

## Exploring Synchronous Learning during COVID-19 Pandemic: Taiwan EFL College Learners' Motivation and Learning Experience

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### Abstract

The purpose of this study was twofold: first, to explore Taiwan EFL college learners' motivation for synchronous learning, and second, to differences between gender groups in their synchronous learning motivation during the time of the COVID-19 pandemic. A total of 96 undergraduate learners from northern Taiwan took part in the study. All the participants were required to participate in 4 different types of online activities: synchronous learning, online discussion, group oral presentation, and submission of e-assignments. Quantitative and qualitative data were collected, including a motivation questionnaire and learners' essay writing. According to the findings, their overall motivation was positive. Nevertheless, male learners had significantly less confidence in their online performance and less acceptance of this kind of interaction. This study highlights not only the crucial role of motivation in synchronous learning acceptance and engagement but also the importance of gender differences, self-regulation, social interaction, and self-efficacy for effective online learning.

**Keywords:** synchronous learning, learning motivation, EFL learners

### Introduction

As a consequence of the Covid-19 pandemic, many learners have been learning online. Before the pandemic in Taiwan, asynchronous or blended learning had been implemented in colleges and universities for more than a decade. Pre-recorded online lessons or MOOCs (Massive Open Online Courses), for example, are available nationwide. The popularity of MOOCs has increased with the support of the Taiwan government since 2014 to promote digital or online learning (Yang et al., 2017).

On May 19th, 2020, the Taiwan government announced it would shut down academic institutions due to the increasing number of COVID-19 cases. Consequently, traditional face-to-face instruction was stopped and forbidden. To maintain the traditional way of learning as much as possible, the synchronous learning mode has begun to gain more attention and popularity. In synchronous learning, teachers and learners or learners and learners can still have direct and instant interaction. With the abrupt notice of synchronous instruction, whether the preparation, course designs, and learning activities are suitable or not, they still need further attention and exploration.

Although online learning has been promoted in Taiwan for more than a decade, the majority of

teachers and learners do not enthusiastically embrace it. However, since the unexpected and deteriorating COVID-19 situation in Taiwan this May (2021), the Taiwan Ministry of Education announced the launch of online learning for all levels of students, from preschool to adult learners. The abrupt outbreak of COVID-19 made institutions change teaching mode from offline to online. Synchronous learning has become an alternative way in the COVID-19 situation. In synchronous learning, learners are able to interact with instructors and other learners. They can get timely and instant feedback and responses. Active learning leads to satisfying learning results. In light of the above, it is significant to explore the impact of online learning on learners, including their motivation, attitudes, and other learning aspects.

Technological advancements have led modern education to an online world of learning. Particularly, educational or e-learning technologies have radically transformed education systems (Archer et al., 1999). Different teaching strategies or techniques, such as direct online teaching, pre-recorded audio and video lectures, online assessment, and blended learning were used with online learning technologies or platforms to achieve effective online learning outcomes (Favale et al., 2020; George, 2020). It is significant to take learners' preferences or perceptions into consideration before online or synchronous courses are designed. Whether learners prefer it or not influences their willingness or acceptance to learn online; in other words, learners' personal factors are directly related to their attitudes toward online learning.

Studies on online learning have lent credence to investigations of the positive impact on learning performance, learner motivation, acceptance, and so forth. Considering the advantages of synchronous learning, it is surprising that although plenty of studies explore factors influencing learners' motivation to take online lessons, there are not many of them which aim at EFL college learners and their synchronous learning motivation from the perspective of gender differences. Thus, in the current study, Taiwanese EFL learners' perceptions and their genders towards online learning were explored. In the following part, the findings from related literature are presented.

