The Impact of the COVID-19 on Teachers' Sense of Efficacy and Their Attitudes Towards Online Learning

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Abstract
Teachers' sense of efficacy has been pinpointed in a rich array of recent studies to determine the teachers' readiness and success in adapting themselves to online teaching during the abrupt school closure amid the Pandemic. With attempts to ensure the quality of teaching and learning, acknowledgement of teachers' self-efficacy and attitude towards the new form of education is crucial for school leaders and trainers to provide appropriate training, supportive policies, and changes in curriculum development. By employing the Teachers' Sense of Efficacy Scale (TSES; M. Tschannen-Moran & A. Woolfolk-Hoy, 2001) and Test of e-Learning Related Attitudes scale (TeLRA; DH Kisanga and G. Ireson, 2016) followed by semi-structured interviews, this paper unravels the practices of teaching during the Covid-19 from the perspective of language teachers (N = 109) in Vietnam from different levels and educational sectors. Results from this study reveal that scores for efficacies in student engagement and classroom management are low. In comparison to the mean score from the TeLRA scale, 45% of the teachers held a negative attitude towards teaching online. During the interviews, they reflected that their preference for online teaching was due to remote work's convenience, not its effectiveness. Further directions for research and recommendations to ensure the prevalence of online learning are also discussed.

Keywords: Teacher's Self-Efficacy, Teacher's Attitude, Online Learning

Introduction

Since the advent of the Internet, online learning has emerged as an alternative option for educational stakeholders despite doubts and critics (Berge, 1998; Wang et al., 2003; Liu et al., 2007; Shea, 2007). However, it was not until the spread of the COVID-19 pandemic starting in early 2020 that virtual classrooms dominated the global learning practices as schools were forced to close temporarily, and lockdown protocols were imposed to ensure the community's safety. Face-to-face classrooms, hence, were abruptly shifted to be conducted via online platforms, such as Google Meet, Zoom, Microsoft Teams, or ClassIn (see Yen & Nhi, 2021; Dash et al., 2021; Wang & Huang, 2022), without educational stakeholders' readiness, especially the teachers. Hodges et al. (2020) even described this crisis in education in the midst of the pandemic using the term "Emergency remote teaching (ERT)", and this sudden transition to online teaching resulted in several deficiencies (Ma et al., 2021). In a report by Van der Spoel et al., (2020), most teachers and organisations had approximately three days to prepare for switching offline to online classes in the Netherlands. Amid the pandemic, while schools and educational sectors provided technological platforms to accommodate teachers' and students' engagement (Marshall et al., 2020), the teachers confronted a plethora of challenges to 1) adopt new approaches to lesson planning and giving instruction in little time (Honigsfeld & Nordmeyer, 2020; Van der Spoel, 2020), 2) familiarise with new platforms to conduct teaching (Wiggins, 2020; Tim Pressley & Cheyeon Ha, 2021), and 3) endure stress and suppress burnout due to parent communication, administrative support, and anxiety (Pressley, 2021; Yang, 2021; Yang et al., 2021).

In Vietnam, schools were shut down on a national scale due to the severe outbreaks of COVID-19 taking place between February - May 2020 (3 months) and May 2021 - February 2022 (9 months). Although online training workshops for teachers were immediately organised to prepare them for conducting online classes (Pham & Ho, 2020), teachers' frustration with the novel teaching approach was inevitable as their role accumulated more duties as they had to be the facilitators and class monitors simultaneously. Such ambitious tasks would not be possible without a prodigious amount of continuous effort from the teachers to carry out prolonged online teaching hours. Among the influential factors in the classroom, teachers' sense of efficacy (TSE) has been pinpointed in a rich array of recent studies to determine the teachers' readiness and success in adapting themselves to online teaching (Horvitz et al., 2015). With attempts to ensure the quality of online teaching and learning, TSE and teachers' attitude (TA) (particularly English language teachers) towards ERT are set to be the focus of this study. Its aims are to 1) report the status quo of teaching practices and 2) propose solutions to alleviate the encumbrance arising from ERT. The research questions are:

1) What were teachers' sense of efficacy scores while teaching amid the COVID-19 pandemic?
2) What were their attitudes while embracing the abrupt changes in educational practice?
3) How did teachers cope with the abrupt changes in teaching during the Pandemic?

