



Teachers' Perception Towards Factors Influence Online Teaching Readiness

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Abstract

In response to the COVID-19 pandemic, schools urgently transitioned from traditional to online teaching. Teachers were forced to adapt quickly to the new learning pedagogy. This study investigates teachers' perceptions of factors influencing online teaching readiness using competency aspects, institutional support, and computer anxiety as predictors. Samples were collected through an online survey from 172 private school teachers. Multiple linear regression was applied to test the hypotheses. The results revealed that a linear combination of independent variables was statistically significant to online teaching readiness ($R^2 = 0.396$, Adj. $R^2 = .374$, $F(6,171) = 18.01$, $p < .001$). However, individual analysis shows different results; among four competencies, time management is the strongest predictor of online teaching readiness, whereas computer anxiety was the second strongest. The remaining construct did not significantly influence online teaching readiness; further analysis and review of previous literature reveal that four competencies used in this study have mixed results compared to findings of prior literature using the same construct. The mixed results of competency variables can be attributed to the variation of characteristics of the population. The researcher recommends further exploring other constructs, such as the institutional aspect of online teaching readiness and the influence of cultural context as the mediating factor.

Keywords: Online Teaching Readiness, COVID - 19, Teachers' Competencies, Institutional Support, Computer Anxiety

JEL Classification Code: I21, I23, 032

1. Introduction

The immense technological advancement tremendously helps the popularity and efficiency of online education, which is thoroughly utilized by most institutions in higher education, especially in the US, UK, Australia, South Africa, and even Asia. In the later part of 2019, as the COVID-19 pandemic broke out, the initial response of industries worldwide was to shut down to contain the virus, the education industry was not spared, and most schools all over the world were caught off guard. Online education plays a significant role in ensuring that

students continue to receive education during the pandemic.

During the pandemic, several issues were discovered while transitioning from face-to-face to online teaching. The biggest issue that most schools came across was that "teachers are not ready to teach online." Regardless of teachers' knowledge of using technology in teaching, most have been put on the spot by the sudden changes in the learning methodology. Shifting from face-to-face to online teaching is the only option to avoid further disrupting students' learning. Though it cannot be denied that the availability of modern technology has helped



during the transition, challenges and issues equally arise as the transition progresses. Despite the advanced age of technology, quick changes in the implementation of learning pedagogy have not become accessible to most schools. The existing learning materials were not designed for online teaching. It must be redesigned with the program structures and curriculum to complement online teaching. Teachers are not ready and equipped with technological skills. These issues were a huge setback to the schools, preventing them from quickly implementing online learning (Ferri et al., 2020). Teachers' online teaching readiness during the pandemic has been put in the spotlight as the sudden shift in education paradigm highlights the lacking of technological capability of the teachers to teach online (Hermanto, 2020; Tyagi & Kumar, 2020).

Thailand's education sector also faced this issue. Like in any other country, the only option is to close the schools and shift to online learning. These quick changes uncovered several issues during the implementation of online teaching. Some teachers are unfamiliar with online teaching methodology or only have little experience and struggle to cope with the unexpected shift in teaching methodology (Ngampornchai & Adams, 2016; NXPO, 2020; Somsathan & Sanjaiprom, 2021). Teachers lack fundamental skills to operate digital devices (Chang, 2020), and some schools have limited access to the internet and outdated technological infrastructure (Sethabutra et al., 2018).

According to the (United Nations Educational, Scientific and Cultural Organization [UNESCO] 2021), learning losses and students dropout has increased since the pandemic due to prolonged and repeated school closure, not surprisingly as it was labelled as the worst shock to the education system in century (Giannini et al., 2021) United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF) and The World Bank launched a joint mission focusing on the "Recovering Education 2021", three priorities have established; (1) all children back in a safe and supportive school; (2) recovering learning loss (3) preparing and empowering teachers by providing training to deliver instruction

remotely or utilize hybrid teaching methodology (Giannini et al., 2021). In Thailand, a significant reform in education is expected after the pandemic. Offering hybrid learning is expected to be part of the changes in educational institutions (Office of National Higher Education Science Research and Innovation Policy Council [NXPO], 2020). The success of education recovery from the ongoing pandemic, implementing the hybrid program and focusing on delivering education through online teaching relies on several factors. One of the factors is the readiness of teachers to teach online, failure to understand the level of readiness of teachers to teach online could negate the success of achieving the goals and objectives of the institution (Lynch et al., 2017).