## Literature review

Nowadays, school learning is not restricted to school contexts, but learners can learn from home through technology. The traditional face-to-face learning model has been switched to online learning or blended learning. Online learning refers to the situations in which learners take lessons outside school or classroom contexts through online platforms (Oblinger et al., 2005). Blended learning is the combination of both offline and online modes. Online learning can be categorized into two modes: synchronous and asynchronous. The latter refers to the fact that teacher-learner interaction happens at different times. Synchronous learning refers to the situation in which both teachers and learners are present at the same time, which is also called live or real-time instruction. This virtual face-to-face learning or instruction occurs anytime and anywhere, without time and geographic location restrictions.

Another advantage of synchronous learning is to reduce or remove commuting time. Learners or teachers from different parts of the world could gather in a virtual classroom to learn or teach without spending time traveling from home to academic institutions (Hannum, 2001). Previous

studies suggest that the lack of instant communication in asynchronous learning hardly promotes effective learning (Jaradat & Ajlouni, 2020).

Motivation is the key to successful language learning. “L2 motivation provides the primary impetus to initiate the learning behavior and later the driving force to sustain the long and often tedious learning process” (Dornyei, 1997 p. 261). Learner motivation refers to learners' desire to join the learning process (Lumsden, 1994). Therefore, learners should be motivated; factors affecting their motivation should be considered as well, such as learning contexts and gender preferences.

For the purpose of increasing the effectiveness of online learning, learners' perceptions should also be explored. The importance of teacher-learner interaction could cause a considerable influence on the learners' satisfaction (Fedynich et al., 2015; Jamalpur et al., 2021). A survey-based study suggested online accessibility was the key to successful online learning (Agung et al., 2020). Their findings showed three main impediments: internet connection, accessibility of learning materials, and technological compatibility.

Speaking of gender differences, female learners had more satisfying learning outcomes than male ones. Male learners were not committed to online learning; females' persistent attitudes led to successful results (Alghamdi et al., 2020). Furthermore, females were active learners who were more self-regulated and willing to interact with others online and finished more assignments (Hung et al., 2012; Lowes et al., 2015; Lowes et al., 2016). However, no significant gender differences in motivation or attitudes toward online learning were unfolded from several studies (Harvey et al., 2017; Nistor, 2013).

Learners perceived online learning to be an innovative way to promote self-learning and learning motivation (Mamattah, 2016; Mislinawati & Nurmasyitah, 2018). Learners' self-regulation or self-control plays a crucial role in promoting the effectiveness of online learning (Jacobson, 2008). However, learners were worried about their time management and motivation to use online systems for learning (Fidalgo et al., 2020). Through learners' online learning experiences, time management was suggested to be a decisive factor in implementing a successful online learning course (Sharpe & Benfield, 2005).

Given the aforementioned inconsistent findings, the research questions were proposed and investigated.

Q1: What is the EFL college learner's motivation for synchronous learning?

Q2: Do the gender groups significantly differ in their motivation for synchronous learning?

## Methods

To achieve this study's aims, a mixed-design research method was applied. Both quantitative and qualitative data were analyzed, which were obtained from an online learning motivation questionnaire and learners' essay writing regarding their synchronous English learning experiences.

## Participants

A total of 96 technological college students (49 males and 47 females) were recruited in this study. Generally, their levels of English proficiency were equivalent to CEFR A2-B1. Convenience sampling was adopted to ensure that all the participants had synchronous learning experiences. Their age ranged from 18 to 21. A Chinese-version questionnaire was answered and submitted online. The questionnaire data were collected in July 2021. In addition, their essays regarding their synchronous learning experiences were collected and analyzed after the study.

TronClass, a Learning Management System, was applied for the class announcement, assignment submission, evaluation, feedback, and asynchronous communication. The synchronous instruction was conducted via Google Meet, for it was effortless to create an e-classroom for synchronous learning. As long as receiving the link, each learner can join it instantly. All the participants were required to take part in four different types of online activities: synchronous learning, online discussion, group oral presentation (see Figure 1), and submission of e-assignments.