Literature review

Teachers' sense of efficacy

The bulk of the literature on TSE is associated with Bandura's theoretical self-efficacy framework (1977). In an attempt to conceptualise the notion, Bandura claimed that it could govern the amount of effort and perseverance of an individual when confronting hardship. Regarding educational settings, a notable definition of a teacher's self-efficacy can be traced back to Tschannen-Moran & Hoy (2001) as they referred it as "a teacher's judgement of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (p. 783). Similarly, Dellinger et al., (2008) also defined TSE as "individual beliefs in their capabilities to perform specific teaching tasks at a specified level of quality in a specified situation" (p.4).

Despite the ample studies to examine TSE, there is a consensus on its implications in the classroom which can determine the students' motivation towards learning and outcome (Guskey, 1988; Stein & Wang, 1988; Tschannen-Moran & Woolfolk Hoy, 2002; Thoonen et al., 2011). This is also true for online learning. In a recent study by Gordon et al. (2022), TSE was noted as the key factor that can exert an influence on the quality of the online course and how the students experience it. In addition, the higher sense of self-efficacy the teachers possess, the more creative work and effort they devote to teaching. Specifically, teachers with high self-efficacy showcase the willingness to support, implement and embrace positive change. Moreover, they retain persistence during adversity, embrace new ideas without being non-judgemental, respect diversity, and experiment with novel teaching strategies even if it exceeds their comfort zone (see Charalambous & Philippou, 2010; Cerit, 2019; Gordon et al., 2022).

Factors thought to be influencing TSE have been explored in several studies, and one of the most well-known measures was Ohio State Teacher Efficacy Scale (OSTES) devised by Tschannen-Moran & Hoy (2001). In their landmark study, there were three domains that construct TSE, namely efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement. Thus far, a number of global studies have adopted OSTES to evaluate TSE. The findings from Chacon's study (2005), which recruited 104 English language teachers in Venezuela to give response to the short form of OSTES, reveal that they scored the lowest in efficacy for student engagement ($M = 6.59$) while efficacy for instructional strategies received a relatively higher score ($M = 7.13$). In a study by Wolters and Daugherty (2007), 6.86 was the score for engagement, and 7.36 was for teachers' instructional efficacy scores across 1000 teachers. Amid the pandemic, TSE scores have changed (Pressley & Ha, 2021). One study of 132 Ontario secondary teachers from Dolighan & Owen (2021) reported an astonishing result. Specifically, the score for efficacy for student engagement was still the lowest but at an alarming level ($M = 4.73$), and $M = 5.76$ was the score for efficacy for instructional strategies. The plunge in TSE score is significant between before and during the COVID - 19, so further studies should be conducted to examine TSE in various contexts.

It is also noted that TSE in online learning is attached to the notion of the teachers' efficacy in using computers or web-based platforms (Kao & Tsai, 2009; He, 2014; Dolighan & Owen, 2021). Therefore, attempts to adjust the OSTES by adding a sub-scale for digital use have been made, such as The Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT) devised by Robinia, (2008). Alternatively, in a study by Kao & Tsai, (2009),

Internet-efficacy towards web-based learning was reported to correspond to teachers' attitudes ($r > 0.20$, $p < 0.001$). Therefore, examining the teachers' attitude towards online learning as the substitute for teachers' sense of efficacy for technology use can be viable. The literature review of their attitudes is discussed in the next section.