Phan and Dang (2017) suggested that technological competency, pedagogy, training and time constraint should be considered when preparing teachers to teach online. Their critical review suggests that competencies are one of the indicators that influence online teaching readiness. Most studies on teachers' readiness vary in different contexts and measures (Summak et al., 2010), (Mansor et al., 2021), (Lynch et al., 2017). Recent studies measure online teaching readiness by using various indicators; competencies (Paliwal & Singh, 2020), confidence and ability (Martin et al., 2019), (Bolliger & Halupa, 2021). Some studies include attitude as one of the indicators (Yagci et al., 2015), (Phan & Dang, 2017), (Martin et al., 2019), (Eslaminejad et al., 2010), (Andarwulan et al., 2021). Some focus on the structural and cultural aspects (Cutri et al., 2020), while other studies measure readiness by profiling teachers and including institutional support as indicators. Howard et al. (2021) prove the importance of support at the organizational level to the success of online teaching. Computer anxiety, on the other hand, has been linked to the importance of teachers' competence (Babic, 2010) and to the intention to adopt online teaching (Al-alak & Alnawas, 2011) while, (Ramsden et al., 2009) linked to the lacking of computer skills to computer anxiety which could lead to the deterrence of learning capability. The vast literature available recently tries to identify the indicators that influence online teaching readiness. None has yet combined predictors such as; competencies which



include course design, course communication, time management, and technical competency, together with institutional support and computer anxiety, to measure online teaching readiness. Therefore, this study would like to explore the combined teachers' perception of their skills by measuring competencies, organizational support by measuring teachers' perception of institutional support, and psychological aspect by measuring teachers' perception of their computer anxiety towards using technology in their work.

The combined dimension of predictors of independent variables developed in this study hopes to provide unique information that can be valuable in providing teachers' required support and personalized training program to develop and enhance their confidence and skills in online teaching. Likewise, the view of teachers of institutional support will provide the institution with broader insights into the critical needs of teachers to integrate successfully into online teaching.

Hopefully, this study provides significant insights and evidence of the importance of encouraging teachers to develop their technological skills and embrace the changing paradigm of educational pedagogy. This action can prepare teachers for similar emergencies such as the COVID-19 pandemic. Also, provide educational institutions insights into the teachers' needs to integrate online teaching and improve schools' technological infrastructure. Furthermore, this study will hopefully be helpful to people responsible for the training and development of teachers so they can provide teachers with updated training and professional development aligned with the changing educational pedagogy. Finally, with the information from this study, the researcher also hopes that it could significantly contribute to the emerging literature in the field of teaching and technology.

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2. Literature Review

At the onset of the COVID-19 pandemic at the beginning of 2020, regardless of academic levels, the education industry abruptly shifted from face-to-face learning to online learning. It is a big challenge for teachers and students to shift from one pedagogy to another, especially with the involvement of technology. The challenges uncovered during the pedagogy shift have generated interest within the education profession to identify factors influencing online teaching readiness. Shifting from one pedagogy to another requires careful planning and extensive preparation (Phan & Dang, 2017).

Interesting studies emerge measuring teacher readiness based on teacher's perception of their competencies, abilities, challenges, and barriers to teachers' teaching readiness online (Bolliger & Halupa, 2021), (Andarwulan et al., 2021), (Junus et al., 2021), (Undar & Madrigal, 2021), (Paliwal & Singh, 2020). Some studies segmented teachers' level of readiness according to their profile using TPACK and institutional support instruments (Howard et al., 2021); also, anxiety and readiness have been the focus of some studies amid the COVID-19 pandemic (Alqabbani et al., 2021).

It is in everyone knowing that the ongoing pandemic heavily challenges the education industry. The majority of the burden relies heavily on the teachers as the successful outcome of the implementation and delivery of online teaching is entirely dependent on them (Andarwulan et al., 2021). Exploring teachers' perceptions and thoughts toward competencies, institutional support, and computer anxiety and how all



these factors influence online teaching readiness will provide educational institutions with vital information. The information can be utilized to provide personalized training and support to the teachers; likewise, determining online teaching competencies and factors affecting their online teaching readiness will help the educational institution to design professional development programs for teachers (Albrahim, 2020).

This study will investigate "Teacher's perception on competencies aspect, institutional support and computer anxiety and its influence towards online teaching readiness."

2.1. Online Teaching Readiness

In the early part of online education, (Hativa & Goodyear, 2002) used the term "online learning" it is defined as a type of learning which involves "interaction between people using internet communication technologies such as e-mail or computer conferencing software." The previous study also suggested that online learning should be understood as the background of globalization and borderless education (Goodyear et al., 2001). Generally, it is understood as a design pedagogy to deliver learning online. Howard et al. (2021); Zafar (2021) provides the distinction between distance learning and online learning. According to them, "distance learning refers to any form of education outside the walls of a traditional academic institution," whereas "online learning is any form of education that takes place using the internet." Therefore, it is concluded that any learning that takes place before the internet cannot be considered online learning; instead, they are all part of distance or remote learning. Graff (2008) uses the term "online teaching" instead of the popular term "online learning." He points out that online teaching occurs when an online service is utilized for anything related to teaching activities, such as storing documents, keeping grades, post discussions, and exchanging interactions with the students either synchronously or asynchronously.

