and IT readiness for online learning, most students agreed that their home environment was supportive for online classes though some students were facing distractors. When asking about IT readiness, it is found that the students had sufficient IT equipment such as smartphone, computer, or iPad and were comfortable with using IT equipment to study online. Based on these findings, it can relate to the TAM principle of Davies (1989) and conclude that the students had perceived ease of use and usefulness of online learning. They felt that online learning is easy to understand and use and they believe that online learning would enhance their learning.

However, some participants held negative attitudes towards online learning. They reported their uncomfortable feelings, stress, pressure and unsatisfactory online learning experiences. Dealing with overloading assignments, taking more responsibility of their learning, opening cameras while studying, and their individual factors are the sources of undesirable online learning experiences. Meanwhile, some students viewed that online learning is not unsuitable for English language learning and collaborative learning. This learning approach might not match their learning styles and their needs.

Regarding the problems in online learning, the quantitative and qualitative results showed that the students faced unsupportive environments and distractions of family members while taking online classes. Loud noise of construction and nearby living environment including disturbance caused by people in family cause students to lose concentration from their learning. The accessibility and quality of Internet was another major problem they concerned. Poor Internet WIFI resulting from bad weather and other factors interrupted their learning leaving them annoyance and frustration. As for the participants' suggestions for improving online learning to be more effective, they suggested giving less online homework and assignments, promoting more interaction between teachers and students, making video recording of lectures for students' revision, solving teachers' Internet problems.

6. Implications, Limitations, Recommendations for further studies and Conclusion

6.1 Implications of the study

The research findings can contribute to useful pedagogical implication. Firstly, the findings on the effectiveness of online learning show that online learning is an effective way of learning English for the students studying in English Program. The findings shed lights on pedagogy in English language teaching. To contribute to the effectiveness of online learning, teachers should take into account of technological readiness and learning contexts and ensure that the students can access technological devices and Internet service for online learning. Teachers may consider using appropriate online platforms which offer useful features or tools so that it can help facilitate student learning. Students can gain benefits from learning online as it allows them to learn at anywhere and use online learning resources for lesson review. Additionally, the findings on student attitudes towards online learning will be useful basis information for course instructors in improving online courses. The students' attitudes towards learning environment, resources, technological access, student assignment and class management can be used to make online learning more effective and enhance student learning.

6.2 Limitations of the study and recommendations for further studies

Due to the time constraint, the number of participants participated in this research is limited and has resulted in the generalizability of research findings. Thus, a large sample size is recommended for further research. In further studies, broader scope of participants' fields of study should be considered rather than focusing only on English major students. With broader scope of participants, the research results may bring additional implications. Other instruments should be included so that it allows the researchers to gain more in-depth information and triangulate the data.

6.3 Conclusion

The study was conducted to investigate students' perceptions on effectiveness of online English learning and to investigate students' attitudes towards online learning. Forty two third-year English major students at Huachiew Chalemprakiet University participated in the study. Student Questionnaire with closed-ended and open-ended questions were used to collect the quantitative and qualitative data. The findings revealed that the participants perceived online learning as effective in various aspects. This indicated that the students had perceived ease of use and perceived usefulness of online learning. It can be explained in relation to Davies's (1989) TAM model that the students recognized the usefulness of online learning. They believe that online learning would enhance their work performance and that the students are likely to accept and adapt themselves to online learning.

The participants had positive attitudes towards online learning. However, problematic issues which have effects on students' online learning were mentioned. These include being interfered by accessibility and quality of Internet connection, unsupportive learning environment, distractions and others. The findings on the effectiveness of online English courses and students' attitudes towards their online learning can be useful basis information for language teachers in improving online courses. With more effective online pedagogy, students can gain benefits on their learning and academic achievement and have desirable online learning experiences.

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