Factors Affecting Preadolescence Student Online Learning Anxiety During the COVID-19 Pandemic

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Abstract

The current study aims to investigate factors affecting the online learning anxiety of preadolescent learners during COVID-19 prevention policy. The study was designed with a survey approach. The participants were 181 grade 6 students in a public school in Thailand selected by Yamane's sampling method. During the data collection, Thai educational institutions were politicized to be online. The school was in a suburban area of a small province in Thailand. Therefore, the samples were from lower-middle income families and have problems with devices and the internet signal. Classes were held via online conferencing platforms such as Google Meet and Zoom, and exercises were assigned both online and in textbooks. The instrument was a questionnaire designed to assess the online learning anxiety of preadolescent learners during COVID-19 prevention policy. The data were gathered at the end of the 2021 academic year when all classes were instructed online due to COVID-19 prevention policy. The data were analyzed using percentages, mean scores, standard deviation, and thematic analysis. The results of the study that instructional factors affect preadolescent learners' online learning anxiety during the COVID-19 pandemic. The data are beneficial for teachers, policymakers, and scholars in the area of study.

Keywords: Online learning anxiety, COVID-19, Online learning

1. Introduction

According to UNESCO (2020), more than 1 billion and 575 million students have been affected by school and university closures in 188 countries owing to COVID-19 preventive efforts. Fear, anxiety, and other concerns have been produced among residents in various areas of the world because of the spread of the COVID-19 virus. These emotions have been felt by groups participating in the educational process, such as children, teachers, and parents (NCIRD, 2020). The situation increases the influence of technology in education. The use of virtual classrooms via video conferencing platforms such as Zoom, Google Meet, and Skype have become a new normal in education management. Despite the benefits of the online learning environment in instruction during the COVID-19, concerns have also been raised.

Apart from video conferencing, online technology also serves education in other aspects. The use of a class management system (*e.g.*, Google Classroom) allows teachers to manage assignments and grading. Online exercises (*e.g.*, Google form) can be extended learning activities and in-class activities shifted to online. Gamified student engagement platforms (*e.g.*, Quizizz) encourage students to learn and play at the same time (Dommett, 2019). These technologies soften the impacts of the pandemic situation on education and keep the system running despite not being able to handle face-to-face classes. However, it must be noted that these technologies are meant only for temporally replacing activities in a classroom setting, and not everyone is ready for the change.

Therefore, the rapid changes caused by the COVID-19 prevention policy cause inconvenience for both teachers and students. For example, Sudiapermana and Muslikhah (2020) reported that digital discrepancy is one of the major problems in managing online learning. Students, whose devices, and the internet signal are not of sufficient quality would face advantages in learning. Moreover, the internet could be a great distraction in learning especially in an online environment where learners have independence in doing other activities while learning. Some students might be distracted from other entertaining activities and lose focus on learning (Gillick, 2020). For teachers, technology competency and online teaching readiness can be a difficulty in class management. For those who are not familiar with online technology, setting up a google class, assigning online exercises, and event managing video conferencing classes can be a great challenge (Paliwal & Singh, 2021). Therefore, the online environment could also limit the success of learning management in certain circumstances.

The changes in education during the pandemic also lead to negative feelings in learning including anxiety. The term "Anxiety" can be defined as a condition of fear caused by anticipating a frightening scenario or event (Hilgard et al., 1971). Anxiety is a nonspecific feeling of discomfort, nervousness, vague fear, and apprehension (Krashen, 1985). Behavior, cognition, and physiology are affected by anxiety. For instance, those who are anxious about the test would find it difficult to complete (Huberty, 2009). Anxiety can be reviewed in different dimensions. First, trait anxiety is the tendency to be nervous or tense regardless of conditions (MacIntyre & Gardner, 1989). The second type of anxiety is situational anxiety, in which people feel apprehensive or tense in response to outside stimuli, such as fear of verbal

engagement (MacIntyre & Gardner, 1989). Third, people worry about what others think, causing dread of negative evaluation (Horwitz et al., 1986). Therefore, it is a factor that could obstruct students' learning development and the education system.

Moreover, distance and online education also increase students' anxiety. Studies have shown the association between online or distance learning environments and a decrease in academic achievement (*e.g.*, Ajmal & Ahmad, 2019; Macher et al., 2012; Saad et al., 2017). As the processes of learning involve hands-on experiences gained in doing learning activities that are naturally meant to be in a face-to-face classroom, learners might feel uncomfortable about learning online. According to Macher et al. (2012), students with general technophobia or specialized online course anxiety have difficulty learning, postpone online courses or tests, delay assignments, and have lowered academic achievement overall.