The concept of teaching readiness is the "perception of the qualities one possesses when they are prepared to teach a course" (Graff, 2008). Meanwhile, the term "preparedness" has been used in several studies to define online teaching readiness. Martin et al. (2019) relate online teaching readiness to teachers' preparedness for online teaching, while (Bolliger & Halupa, 2021) associate preparedness with the ability to complete the necessary task in the delivery of the online course. On the other hand (Cutri et al., 2020) suggested that an assessment of teachers' online teaching readiness can be utilized as a basis for teachers' preparedness for the development and implementation of online teaching. **For uniformity, the term "online teaching readiness" will be used throughout this study.**

2.2. Competency

The importance of studying online teaching competencies was stressed in the study by (Martin et al., 2019); according to them, the result could provide information on the support and training the teacher requires. The same view is shared by (Albrahim, 2020); according to her, to develop a professional program for online instructors, online teaching competencies must be determined. Some studies revealed that online teaching readiness is determined and highly dependent on teachers' competencies (Paliwal & Singh, 2020; Callo & Yazon, 2020). However (Cutri et al., 2020) do not share the same view; according to them, online teaching readiness should not focus on competencies but rather on structural and cultural issues.

2.3. Institutional Support

The challenges and incapability of teachers and institutions to deliver and implement online teaching became evident during the COVID-19 pandemic. Several studies indicated that some teachers never use or are somewhat unfamiliar with any teaching system and technologies to facilitate teaching and are hesitant to



learn about them prior to the pandemic. Even so, they have no experience or involvement at all in online teaching (Chang, 2020; Cuttri & Mena, 2020; Hermanto, 2020; Ngampornchai & Adams, 2016; NXPO, 2020; Simms & Baker, 2021; Somsathan & Sanjaiprom, 2021; Tyagi & Kumar, 2020).

Lacking inadequate institutional support is a pinpointed reason for teachers' scepticism and resistance to adopting online teaching (Makhaya & Ogange, 2019; Maze, 2015; McLean, 2005). It is also one factor that negatively impacts teachers' confidence (Bolliger & Halupa, 2021). The teachers will be more encouraged to follow the path of online teaching if there is clear guidance and support from the institution (Chi, 2013; Makhaya & Ogange, 2019). Some institutions provide some level of support, such as technical and pedagogical training, but whether teachers utilize the support remains unanswered (Lion & Stark, 2022). This lead to another question: "Do the schools meet the teachers' needs to support online teaching? Studies show that the success of online teaching delivery is a collective effort of both teacher and institution (Almpanis, 2015; Fetzner, 2003; Howard et al., 2021). It is a conscious effort that must be planned, designed, constructed, and tested with full awareness of the institutions' goals and means (Almpanis, 2015; McLean, 2005), and teachers' intrinsic motivation should be aligned with the institution's mission and shared strategic value (Maze, 2015).

Infrastructure, clear vision, professional development strategy change process, and administrative support are the many forms of institutional support mentioned several times in various literature. (Fetzner, 2003; Pedro & Kumar, 2020; Simms & Baker, 2021).

In further review of the literature, (Simms & Baker, 2021) identified some of the factors affecting the success of online course delivery: technology infrastructure, technical support, training to improve technical skills, and workload.

Many studies reveal that faculty satisfaction and online education effectiveness are highly impacted and positively associated with institutional support (Fetzner,

2003; Tartavulea et al., 2020). In the study by (Ullah et al., 2022), they assessed Bangladesh's institutional support for online education during the COVID-19 pandemic, and the result of the study suggested that there is insufficient support and planning on the part of the government, institutional support plays a vital role in producing quality education for the student. It is critical to close the massive academic gap that has emerged during the COVID-19 pandemic.

2.4. Computer Anxiety

In online education, teachers must be responsive to the demands of modern teaching by being updated and familiar with the advancement of technology and how it should be incorporated into modern pedagogy (Agbatogun, 2010). These changes are inseparable from education so does computer anxiety. Computer anxiety is prevalent, especially among those new to the online environment. Computer anxiety sets in when the teacher worries about how they can deliver adequate instructions and provide an excellent learning experience to their student when they lack the knowledge and skills to utilize the seemingly complex computer devices and online environment (Simms & Baker, 2021).