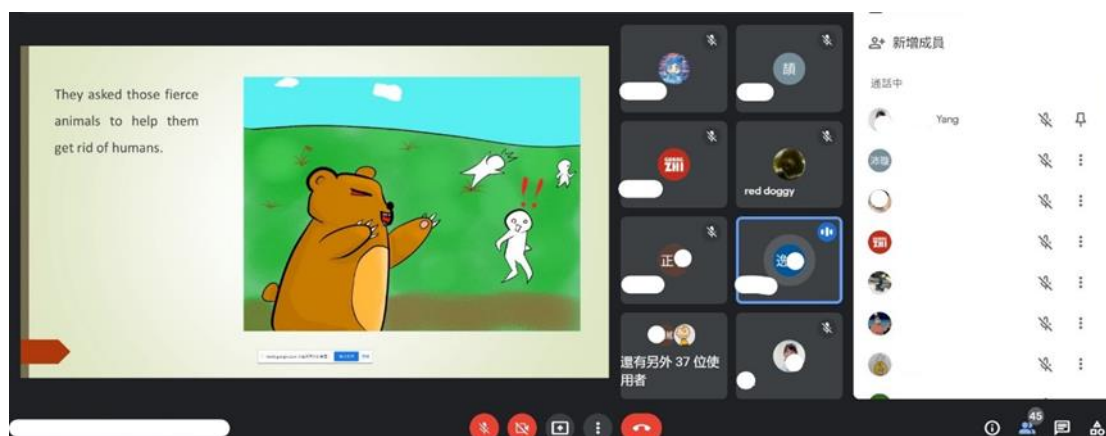


Figure 1. Snapshot of group oral presentation via Google Meet

## Instruments

Lin's COVID-19 Online Learning Motivation (COLM) questionnaire (2021) was adapted to fit the research purposes. The COLM questionnaire was designed to reveal participants' learning experiences and motivations, covering task value, goal orientation, and self-efficacy domains. However, in this current study, the target participants were college English learners who had synchronous learning experiences. Thus, 'synchronous English learning' was added to Lin's COLM questionnaire; short essays were written to unfold the learners' deeper feelings or thoughts about synchronous English learning. After modification, the above-mentioned COLM questionnaire (Lin, 2021) had 38 items (5-Likert-point scales). The questionnaire applied to the present study aimed at synchronous and English learning, which was named Synchronous English Learning Motivation (SELM) questionnaire. Like Lin's COLM questionnaire, the revised questionnaire was examined for its reliability, and the results showed all the questions were reliable (Cronbach's Alpha = .86).

### *Data Collection*

The study was carried out at a Taiwan university located in northern Taiwan. The target Taiwan participants all had English learning experiences for at least 6 weeks, particularly synchronous learning. During the 6 week's time, the instructor applied different technology facilities to promote learning, including Google Meet and TronClass. Google Meet was applied for instant online instruction, while TronClass, was for other teaching and learning purposes, such as uploading learning materials or having an online group discussion. During the 6-week synchronous learning, the instructor did her best to offer as many teacher-learner and learner-learner interaction chances as possible via Google Meet. With the support of TronClass, the learners were able to submit assignments, provide feedback, and take tests. Thus, after the synchronous learning, they were recruited to respond to the SELM questionnaire and submit synchronous learning experience essays. The main source of data collection for this current study was the questionnaire and experience essays which aimed at revealing the participants' synchronous English learning motivation and experience.

### *Data analysis*

SPSS version 18 was used for examining the questionnaire's reliability, frequency of each category, and differences between different gender groups. Besides the descriptive data, an independent sample t-test was also run to determine any differences between the two gender groups. Apart from the quantitative analysis, exploratory qualitative analysis was conducted for the qualitative data (the participants' synchronous English learning experience essays).