Teachers' attitude towards online teaching

Attitude is related to readiness for response (Allport, 1935; Oskamp & Schultz, 2005), encompassing feelings and thoughts which can be positive or negative concerning a specific object or belief (Semerci & Aydın, 2018). The determinants of teachers' attitudes towards online teaching include 1) their acknowledgment of technology's challenges, 2) benefits, 3) their experience with computers, and 4) leisure interest in e-learning innovations and the use of computers (Kisanga, 2016; Kisanga & Ireson, 2016).

Although the prevalence of online learning has been well documented to offer tangible convenience (Wang et al., 2003; He, 2014), it has also resulted in mixed attitudes among educators. This, surprisingly, has been reported to be relatively half positive and half negative since the advent of online learning until now. Particularly, one study found that 40% of faculty viewed online teaching as an incentive, whereas 30% considered it an obstacle (Rockwell et al., 1999). In the same vein, in a recent study conducted by Dorji (2021), it was reported that 46% of the teachers held negative attitudes towards online learning. Their concerns shared similarities to Rockwell et al. 's findings (1999), highlighting that teachers' computer literacy skills encumbered their motivation to conduct online teaching. Moreover, there are other factors that sustain resistance and undermine the teachers' attitude such as increased enrollments, lack of control over online curriculums, and a lack of institutional support (Clark, 1993; Olcott & Wright, 1995).

The intention to improve the quality of online learning, particularly ERT, therefore, should be aligned with increasing TSE and their attitude to avoid any undesirable circumstances such as the perception of lack of support, leading to teachers' burnout (DiGregorio & Liston, 2018) and low retention (Hoang, 2020).

Research Design

A complementary mixed-method design that integrates qualitative and quantitative data was employed in this study to improve the reliability of the study findings (Creswell, 1999; Schifferdecker and Reed, 2009; Creswell, 2018). Online data collection was prioritised due to the lockdown in Vietnam. Specifically, numeric data were collected by mailed survey instrument using Google Form, while text information was gathered by recorded interviews conducted via Google Meet.

Procedure

Online surveys on Google Form and invites for a 30-minute interview attached with a consent form were sent via emails. Subsequently, the data were collected from May 30 to June 15, 2021, which was also the peak of the pandemic in Vietnam. From July 1 - 15, 2021, participants arranged their time to attend the meetings via Google Meet.

Participants

For the purpose set in this study which aims to measure TSE and teachers' attitudes towards online learning, 109 English language teachers (both Vietnamese and Expats) were recruited as participants. Additionally, they worked for various educational sectors, including public and private schools, universities, and language institutes. Amid the pandemic, they received different numbers of training to support their transition to online teaching (see Tables 1 &2)

Teaching Program

		Responses		
		N	Percent	Percent of Cases
program[a]	General English for adults	63	25.2%	57.8%
	English for kids	43	17.2%	39.4%
	English for teenagers	57	22.8%	52.3%
	Test-prep (IELTS, TOEFL, TOEIC, SAT)	53	21.2%	48.6%
	English for Specific Purposes	31	12.4%	28.4%
	Other	3	1.2%	2.8%
Total		250	100.0%	229.4%

Table 1 – Teaching Program

How many training sessions for online teaching have you attended?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	none	16	14.7	14.7	14.7
	1-2	33	30.3	30.3	45.0
	3-4	33	30.3	30.3	75.2
	more than 5	27	24.8	24.8	100.0
	Total	109	100.0	100.0	

Table 2 – Number of training sessions

Teachers' self-efficacy

To measure the TSE, this study adopted the original short form of the Teacher's Sense of Efficacy Scale (M. Tschannen-Moran & A. Woolfolk-Hoy, 2001). The questionnaire (see Appendix a) includes 12 questions in three following categories:

- Efficacy for Instructional Strategies — Items 5, 9, 10, 12
- Efficacy for Classroom Management — Items 1, 6, 7, 8
- Efficacy for Student Engagement — Items 2, 3, 4, 11

This measure was assessed along a 9-point continuum ranging from 1 - Nothing, 3 - Very Little, 5 - Some Influence, 7 - Quite A Bit, to 9 - A Great Deal.