In the last three decades, computer anxiety has been addressed by various studies; it evokes different negative emotions such as uneasiness, fear, reluctant, avoidance, resistance to change, apprehension, and hostility towards the use or expected use of technology (Dos Santos & De Santana, 2018; Howard & Smith, 1986; Peptan & Peptan, 2021; Popovich, 1994). Developing Teachers' competence by providing needed computer literacy skills training would likely diminish the manifestation of computer anxiety (Babic, 2010).

Howard and Smith (1986) found different results from their study; computer anxiety is seemingly linked to "profound, deep-seated personality traits." It can also be linked to a superficial phenomenon that they seem to think can be easily corrected by providing simple hands-on training. They also suggested that computer anxiety



has three roots, psychological, educational, and operational.

In the meta-analysis that **(Chua et al., 1999)** conducted, they summarized and characterized the nature of computer anxiety; their study reveals that computer anxiety is associated with fear of computers when or considering using. They also added that it is a state of anxiety that can be changed. Furthermore, it can be measured in multiple dimensions. It can cause computer use avoidance. **Al-alak & Alnawas (2011)** study suggested that computer anxiety has been found to have a strong and negative effect on the intention to adopt the e-learning system. They highlight the importance of providing relevant training to teachers to increase their knowledge. **Babic (2010)** highlighted the importance of providing computer literacy training to teachers as it is crucial to their competence. It is concluded that lacking computer skills is associated with computer anxiety which could deter the teacher's learning capability **(Ramsden et al., 2009)**.

Some studies found that computer anxiety affects the readiness to implement online learning. **Alanazy (2017)** investigated faculty members' attitudes toward online learning at Aljouf University in Saudi Arabia. The study results show that teachers show slightly high computer self-efficiency, positive attitudes toward online learning, and low levels of computer anxiety. He suggested that changes in any of the factors mentioned in the study will have a consequential effect on the readiness to implement online teaching.

2.5. Previous Literature

A critical review was conducted by **(Phan & Dang, 2017)**, wherein they conceptualized a framework derived from the findings of their study. According to them, factors influencing teacher e-readiness are attitude, pedagogy and methodology, technology competence, training, and time constraints. Another framework was designed by **(Martin et al., 2019)**, which includes course design, course communication, time management, and technical competencies; also, they developed a Faculty

Readiness to Teach Online (FRTO) instrument to measure online teaching readiness. The instruments measures teachers' attitude about the importance of online teaching competencies and faculty perceptions of their ability to teach online confidently. The study's results stated that teachers rated the perceived importance of course design, course communication, and technical competencies higher than they rated their ability. For time management, the perception of their ability is higher than their attitude about its importance.

By using different constructs, several studies employed the FRTO instrument developed by **(Martin et al., 2019)** to assess and measure teachers' level of readiness based on their competencies and preparedness. For example, **(Paliwal & Singh, 2020)** measured teachers' online teaching readiness based on the online teaching readiness competencies model. The study's findings suggest that the level of teaching readiness of higher education institute (HEI) teachers for course design, course communication, and time management competencies is insufficient. In contrast, the teachers' technical competencies met the readiness requirements for online teaching.

On the other hand, **(Bolliger & Halupa, 2021)** conducted a correlational analysis to determine if there is a positive correlation between teachers' preparedness to teach online and self-reported level of confidence in teaching online. The ability construct was used to measure teachers' preparedness and confidence to teach online; the study results show that the teachers are somewhat ready to accomplish tasks related to online teaching. Additionally, the teachers reported that they felt most competent with course communication and least competent with time management.

Some study measures teachers' and students' online readiness to investigate factors influencing teachers' and students' teaching and learning online readiness, respectively. Quantitative research was conducted by **(Callo & Yazon, 2020)** to investigate factors influencing online teaching and learning readiness. The Faculty and Students Readiness to Teach and Learn Online (FSRTLO) was developed to measure faculty readiness to teach online and students' preparedness to learn online.



They concluded that faculty and students' readiness for online teaching and learning is determined by their competence. A mixed method approach was used by (Junus et al., 2021) to evaluate the online teaching readiness of lecturers in Indonesia and investigate the weaknesses and obstacles that the lecturers face in teaching online. Similar to the construct used by (Callo & Yazon, 2020) and (Bolliger & Halupa, 2021), the quantitative aspects of the study surveyed lecturers' online teaching readiness using an online preparedness questionnaire, and the qualitative aspects were constructed based on the gathered data during the interview. The study's results suggested that despite lecturers' medium level of experience in online teaching before the pandemic, their readiness was relatively high due to their quick adaptation to Learning Management System (LMS) and employing tactical solutions to the situation. This result relates significantly to the survey of lecturers' perspectives on their basic technical skills. The same notion was shared by (Callo & Yazon, 2020), who suggested that technology significantly influences online teaching.