## **Results**

Table 1 reveals the overall descriptive results of the SELM. Based on the means of 10 categories, Intrinsic Value had the highest mean (Mean = 4.27, SD = .739), followed by Attainment Value (Mean = 4.20, SD = .662), and Functional OLSE (Mean = 4.16, SD = .594). Cost and Mastery-approach were the lowest two categories (Mean = 3.12, SD = 1.03; Mean = 3.16, SD = 1.046). The frequencies for all categories ranging from 3.12 to 4.27. As can be seen from Table1, the majority of participants reported enjoying synchronous English learning. They thought the learning was interesting and fun. In addition, their efforts to learn synchronously were worthwhile, which made them more knowledgeable. They also tended to believe that they had no problem using the functions of the online learning platform, including uploading assignments and downloading learning materials. These findings are supported by Lin's study (2021). Apart from showing the highest frequency of the SELM, the data also indicated that the participants, in general, thought that synchronous learning reduced social or interpersonal interaction between teachers and learners and among learners. They wanted to understand the content of synchronous lessons. For them, online or synchronous lessons did not make them have the desire to learn more.

Table 1. Descriptive analysis (frequency) all the categories of SELM

Category	N	Min	Max	Mean	SD
Attainment Value	96	3	5	4.20	.662
Utility Value	95	2	5	4.12	.709
Intrinsic Value	96	2	5	4.27	.739
Cost	96	1	5	3.12	1.030
Mastery-approach	96	1	5	3.89	.728
Mastery-avoidance	96	1	5	3.16	1.046
Performance-approach	96	2	5	3.53	.668
Performance-avoidance	96	2	5	3.53	.775
General OLSE	96	3	5	3.93	.658
Functional OLSE	95	3	5	4.16	.594

### *SELM scores between gender groups*

An independent sample t-test was applied to reveal differences in motivation between different gender groups. Overall, female participants had more positive motivation for synchronous English learning. The results showed that there was a significant difference in two categories, i.e., Cost and Mastery-avoidance (Table 2). In these two categories, all the questionnaire items address negative thoughts about and attitudes toward synchronous English learning. The male participants had stronger agreements on limited opportunities for interaction and discussion in the context of synchronous English learning. Furthermore, the male ones worried more about their ability to learn English well.

Table 2. SELM scores between gender groups

Category	Male	Female	<i>t</i>
	N = 49	N = 47	
	Mean (SD)	Mean (SD)	
Attainment value	4.13 (.096)	4.27 (.095)	-1.025
Utility value	4.08 (.104)	4.17 (.102)	-.631
Intrinsic value	4.16 (.102)	4.38 (.110)	-1.498
Cost	3.40 (.143)	2.83 (.144)	2.824*
Mastery-approach	3.82 (.112)	3.96 (.098)	-.906
Mastery-avoidance	3.45 (.150)	2.86 (.140)	2.874*
Performance-approach	3.62 (.102)	3.45 (.089)	1.272
Performance-avoidance	3.65 (.118)	3.41 (.103)	1.500
General OLSE	3.89 (.093)	3.97 (.098)	-.627
Functional OLSE	4.08 (.085)	4.24 (.086)	-1.332

\* $p < 0.05$

### *Attitudes towards synchronous English learning*

Essays written by each participant to report their synchronous English learning were analyzed through exploratory qualitative analysis. The feedback showed their perceptions of and attitudes toward synchronous English learning. To elicit authentic thoughts and create a comfort zone,

the feedback was written in their mother language, which is Mandarin Chinese. In other words, they could express their feelings with ease. Their writing (16,541 Chinese words) was collected and then analyzed via coding, data reduction, and identification of themes (Graneheim & Lundman, 2003). To ensure the trustworthiness of the analysis, several steps were undertaken: strictly follow systematic ways of directed content analysis, reduce the possibility of bias, and recruit peer colleagues to reach good interpretations and credibility (Walsh & Downe, 2006). In the following part, eight major themes were presented in detail. Among the eight themes, six of them fit well with the SELM categories, which were positive English learning attitudes, good concentration on learning, enhancement of autonomous learning, poor interpersonal interactions, poor time management, and a less anxious learning environment). The other two themes (instability of technology facility and less commute time) were newly added to the Cost and General OLSE categories. All the quoted statements translated into English and shown anonymously are presented to illuminate the study findings.