Teachers' attitudes

To measure Teachers' attitudes toward e-learning, the TeLRA scale developed by Kisanga & Ireson (2016) was used. The factors explored in the 36-item questionnaire see (Appendix B) include:

- Benefits from e-learning Items: 1, 2, 3, 4, 5, 6, 14, 23, 34
- Challenges of e-learning Items: 7, 10, 11, 12, 13, 18, 19, 20, 21, 26, 27, 33
- Attitude on using computer systems Items: 28, 29, 30, 31, 35, 36
- Leisure interest in e-learning innovations and use of computers Items: 8, 9, 15, 16, 17, 22, 24, 25, 32

The TeLRA scale consisted of a four-point Likert's response format with degrees of agreement ranging from 1- strongly disagree, 2- disagree, 3- agree to 4- strongly agree.

Data Analysis for OSTES & TeLRA

All data from OSTES and TeLRA were analysed using a statistical package for the social sciences (SPSS). A reliability test (Cronbach's Alpha) was also employed to ensure the data's consistency. The obtained results for both measures are reliable, with 0.93 and 0.87 for OSTES and TeLRA, respectively.

For TSE, mean and median scores from Efficacy for Instructional Strategies, Efficacy for Classroom Management, and Efficacy for Student Engagement were computed and compared.

For TeRLA, reverse coding was applied for negative worded items: 7, 9, 10, 11, 12, 13, 17, 18, 19, 20, 21, 26, 27, 28, 29, 30, 33, 35, & 36 before adding all scores of responses and comparing with the median score. Eventually, responses with the above mean scores were regarded as "positive attitude", and vice versa for "negative attitude".

Interviews

Online interviews were conducted via Google Meet, offering a comfortable space for the participants to share their thoughts and feelings (Creswell, 2018). Prior to the meeting, the participants received the consent form and language preference form (Vietnamese or English). They all acknowledged the aim of the study and that the conversations were recorded. The questions were semi-structured and followed the following themes:

- Participants' experience with teaching online (particularly with student engagement and classroom management)
- Participants' feelings about teaching online (particularly with student engagement and classroom management)
- Participants' strategies to cope with difficulties they have with online teaching

For ethical considerations, the participants' names are kept confidential and only displayed by their initials.

Findings

Teachers' self-efficacy

The average score for Efficacy in Student Engagement is (M = 6.17) while that of Efficacy in Instructional Strategies is slightly higher (M = 6.57), followed by that of Efficacy in Classroom Management (M = 6.47) (See Table 3).

Teachers' Sense of Efficacy Scale

		Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management:
N	Valid	109	109	109
	Missing	0	0	0
Mean		6.1720	6.5711	6.4174
Median		6.5000	7.0000	7.0000
Std. Deviation		1.85707	1.80473	1.73207

Table 3 – Teachers' Sense of Efficacy

Specifically, from the descriptive data for Efficacy in Student Engagement, teachers struggled most with the degree of assisting the students' families to motivate them, and the responses for this aspect also scored the lowest in the questionnaire. Another striking feature is that they also scored mildly low in encouraging students with low interest in learning (See Table 4).

Efficacy in Student Engagement

		2. How much can you do to motivate students who show low interest in school work?	3. How much can you do to calm a student who is disruptive or noisy?	4. How much can you do to help your students value learning?	11. How much can you assist families in helping their children do well in school?
N	Valid	109	109	109	109
	Missing	0	0	0	0
Mean		6.0275	6.2569	6.4495	5.5872
Median		6.0000	7.0000	7.0000	6.0000
Std. Deviation		1.80256	1.93124	1.77684	2.07815

Table 4 – Efficacy in Student Engagement

Results of the subscale - "Efficacy in Instructional Strategies" reveal that except for employing diverse tools and platforms for students' assessment, teachers could manage to provide instructions with ease, even if the students were confused (See Table 5).