2.6. Conceptual Framework

The conceptual framework of the study was adapted from the following pieces of literature; course design, course communication, time management and technical competency (Paliwal & Singh, 2020), computer anxiety (Setyarini, 2015), institutional support (Howard et al., 2021) online teaching readiness (Paliwal & Singh, 2020).

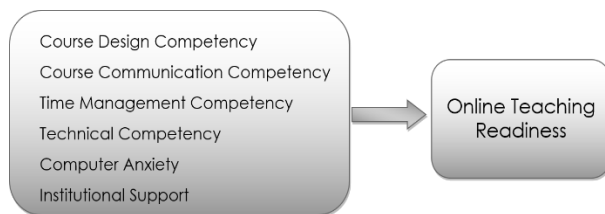


Figure1: Conceptual Framework of the Study

3. Research Methodology

This study was designed as a quantitative research survey to investigate factors influencing online teaching readiness using competency aspects (course communication, course design, time management, and technical competency), institutional support, and computer anxiety as predictors. Multiple regression was used to predict the dependent variable's value based on the independent variables' value. According to (Statisticslaerd, 2018), by using multiple regression, the researcher can determine the model's overall fit, and the relative contribution of each predictor to the total variance explained; therefore, multiple regression is the fit statistical analysis to use in this study.

This study's target population and sample are 642 in-service private school teachers currently teaching in Hua Hin district in the province of Prachuap Khirikhan.

This research applied multiple linear regression as a statistical method to calculate the sample size. The G*Power software is utilized for sample size estimation. The G*Power software is designed to provide an accurate power analysis based on most statistical tests in behavioural science (Erdfelder et al., 1996). In this study, a preliminary analysis that computed the required sample size was calculated via the following value; a preliminary analysis for Linear Multiple Regression, Fixed Model R2 deviation from zero, was selected. Then, the following data were chosen to analyze the sample size: 0.20 Effect size, .05 error probability, and .95 power and six predictors. The results showed that the study needed a minimum of 111 sample sizes.

This study employed a nonprobability sampling technique using judgmental or purposive sampling to collect data. The researcher focuses on distinct characteristics of the population which will best represent the target population. The researcher defined the population sample as "in-service private school teachers in Hua Hin." In-service private school teachers currently teach in the Hua Hin district in private school settings.

The researcher set a selection criterion to identify private teachers from government school teachers. The private school teachers will be identified through a yes or



no question, “Are you teaching in a private school in Hua Hin district?” The researcher aims for homogenous sampling to get a sample of people who have shared similar or identical traits (Qualtrics, 2022).

The results of an extensive literature review suggest that there is no existing study or instrument suitable to collect data that would fit the study the researcher is attempting to undertake. After conferring with earlier studies, the researcher developed an online teaching readiness instrument suitable for the researcher’s intended goal (course design, course communication, technical and time management competencies (Paliwal & Singh, 2020) (Martin et al., 2019) institutional support, (Howard et al., 2021) computer anxiety (Setyarini, 2015) and online teaching readiness (Paliwal & Singh, 2020)).

From the combination of different studies, the researcher developed 7 constructs with a total of 47 items and 8 demographic question items. The 47 items were created using a five-point Likert scale. The four competencies, institutional support and online teaching readiness, were measured using five points levels of agreement (5) strongly agree, (4) agree, (3) neutral, (2) disagree, (1) strongly disagree, and computer anxiety construct is measured by the level of anxiety, the level of agreement from (5) very high anxiety (4) high anxiety (3) moderate anxiety (2) some anxiety and (1) no anxiety was employed to measure the construct. The instrument was validated using three experts’ indices of item objective congruence (IOC). After careful validation, 43 questions plus 8 demographic questions were retained. This study used a mix of Thai and foreign respondents; therefore, the questionnaire must be translated from English to Thai and then back-translated to English to check accuracy.

The reliability of the two questionnaires, English language, and Thai language, are both tested its consistency by using Cronbach’s alpha. The reliability analysis was carried out using jamovi 2.2.5. The results indicate an acceptable level of consistency, a generally accepted rule is that between 0.6 and 0.7 indicates an acceptable level of reliability, and 0.8 or greater indicates an excellent level (Ursachi et al., 2015).

The researcher applied descriptive statistics and multiple regression to analyze the data obtained and to test the hypotheses. All statistical analyses utilized jamovi versions 2.2.5. Frequency and percentage distribution were used to describe the demographic profile of the respondents; meanwhile, standard deviation and variance were used to interpret the data. Furthermore, multiple regression was used to determine whether the independent variables’ association with online teaching readiness is statistically significant.