### *Intrinsic value*

#### *Positive English Learning Attitudes*

S1: Although we did not go to school physically, we still had positive attitudes toward synchronous English learning.

S28: It is the first time I have learned English synchronously. Having an online English conversation is interesting.

S30: It is surprising that some of my classmates did not frequently go to school before, but in the online learning situation, all my classmates attend courses all the time. And we work harder to do assignments.

S33: I always take the synchronous course on time. Before I was often late for class.

#### *Good Concentration on Learning*

S2: Through the computer screen, it is easier to read the learning materials.

S15: I focus more on learning itself.

S38: In a traditional classroom, too much distraction makes me less concentrated on learning, while synchronous learning does not.

S61: Before I felt annoyed by my classmates' chatting during class. Now, I can pay more concentration to learning and taking notes.

S86: Before sometimes it was difficult to listen to the teacher's voice clearly because my seat was at the back of the classroom. But now I just turn up the volume. I can catch every word of the teacher perfectly.

#### *Enhancement of Autonomous Learning*

S4: I can screenshot the content from the computer screen. It is more convenient to write the notes down in my notebook. While taking notes, I memorize the words or phrases.

S17: In order to learn better, I preview the lessons and google more information for the group assignment.

S23: I go online to check posts or announcements from the teacher regularly. I spend more time on my own learning and submit good online assignments.

S28: When I encounter English words I don't know, I just use the computer to check the words. It is easy to do so.

S54: I can record the content of the learning. After class, I can watch the recording repeatedly to improve my learning.

### *Cost*

#### *Poor interpersonal interactions*

S7: There is a huge difference between face-to-face and online communication and interaction. I rarely have a chance to interact with my classmates.

S8: It is a pity that I cannot discuss something with my classmates or teachers. Particularly for group assignments, it is difficult to assign roles or play our roles well.

S22: I feel bored not chatting with friends at school. It is not convenient to discuss assignments with classmates.

S97: Learning is not as interesting as before because I cannot interact with my classmates in person and physically.

#### *Instability of Technology Facility*

S9: Sometimes, my computer and Internet connection drive me crazy. It interferes with my online learning.

S12: My brothers and I all need a computer to take synchronous courses. But there is only one desktop computer.

S50: Poor Internet connection negatively influences learning.

### *Mastery-avoidance*

#### *Poor time management*

S14: Learning from home makes me lazier and reluctant to learn.

S22: The home environment is too comfy to focus on learning.

S43: I become so dispirited in this online learning situation. I am too relaxed to study hard.

S56: Sometimes, I forget to attend the online course. I am busy doing something else at home.

S77: I want to take a rest or nap all the time. Studying is so relaxing.

S78: In this online learning mode, I stay up late at night more frequently than before. I do not know how to manage my time. With insufficient sleep, it is difficult to concentrate on learning.

### *General OLSE (online learning self-efficacy)*

#### *Less anxious learning environment*

S19: Learning from home is relaxing. I can adjust AC temperatures easily. Learning English is easier for me because I can use the computer to look up unknown words through an online



dictionary.

S22: While doing an oral report, I feel less intense.

S37: I feel less tense. I am braver in expressing myself and speak out in English.

S45: I am not so afraid to raise questions. I can say something with ease.

#### *Less commute time*

S21: It is better not to go to school. It saves a lot of time for commuters.

S22: I can sleep more because I do not go to school in person.

S31: I do not need to leave home one hour earlier to get to school. So, synchronous learning is good.

S64: I used to spend more than 40 minutes getting to school every day. Now I can have enough sleep.

S76: I save a lot of time and money while learning from home.

During the pandemic situations, learning was nonstop. The participants stated that they embraced synchronous learning, had more positive attitudes towards learning (Tran & Nguyen, 2022), concentrated on learning more easily, became more courageous to speak out in English, spent more time learning on their own, and wasted zero time commuting from home to school. Nevertheless, negative opinions were also expressed. The most-frequently-mentioned ones were poor computer facilities and Internet connection, which halted learning abruptly. Additionally, due to the lack of physical and interpersonal interactions, casual talk, group project discussion, and peer communication were not carried out smoothly. Lastly, time management was a serious issue in this kind of online or synchronous environment. There needed to be a more balanced time allocation between learning and living. A stay-at-home learning mode was so cozy that the learning was highly likely to be suspended.