Efficacy in Instructional Strategies

		5. To what extent can you craft good questions for your students?	9. To what extent can you use a variety of assessment strategies?	10. To what extent can you provide an alternative explanation or example when students are confused?	12. How well can you implement alternative teaching strategies in your classroom?
N	Valid	109	109	109	109
	Missing	0	0	0	0
Mean		6.4771	6.3945	6.8899	6.5229
Median		7.0000	7.0000	8.0000	7.0000
Std. Deviation		1.82369	1.94850	1.99694	1.95124
Minimum		1.00	1.00	1.00	1.00
Maximum		9.00	9.00	9.00	9.00

Table 5 - Efficacy in Instructional Strategies

The score for controlling disruptive behaviours in the online classroom is slightly lower than other questions in the same subscale - "Efficacy in Classroom Management (See Table 6).

Efficacy in Classroom Management:

		1. How much can you do to control disruptive behavior in the classroom?	6. How much can you do to get children to follow classroom rules?	7. How much can you do to get students to believe they can do well in school work?	8. How well can you establish a classroom management system with each group of students?
N	Valid	109	109	109	109
	Missing	0	0	0	0
Mean		6.2294	6.3670	6.6055	6.4679
Median		7.0000	7.0000	7.0000	7.0000
Std. Deviation		2.00755	1.93726	1.90038	1.98405
Minimum		2.00	1.00	1.00	1.00
Maximum		9.00	9.00	9.00	9.00

Table 6 - Efficacy in Classroom Management

Teachers' attitudes towards online learning

The Median score computed is 100, so respondents with a Mean score above 100 are labelled to have positive attitudes towards online learning and vice versa for those with a Mean score below 100. The gap between positive and negative attitudes is insignificant when 55% of the teachers held positive attitudes and 45% had negative attitudes (See Table 7).

Teachers' attitude

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Positive	60	55.0	55.0	55.0
	Negative	49	45.0	45.0	100.0
	Total	109	100.0	100.0	

Table 7 – Teachers' Attitude

Details of the questions indicate that the majority of the teachers (72%) found working with a computer at home barely frustrating (see Figure 1). "Teaching online is tiresome", however, was confirmed by 55.9% of the respondents (see Figure 2). Therefore, this means that their negative attitudes were because of the nature of online learning itself, not their reluctance towards working with the computer.