The frequency, percentage, mean, and standard deviation are employed in this study to describe the data obtained from the questionnaire. Frequency and percentage were utilized to analyze and describe the demographic information of the sample data sets (Napalit et al., 2021), while the main variables were analyzed by determining the central tendency and variability of the data. Since the data in this study appear to have a normal distribution, the mean, mode, and median are nearly identical. The mean is used to measure the centre of distribution of the data (statisticslaerd, 2018). The standard deviation was utilized in this study to measure the data’s spread and dispersion and describe its variability. The standard deviation is low if there is a collective agreement about the answers. In contrast, a high standard deviation score indicates a wide range of answers indicating agreement (Stephanie, 2015).

4. Results and Discussion

4.1. Demographic Information

One hundred seventy-two private school teachers participated in the study. 100% of respondents are teachers teaching in a private school in the Hua Hin district. Most respondents are Thai teachers, which accounted for 91.3%, followed by non – Thai Teachers, who made up 8.7%. Interestingly, the highest number of respondents in terms of age group came from teachers ages more than 40 years old, who accounted for 30.2%, followed by teachers between 26 – 30 years old, who accounted for 26.7%, then 36 – 40 years old, 20.9%, followed by 31 – 35 years old, 13.4% lastly, below 25 years old who accounted 8.7%.

Regarding gender, there is a big gap recorded between female and male teachers teaching in a private school in Hua Hin. The percentage of female teachers,



which recorded 80.8%, is higher than male teachers, which only recorded 19.2%.

For the highest education attained by private teachers in Hua Hin, most teachers have a Bachelor's degree, which accounted for 87.2%, followed by a Master's degree holder, which is about 11.6%, and two teachers holding a doctorate which accounted for 1.2%.

Regarding students' grade level, teachers teaching primary students are the highest respondents in this study, 53.5%. It was followed by kindergarten or pre-primary teachers, who recorded 20.9%. Upper secondary or matthayom teachers recorded 13.4% and behind is lower secondary with the same level as matthayom teachers, which recorded 12.2%.

The descriptive data shows that in terms of overall teaching experience, more new private teachers are teaching in a private school in Hua Hin compared to the more experienced teachers. Most of the numbers of teacher teaching in Hua Hin are teachers with 0-5 years of experience, which accounted for 30.2% of the total population, then followed by teachers with experience between 6 – 10 years, which accounted for 27.9%, teachers with more than 15 years experience, accounted for 25.6%, and finally, teachers with 11 – 15 years experience, accounted for 16.3%.

There were 107 who answered yes to the question, "have they taught online during the COVID-19 pandemic?" about 62.2%, and 65 teachers answered no to the same question, which accounted for 37.8%.

On the other hand, 35 teachers answered yes to the question "have they taught online before the COVID-19 pandemic," which accounted for 20.3%, and 137 teachers answered no to the same question, which accounted for 79.7% of teachers.

4.2. Descriptive Statistics of Variables

The overall means of descriptive analysis of competency constructs shows that teachers mostly agree with the item's statements. The overall mean of course design competency is 4.21, which, compared to the arbitrary level, represents "agree." They strongly agreed on two statements; during the COVID-19 outbreak, they used different online teaching methods in the online environment (mean score of 4.47). They organized instructional materials into modules or units in the form of videos like teaching videos, demonstrations, and

tutorials (mean score of 4.26). Likewise, the communication competency overall means the score is 4.05, which is interpreted by an arbitrary level as agreed. They all agreed on the item's statement, "they used online apps like LINE, FB Messenger and WhatsApp to communicate and send the announcement to students," which has the highest mean score (4.19).

Time management competency has an overall mean of 4.14, representing "agree" compared to an arbitrary level. The teachers strongly agreed with the two-item statements, "spent specified weekly hours grading assignments" (mean score 4.27) and "used facilitation strategies to manage time spent on teaching" (mean score 4.29). Technical competency has an overall mean of 4.09, equivalent to agreed when interpreted using the arbitrary level. They all agreed on all item statements, completed basic computer operations, navigated LMS, used online collaborative tools, created and edited videos and shared open educational resources with the students, with the highest mean score of 4.21. The institutional support construct has an overall mean of 3.32. The teachers collectively answer neutral to all the item statements. The statement that there is a clear vision toward online teaching in our school got the highest mean score (3.42). The overall mean of computer anxiety is 3.3, equivalent to moderate anxiety compared to an arbitrary level. The teachers felt moderate to high anxiety with the item statements. Two item statements made the teachers highly anxious, "thinking of breaking and damaging the technology they are using (mean score of 3.44) and when they think of using technology in instruction (mean score of 3.55). Online teaching readiness has an overall mean of 3.97, equivalent to agree. The teachers agree on all item statements. They all believe that teaching online offers greater course flexibility for students with the highest mean score (4.08).