The qualitative analysis not only supports the quantitative findings but also draws more attention to different factors influencing the learners' synchronous English learning. Given the results of the t-test, the male learners reported more concern about their online learning capability and the lack of online interaction, which belonged to the Cost and Mastery-avoidance categories. Intrinsic Value and General OLSE categories, from the qualitative analysis, also stand out to unfold their synchronous English learning motivation.

## **Discussion and Implications**

Synchronous learning has gained more and more attention and significance with the technological advancement and outbreak of the pandemic. This study reveals that gender differences and other factors influence Taiwanese college English learners' motivation to take synchronous courses, including social interaction, self-regulation, and self-efficacy.

Female learners felt more adapted to and more satisfied with online learning and perceived that they could learn more through it. This finding is in line with previous research, such as Chung et al. (2020), Gonzalez-Gomez et al. (2012), and Rovai & Baker (2005). Furthermore, temporal

flexibility particularly benefits females (Veletsianos et al., 2021), and females have better online learning experiences (Chung et al., 2020). Females had higher levels of self-efficacy and scored significantly higher than males (Chyung, 2007). In contrast to previous studies (Hung et al., 2010; Kuo et al., 2020), the present study results showed gender differences had a significant impact on online learning self-efficacy. In online learning, female students held higher levels of academic self-efficacy (Jan, 2015) and computer self-efficacy (Katsarou, 2021).

Social presence and peer interaction play a significant role in predicting learners' satisfaction in online learning contexts. Females were more active in participating in online discussions and activities. The finding is in accordance with some of the previous literature, such as Lowes et al. (2016) and Jaradat & Ajlouni (2020). Learning is not always enough; therefore, learners should have to take responsibility for their own learning. Effective learning can occur with the assistance of teachers and technology. Upon shifting from traditional learning to online learning, the target college learners claimed to have difficulties or issues to face, which were online learning self-efficacy, self-control, time management, autonomous learning, and social interaction.

The study yields the following pedagogical implications. First, synchronous learning should be shifted from teacher-centered to learner-centered. Learners will be able to develop more self-control or self-management for their own learning. Second, apart from the focus on computer facilities or Internet connection, the application of learning strategies, especially social, affective, and metacognitive strategies (indirect learning strategies), should be included in lesson plans or curricula. Strategy awareness and application can enhance effective learning. Lastly, no matter whether online or offline, synchronous or asynchronous, the essence of education is the same. "Educators reshape education, not technologies. (Jonassen, 1996: 4)" Teachers and learners work together to produce more beneficial outcomes in this reshaped education.

To conclude, in terms of future research, gender differences and indirect learning strategies are also crucial factors that need to be considered or explored for more effective synchronous instruction or learning. While designing an online or synchronous learning course, it is crucial to take gender differences, social interaction, self-regulation, and self-efficacy into consideration.

## Conclusion

E-learning, no matter whether synchronous or asynchronous learning, has become a vital and crucial mode of learning. This study has shown how synchronous learning positively influences the target EFL learners' learning motivation, social interaction, self-regulation, and self-efficacy. The female learners reported higher levels of positive motivation for learning English. However, the male learners expressed their negative thoughts about synchronous English learning, such as limited chances for interaction and discussion. Overall, they were concerned more about their ability to master English in this learning mode. Synchronous or online learning has gained more attention, particularly in the COVID-19 situation. When designing this kind of learning, it is significant to take gender differences into consideration. Course designers or

instructors should promote more online interaction and discussion. A supportive environment, such as rapport or encouragement, also needs to be included in lesson plans (Le, 2021). Thus, it is significant to take not only gender differences but also learners' preferences or perceptions into consideration before online or synchronous courses are designed.

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