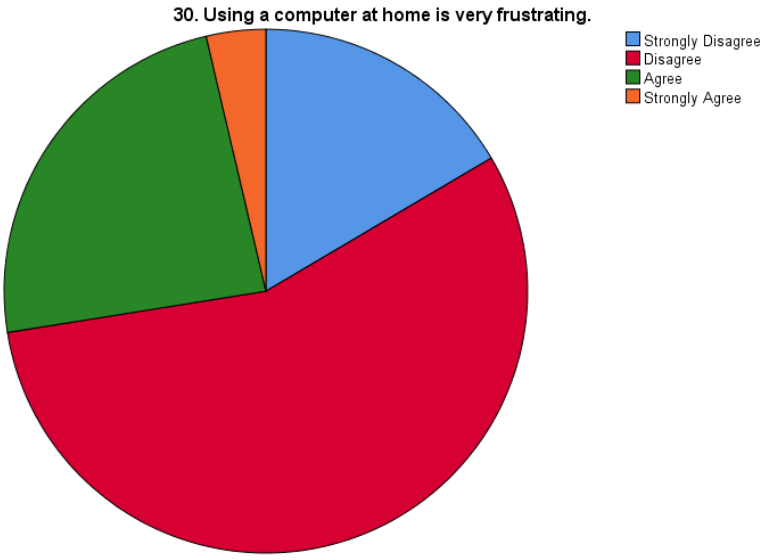

Figure 1 – responses for item 30

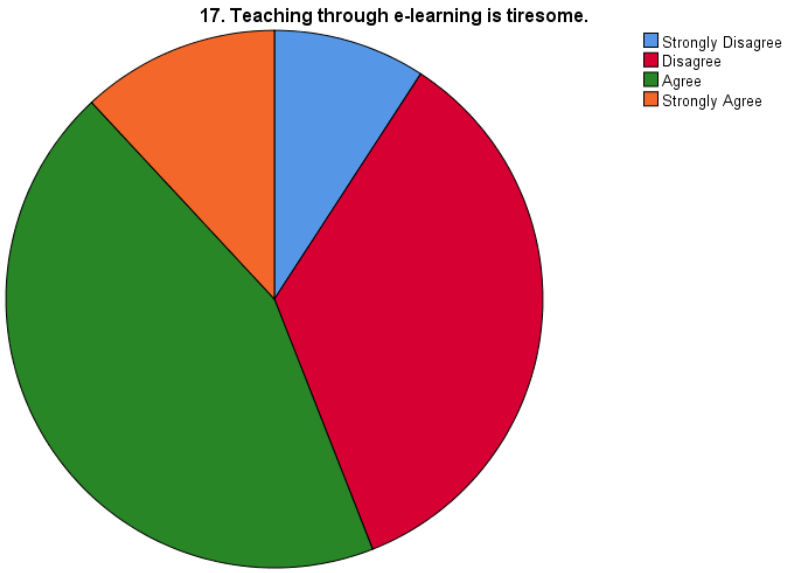

Figure 2 – Responses for Item 17

Teachers' reflection on their experience with online teaching

Most teachers reported that classroom management and online interaction significantly depended on external factors, including noise and the Internet connection. These issues were far from the teachers' control to maintain the continuity of the lesson and student engagement.

> *"...like some of my students, they live in rural areas and their **internet connection** is not well connected so they **lost the connection** sometimes and I had to wait for them to come back to the class." - (B)*

> *"...when I use the computer, there's **noise outside** which I could not control, for example my neighbour's singing, or the noise from house construction." - (NH)*

Another factor mentioned by many teachers was that their students turned their cameras off. This could be the result of either Internet instability or even the students' self-discipline misconduct. Regardless of the reasons, the participants embraced the negative feelings. Specifically, negative words related to feelings such as "desperate", "tired", or "lonely" were used by teachers to describe their emotions whenever encounter such a problem:

> *"I felt **desperate** when they [the students] talked nothing, and also angry" (NH)*

> *"Quite **tired**! Like I wanted them to interact but they didn't want to. Because when they.. when they keep studying like this, they tend to be **passive**. I feel like they would become more passive, and not for my class only, but also for other classes." (TL)*

> *"I felt **lonely**, like I was the only person in the class" (QA)*

Other teachers expressed positive attitudes toward online, but the reasons were not from their high sense of efficacy. In fact, they were due to the comfort of working from home, such as saving time for travelling:

"And the outcome, I don't think it [online] can be comparable to offline. But I did have VIP sessions, like one-on-one, or some small-size classes which I could manage, and I feel it's still plausible. I even feel it is more convenient because I don't have to travel. ***Staying at home is awesome****." (TL)*

"They [my colleagues] would choose to teach online and the reason is that they're ***afraid to commute****, being in a* ***crowded and small elevator****. When they teach at home,* ***they can order food****,* ***turn their cameras off****."*
(NH)

To cope with ERT, many teachers followed the protocols from school leaders and attended several training sessions for new alterations in classroom conduct. They, however, addressed mixed opinions regarding how practical the training was. Learning from peers, in contrast, was noted to be the motivation for teachers to experiment with novel teaching methods:

"To apply [what I learned from the training] is ***not possible****. I mean, I have to try. Sometimes it isn't like what it seems, when I tried it with real teaching, it might not work out. I had to try over one or two classes to know whether it is effective."*
(TL)