4.3. Hypotheses Testing

A multiple regression analysis was conducted to test if independent variables; four competencies - course design, course communication, time management, and technical competency- together with institutional support and computer anxiety significantly influence online teaching readiness.

Table 1: ANOVA Omnibus Tests



	SS	F	p	η^2
Model	32.4547	18.013	<.001	.396
Course Design Competency	0.0303	0.101	0.751	.000
Course Communication Competency	0.1988	0.662	0.417	.000
Course Time Management Competency	4.1796	13.918	<.001	.365
Technical Competency	0.7168	2.387	0.124	.000
Institutional Support	0.1955	0.651	0.421	.000
Computer Anxiety	3.8242	12.735	<.001	.222
Residuals	49.5485	165		
Total	82.0032	171		

The linear combination of independent variables measures was statistically significantly related to online teaching readiness ($R^2 = 0.396$, $Adj. R^2 = .374$ $F(6,171) = 18.01$, $p = <.001$). The sample multiple correlations were .39, indicating that the linear combination of independent variables can account for approximately 39% of the variance of teachers' online teaching readiness.

Table 2: R^2 and adjusted R^2

Info	
Estimate	Linear model fit by OLS
Call	OTR+CDC+CC+TM+TC+IS+CA
R-squared	0.396
Adj. R-squared	0.374

Table 3: Fixed Effects Parameter Estimates

Construct	β	t	p
Course Design Competency	0.0289	0.318	0.751
Course Communication Competency	0.0774	0.814	0.417
Course Time Management Competency	0.3650	3.731	<.001
Technical Competency	0.1460	1.545	0.124
Institutional Support	0.0512	0.807	0.421
Computer Anxiety	0.2222	3.569	<.001

Two of the indices were statistically significant. Time management accounted for 7% of the variance in the teachers' online teaching readiness, and it was statistically significant at $p <.001$ with a Beta value of 0.365. The computer anxiety was the second strongest influence which accounted for 7% of the variance in the teachers online teaching readiness, and it was statistically significant at $p <.001$ with the Beta value of .222 furthermore, the test also found that course design competency ($\beta = 0.028$, $p = 0.751$), course communication competency ($\beta = .077$, $p = 0.417$), technical competency ($\beta = 0.146$, $p = 0.124$), and institutional support ($\beta = 0.051$, $p = 0.421$) did not significantly influence teachers online teaching readiness.

The formula for the model of the independent variables for online teaching readiness is as follows;

$$\hat{Y} = .028X_1 + .077X_2 + .365X_3 + .146X_4 + .051X_5 + .222X_6$$



4.4. Answers to the Research Questions

Multiple regression analysis was used to predict the influence of independent variables on dependent variables. The linear combination of independent variables measures was statistically significantly related to online teaching readiness $F(6,171) = 18.01, p < .001$. Since the p-value is < 0.05 , at least one of the model coefficients is not equal to zero. The sample multiple correlation was .39, indicating that the linear combination of independent variables can account for approximately 39% of the variance of teachers' online teaching readiness.

4.4.1. To what extent does "course design competency" influence teachers' online teaching readiness?

The response to question 1 shows that course design competency with a value of ($\beta = 0.028, p = 0.751$) did not significantly influence teachers' online teaching readiness.

4.4.2. To what extent does "course communication competency" influence teachers' online teaching readiness?

In response to question number 2, course communication competency ($\beta = .077, p = 0.417$) did not significantly influence teachers' online teaching readiness.

4.4.3. To what extent does technical competency influence teachers' online teaching readiness?

The answer to question number 3 entails that technical competency ($\beta = 0.146, p = 0.124$) did not significantly influence teachers' online teaching readiness.

4.4.4. To what extent does "time management competency" influence teachers' online teaching readiness?

The answer to question 4 shows that time management competency ($\beta = 0.365, p < .001$) significantly influences teachers' online teaching readiness.

4.4.5. To what extent does institutional support influence teachers' online teaching readiness?

To answer question 5, institutional support ($\beta = 0.051, p = 0.421$) did not significantly influence teachers' online teaching readiness.

4.4.6. To what extent does computer anxiety influence teachers' online teaching readiness?

To answer question number 6, computer anxiety ($\beta = 0.222, p < .001$) significantly influence teachers online teaching readiness.