Preadolescent development includes both physical and emotional changes, such as growth spurts and body odor. Adolescent emotional outbursts, impolite or defiant behavior, and improvement of individual qualities, propensities, and side interests are common (Soard, 2018). The terms pre-teen or preadolescence is related to early youth at the ages of 10-13 and precedes immaturity. According to the Office of Communications and Outreach (2002), preadolescence is crucial for human development as children are at the transformation stage of their youth life. They start developing their thinking process while dealing with emotional and physical changes. This brings about difficulties and anxiety in life including education. According to R. D. Kellough and N. G. Kellough (2008), early adolescents are more interested in real-life experiences and authentic learning than standard academic disciplines. Consequently, online learning might limit their learning opportunities and increase the level of class anxiety.

Moreover, it should be noted that anxiety in online learning is caused by several factors. Scholars have studied factors leading to online learning anxiety (Abdelwahed et al., 2022; Ajmal & Ahmad, 2019 Sukdee et al., 2021), and they could be categorized into two main domains namely learner factors and instructional factors.

Learner factors include the physical and mental effects of online learning. Idris et al. (2022) found that online learning could cause negative effects such as headaches, tiredness, visual problems, and psychological distress. These problems obstruct learning activities and increase anxiety. Moreover, learners' competency in learning online could also be considered a factor leading to anxiety. Students who are not familiar with an online environment would be easily distracted by external factors and could not concentrate on the class content. Eventually, they fail to reach learning achievement (Bigatel et al., 2012).

In terms of instructional factors, environment, electronic devices, class content, and learning activities are taken into consideration. Environmental factors involve surrounding elements that could distract online learning, electronic devices play an important role in distance education as the quality of laptops, smartphones, and the internet signal directly affects the quality of online environments (Dolgunsöz, 2021). Moreover, class content and learning activities need to be adapted due to changes in learning management. Teachers need to be aware that learning through device monitors could cause stress to learners. The contents and

activities need to encourage interactive learning and self-development (Nleya et al., 2010).

As online learning during the COVID-19 pandemic could make learners anxious, studies have been conducted to investigate learners' anxiety during the situation (*e.g.*, Abdelwahed et al., 2022; Alshammari et al., 2022; Holubnycha et al., 2021; Pelucio et al. 2022). In detail, Abdelwahed et al. (2022) found that lack of time and support, technical problems, and lack of technical skills are factors affecting learners' stress and anxiety in online learning. In Alshammari et al. (2022), the participants' nervousness during online learning was gendered with women showing higher anxiety than men. Moreover, 1st-3rd year students had a higher anxiety risk than those in the 4th-6th years. Holubnycha et al. (2021) found that comparing the first and second online learning periods during COVID-19 prevention policy in Russia, student tension and anxiety rose significantly. Therefore, online learning stress caused by the epidemic and quarantine might contribute to learners' depression. To Pelucio et al. (2022), students in Brazil had moderate anxiety and mild depression symptoms during COVID-19 online learning, with substantial gender differences. It was also found that younger students were more anxious. It could be seen that online learning has caused emotional effects on students around the globe. However, what could be noted from the previous studies is most participants were in university. At this age and level of education, they could be expected to manage their anxiety to some extent. However, there are a limited number of studies studying the effect of online learning on preadolescents who are likely to be vulnerable to anxiety. Therefore, the current study aims to investigate factors affecting the online learning anxiety of preadolescent learners during COVID-19 prevention policy. The results of the study are expected to reveal how 12 years old students are affected by learner factors and instructional factors during a semester of online learning.

2. Methodology

2.1 Research Design

The study was designed with a survey approach. The quantitative data were gathered through a questionnaire having question items determined to investigate online learning anxiety among Thai preadolescent learners. The data were interpreted by participants' answers to the question items and presented in the degree of agreement.

2.2 Participants

The participants were 181 grade 6 students in a public school in Thailand selected by Yamane's sampling method (1973). During the data collection, Thai educational institutions were politicized to be online. The school was in an urban area of a small province in Thailand. Therefore, the samples were from lower-middle income families and have problems with devices and the internet signal. Classes were held via online conferencing platforms such as Google Meet and Zoom, and exercises were assigned both online and in textbooks.

2.3 Instrument

The instrument was a questionnaire designed to assess the online learning anxiety of preadolescent learners during COVID-19 prevention policy. It consisted of 3 parts of

background information, an anxiety survey, and an open-ended question session. The survey was designed on a 5 Likert scale, and it consisted of 33 question items divided into 2 main parts of learner factors and instructional factors. In detail, the aspects of physical and mental effects, online learning competency, learning environment, technical support, contents, and learning activities were involved in the investigation. The questionnaire was developed with the index of item objective congruence (IOC) of 0.67-1.0.

2.4 Data Collection and Data Analysis

The data were gathered at the end of the 2021 academic year when all classes were instructed online due to COVID-19 prevention policy. The questionnaire was distributed online via the Google Form system. The data were analyzed using percentages, mean scores, standard deviation, and thematic analysis.