"Accidentally, I've seen ***my colleague's Facebook post*** *- it's a screenshot of his Zoom class and naturally,* ***I had the pressure****, like why it's so fun but my class is ... weird."*
(NH)

Discussion

Without readiness, language teachers in Vietnam had confronted several issues of online teaching, which had been escalated by the Pandemic (see Yang et al., 2021; Tim Pressley & Cheyeon Ha, 2022; Tim Pressley & Cheyeon Ha, 2021; Choate et al., 2021; Marshal et at., 2020). From what the teachers had experienced, educational practices in Vietnam were reactive instead of proactive. Online classes in the Vietnamese context, therefore, should be referred to as Emergency Remote Teaching (Hodges et al., 2020) rather than proper online teaching. Therefore, teachers' sense of efficacy was affected, especially their Efficacy in Student Engagement and Classroom Management (Tschannen-Moran & Hoy, 2001). The results are slightly similar to the prior study from Pressley & Ha (2021) as teachers' Efficacy in Student Engagement score was the lowest. From the interviews, teachers blamed unpredictable and unpreferable circumstances related to the Internet connection and the inadequate facilities or technological equipment. In addition, teachers still claimed to be dubious about which teaching methods were effective for online classes though they had received training sessions that helped familiarise themselves with online teaching. The training delivered by the schools, hence, could have included more sharing from teachers regarding problems and solutions occurring while teaching online, as most participants reported learning from their peers rather than in-house training.

Results from the TeLRA scale demonstrate a mixed attitude ratio which shares a similarity to the studies from Dorji, (2021). Notably, teachers in this study still expressed doubts and reluctance towards conducting lessons via web-based platforms. Descriptive answers from the interviews reveal that students' presence and self-discipline to participate and turn their cameras on significantly affect the teachers' feelings toward online teaching, which were

mostly negative in this study. Moreover, most teachers' fondness for online learning stemmed from its convenience rather than their belief in its success.

Recommendations

The inevitable turbulence in teaching practice amid the Pandemic yields valuable experience for all educational stakeholders in promoting online learning. First and foremost, its success depends on concrete action plans regarding:

Human capital;

- Facilities, including teaching rooms, powerful computers, and headsets;
- Authorised accounts on proper online teaching platforms rather than using meeting platforms as there will be a lack of educational tools, encumbering classroom engagement and management;
- Sharings from teachers, especially Master teachers, so that they can learn from each other's teaching practices; and
- Communication with learners or their parents to ensure their participation while learning

In a study by (Cavanaugh, 2005), online teaching for 15 students was equivalent to 40 ones in conventional classes. Thus, the class size for online classrooms should be adjusted to alleviate the problems of classroom interaction and management. In 2019, the average class size in Vietnam is 48 - 52 pupils (Nhat Duy, 2019), and this can also be the number of students that language teachers had to manage in an online class which might be overwhelming, frustrating, and challenging for both learners and educators. The suggested class size for online classrooms, according to (Tomei, 2006), should be 12 students. However, small-size classes can be a burden for the schools' facilities, human capital, and profits, so decisions to launch online classrooms should be contemplated.

Finally, more funding should be allocated for devising proper teaching platforms with a sufficient number of tools to facilitate interaction among teacher-student, teacher-students, and students-students. The display should be user-friendly so that everyone can learn with ease, and little time is wasted on getting ready for online learning for both learners and educators. In addition, gamification should also be attached to the platforms to offer teachers convenience when planning their active lessons.

Limitations & further directions

First of all, the study was conducted amid the Pandemic, while it could have been a longitudinal one to track the TSE and their attitudes before-while-post the COVID - 19. Since the emailed surveys were sent, they cannot approach teachers in remote areas where the Internet connection could be inaccessible. Moreover, teachers with low technological skills were also reluctant to participate, so the results could only reflect a part of the mosaic picture of online teaching practices in Vietnam during the Pandemic. Therefore, further research should focus on varied groups in all parts of the country. Another limitation of this study is that observation should be employed as an additional instrument to provide a holistic picture of the actual online classrooms since the reports from interviews could also be subjective.