4.4.7. What is the level of online teaching readiness of the teachers teaching in a private school in Hua Hin districts?

The answer to question number 7 is that there is an adequate level of online teaching readiness for the teachers teaching in a private school in Hua Hin.

5. Conclusions

This study investigates teachers' competencies, institutional support, and computer anxiety and its influence on online teaching readiness amongst private school teachers in Thailand within the context of the COVID - 19 pandemic.

The previous studies on competency aspects heavily emphasized the need for teachers to develop competencies in technical aspects of online teaching, online teaching methodology and design, and also support from the institutions (Chang, 2020; Ferri et al., 2020); Ngampornchai & Adams, 2016; NXPO, 2020; Sethabutra et al., 2018; Somsathan & Sanjaiprom, 2021). Interestingly the findings of this study on the competency aspect and findings from previous studies suggest ambiguity. This study shows that among four competencies, only time management significantly influences online teaching readiness compared to the findings (Paliwal & Singh, 2020); only technical competency impacts teachers' online teaching readiness. On the other hand results of (Badiozaman et al., 2021;



Bolliger & Halupa, 2021) states that course communication is perceived as an essential aspect of competencies. The ambiguity of the analysis results could be attributed to characteristics variation of the population, research design and methodology used, and data collection and analysis implemented in previous studies. The researcher recommends further analysis using a similar construct and a comparative analysis to determine the cause of the mixed results.

Institutional support did not significantly influence teachers' online teaching readiness. Previous works of literature in this area suggest that institutional support has somehow impacted online teaching. For example, (Howard et al., 2021) grouped teachers according to their profile, and the findings show that teachers belonging to the medium group felt that their institution had less support for online teaching. Similarly, a countrywide study in Bangladesh indicates that institutional support in schools in Bangladesh is insufficient (Ullah et al., 2022). Moreover, results from previous literature suggest that institutional support has a negative impact on online teaching readiness due to a lack of infrastructure preparation, non-existing technical assistance and inadequate knowledge and skills of teachers in online teaching (Elewa & Ebrahim, 2022); this can be somewhat true in some schools in the pre-primary, primary and secondary level where prior to pandemic online teaching is non-existing. An interesting result was found in the descriptive analysis of this study. The respondent's answers remained neutral throughout the institutional support construct item statement; this response contrasts with previous studies; for example, (Howard et al., 2021) study shows; teachers' answers vary from positive to negative perception. While (Simms & Baker 2021) showed low-level agreement on institutional support, and (Nikolopoulou & Kousloglou, 2022); showed neutral answers and recorded that over 50% of the sample expressed disagreement or neutral beliefs for the school support scale. It may be assumed that the response could be attributed to the cultural attributes of the majority of respondents. In the Thai cultural context, harmony is maintained, and conflict is avoided. Thai strive to maintain harmony and keep their opinions to themselves to avoid conflict and disagreement. Openly expressing contrasting opinions challenges other people's pride that could potentially cause a loss of face (Sessoms, 2018). The researcher recommends that further studies of

cultural aspects may also include in the context of online teaching readiness (Cuttri & Mena, 2020).

Computer anxiety significantly influences online teaching readiness; the result is somehow related to the findings of (Setyarini, 2015), which identified that one of the types of anxiety is related to teachers' capacity. They further explain that apprehension about using the devices and feeling that they could not keep up with the technological advancement are some of the reasons teachers develop computer anxiety. This study's descriptive analysis supports this result, in which the teachers felt moderate anxiety when they could not keep up with critical technological advances. Further results of the descriptive analysis indicated that teachers felt moderate anxiety when they thought of using technology in instruction. The descriptive analysis results support (Simms & Baker, 2021) findings which state that teachers feel anxious when they think of how to provide their students with the learning they deserve. They further added that online teaching is primary teachers' concern because teaching experience is associated with students' achievement (Simms & Baker, 2021). Studies about the influence of computer anxiety on online teaching readiness are relatively rare or non – existing and further review of the literature indicated there is no specific study yet focusing on the influence of computer anxiety on online teaching readiness. However, streams of literature provided ample information that directs to the assumption that computer anxiety has somehow influenced teachers' online teaching readiness, previous literature associated computer anxiety with computer experience, demographic traits, and personality traits (Chien, 2008).

In terms of online teaching readiness, this study found that overall, private school teachers in Hua Hin have an adequate level of online teaching readiness; this finding is consistent with the results of previous studies. (Elewa & Ebrahim, 2022; Tayyib, et al., 2020).

This study provides the basis to explore further the constructs of competencies, computer anxiety, and institutional support as combined predictors of online teaching readiness. The study's results suggest that further investigation using the combined construct could provide more valuable information for effectively implementing online teaching or hybrid programs.



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