3. Results

Of all 181 participants, 97 (53.59%) were male and 84 (46.41%) were female learners. The table below summarizes their online learning anxiety.

Table 1. Factors affecting online learning anxiety

Factors affecting Online learning anxiety	Gender			
	Male		Female	
	$\bar{x}$	S.D	$\bar{x}$	S.D
Learner factors				
Physical and mental effects	3.16	0.87	3.21	0.65
Online learning competency	3.36	0.73	3.32	0.76
Instructional Factors				
Learning environments	3.36	1.03	3.32	0.95
Technical support	2.95	0.67	3.10	0.87
Content	3.51	0.68	3.70	0.79
Learning activities	3.21	0.74	3.02	0.97
Average	**3.26**	**0.78**	**3.28**	**0.83**

The results of the study show that the participants reported having an average level of online learning anxiety during the COVID-19 prevention policy for both males ($\bar{x}$ = 3.26, S.D. = 0.78) and females ($\bar{x}$ = 3.28, S.D. = 0.83). In detail, for learner factors, the aspect of physical and mental effects was at an average level for both genders ($\bar{x}$ = 3.16, 3.21; S.D. = 0.87, 0.65). Likewise, both males ($\bar{x}$ = 3.36, S.D. = 0.73) and females ($\bar{x}$ = 3.32, S.D. = 0.76) rated the

aspect of online learning competency average.

In terms of instructional factors, the aspects of learning environments ($\bar{x}$ = 3.36, 3.32; S.D. = 1.03, 0.95), technical support ($\bar{x}$ = 2.95, 3.10; S.D. = 0.67, 0.87), and learning activities ($\bar{x}$ = 3.21, 3.02; S.D. = 0.74, 0.97) were rated at an average level. Meanwhile, the aspect of content was considered to affect online learning anxiety at a high level in both male ($\bar{x}$ = 3.51, S.D. = 0.68) and female ($\bar{x}$ = 3.70, S.D. = 0.79).

Moreover, the result of the open-ended questions could be summarized that the participant felt that they miss their friends while learning online. They felt bored and did not comprehend class content learning online. They reported preferring learning in school to online learning as they reported facing environmental distractions and technical problems. They also reported having an excessive amount of homework.

4. Discussions

The results of the study could be summarized in that the participants did not feel anxious learning online during COVID-19 prevention policy. However, the online environment did not comfort their learning as well. Moreover, there was no difference between the level of online learning anxiety among male and female participants. Considering each aspect of learning anxiety, we found that students felt anxious about the class content that is not suitable for online learning. With the consideration of the qualitative data, it could also indicate that apart from the feeling of missing the traditional class environment, class content management also worried students during online learning. The excessive load of homework, tedious class content, and problems with online teaching techniques made students anxious and worried about their educational development.

Therefore, it could be concluded that instructional factors affected preadolescent learners' online learning anxiety. The results of the study confirm the effects of changes in the learning environment on education as seen in the previous studies (*e.g.*, Abdelwahed et al., 2022; Alshammari et al., 2022; Holubnycha et al., 2021; Pelucio et al., 2022). The current study also shows that learning content is the factor that affected students' online learning anxiety. The result of the study went in line with Nleya et al. (2010) who also prioritizes the adaptability of class content as a key factor leading to the success of online learning. According to the author, learners are easily distracted in online learning; therefore, class content should not be too long, and active learning activities need to be applied. Therefore, teachers need to take the length and the quality of class content into the consideration when they teach online. Content that could be comprehended in a short time is ideal.

Moreover, the result indicates that technological problems did not affect the participants' online learning anxiety even though it was the first time that they encounter a whole system of distance education. This supports the nature of learners of the new generation presented in Huang and Yang (2014). According to the authors, gen Z and millennium learners have been growing up with technology; therefore, it is likely for them to adapt to online learning. Moreover, the result also indicates the readiness for technological support in suburban areas in Thailand. According to Open Government Data of Thailand (2021), 56.56 percent of Thai

citizens could access the internet. This number covers schools in downtown areas of each province as evidenced by the result of the study.

5. Conclusion

In the end, it is fair to conclude the results of the study that class content affected preadolescent learners' online learning anxiety during the COVID-19 pandemic. The results of the study could be implicated in instructional design as teachers should consider choosing class content and activities that match the nature of online learning behaviors. Moreover, policymakers should be aware that schools in provincial downtown areas are technically ready for online learning. Therefore, budget and support should be allocated to those in more rural and remote areas. For academic implications, the study reveals the effect of online learning on a group of learners who are vulnerable to anxiety. More studies should be conducted to investigate preadolescent learners' online learning anxiety in different parts of the world. The age when children transform into teens is crucial. Appropriate learning management would help them cope with problems and benefit an education setting.

Acknowledgements

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