Conclusion

Online lessons in Vietnam, particularly amid the pandemic, had been conducted on a national scale which had never occurred, initiating the prevalence of online learning. Frustrations from all stakeholders, therefore, were inevitable, and so were the deficiencies in planning and organising virtual classrooms. As a result, the TSE and teachers' attitudes towards online learning have been influenced, and in this research, teachers' scores for efficacies in student engagement and classroom management are low. Their attitudes towards the abrupt transition to online learning platforms are also mixed, despite their keenness for technological advancement. The main problem undermining online classrooms' inclusion and success lies in the insufficient preparation for Internet connection, especially in remote areas. Furthermore, learners' and teachers' readiness to embrace the changes and comply with specific disciplines to promote proactive learning is significant. Online learning is indeed the future of education, yet it takes more time for learners and teachers to familiarise themselves with being one screen away from each other. Moreover, since the cost for proper online classrooms and teaching platforms that can accommodate interactions to make sense of the lessons still exceeds the schools' budget, efforts should be made to provide cost-free online education, especially for remote areas.

Appendix

Appendix A

Teachers' Sense of Efficacy Scale[1] (short form)

Teacher Beliefs Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.		How much can you do?								
		Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
1.	How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Appendix B

Test of e-Learning Related Attitudes (TeLRA) Scale

Information about teachers' understanding and attitudes about e-learning.

Instructions

- There is no wrong answer; each response will be treated as a correct one. Your opinion is what is required in this study.
- Do not think too long about each statement. It should take you around 10 minutes to complete.
- For each statement, put a tick (✓) to show your level of agreement; **Strongly Disagree**, **Disagree**, **Agree,** and **Strongly Agree**. Do not tick across two boxes.

	Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
1	E-learning is very economical for educational institutions to adopt.				
2	I believe using e-learning will improve the quality of my work.				
3	Computers make work more interesting.				
4	I prefer reading articles in e-learning.				
5	It is easier to revise electronic educational materials than printed material				
6	I prefer using a computer to prepare my lessons.				
7	I feel uncomfortable reading a text book on a computer screen than a physical text book.				
8	I enjoy teaching using computers.				
9	Delivering a lecture through electronic technologies is very difficult.				
10	E-learning requires expensive technical support.				
11	E-learning reduces quality of knowledge attained.				
12	Interacting with the computer system is often frustrating.				
13	A face-to-face method is more learner-centred than E-learning methods.				
14	I believe using e-learning technologies will improve my job performance.				
15	Communicating through social networks is fun.				
16	I like reading magazines on new technology innovations.				
17	Teaching through e-learning is tiresome.				
18	E-learning increases learners' social isolation.				

	Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
19	E-learning technologies are difficult to use.				
20	Using computer systems requires a lot of mental effort.				
21	Discussions on e-learning technologies are uninteresting.				
22	My institution has enough teaching-learning resources to carry out e-learning.				
23	E-learning will increase teachers' efficiency.				
24	Working with computers is exciting.				
25	I like discussing about new e-learning innovations.				
26	Supporting learners in an e-learning environment is very difficult.				
27	E-learning infrastructure is very expensive for the government to afford.				
28	It will be difficult for me to become skilful in the use of e-learning tools.				
29	I make errors frequently when using a Computer.				
30	Using a computer at home is very frustrating.				
31	Using e-learning technologies will allow me to accomplish more work than would otherwise be possible.				
32	I enjoy computer games very much.				
33	E-learning is a threat to teachers' employment.				
34	E-learning will provide me with better learning opportunities than traditional means of learning.				
35	I find computer online interaction unexciting.				
36	Communicating through electronic mails is annoying.				

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