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The Challenges Confronted by the Asian English as Second Language Teachers on Implementation of E-Learning During Covid-19 Pandemic

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ABSTRACT

Teachers in Asian countries confront major problems adjusting to online teaching and establishing a minimum extent of communication with students to support their learning and growth during the COVID-19 pandemic. This study aimed to examine the challenges faced by English as a second language teachers in Asia while implementing e-learning during COVID-19. The study employed a quantitative cross-sectional research technique using a total of 300 ESL teachers from the selected Asian countries, Malaysia, India, Indonesia, Sri Lanka, Thailand, and China, with different demographic backgrounds. The data was analyzed using a standard multiple regression model. The results showed that the teachers' ICT competence, the infrastructure, and resources available to the teachers, and the suitability of working environment had a significant positive impact on implementing e-learning during Covid-19. This study suggested that policymakers can use the findings to plan curriculum by considering teachers' ICT skills as well as access to infrastructure and online resources.

Keywords: COVID-19 Pandemic; The Challenges; E-Learning Implementation; ICT Competence; E-Learning Infrastructure; Working Environment; Online Resources

1. Background

English has had a major impact on education as new approaches to language teaching continue to evolve and create productive learning environments. This was confirmed by a study by Lie (2017). Lie pointed out that outdated teaching methods in and out of the classroom are seen as deterrents and demotivators for schoolchildren. Malaysia's Education Blueprint (2013-2025) also resolves the future of pre-primary education through children's university education, ensuring equal access to appropriate education for all children, and making English a second language. It played an important role in making education a priority. Using an e-learning platform is one of the methods proposed by many scholars in previous studies**.**

It was revealed that a lack of technical investments, infrastructure, and the cost of the internet have been considered negative aspects of e-learning, but online education systems have provided flexibility and time savings in the transpiration and quick feedback of e-study material, as well as more convenience and freedom to the connecting parties, as this has been considered a positive aspect of the e-learning concept (Khan *et al*., 2020).

During the COVID-19 pandemic, e-learning was implemented at all educational levels, including schools, colleges, and universities. According to Baticulon *et al*., (2021), teachers in Asian countries face significant challenges in adapting to online teaching and establishing a basic level of communication with students in order to support their learning and growth. Similarly, Almanthari, Maulina, and Bruce (2020) found that the majority of instructors recognized the value of e-learning, but that there were some challenges, such as issues related to teachers' readiness to use e-learning systems, a lack of mobile phones and IT equipment, as well as a lack of Internet connectivity, proper classroom management in the virtual platform due to limited student involvement, and evaluation.

When it came to implementation, institutions, and teachers with little or no experience with e-learning were doomed to fail. Additionally, teachers are having difficulty navigating online applications and software. During the COVID-19 epidemic, there was a lack of and insufficient research into learning and teaching, particularly in English education. More research is needed to identify issues with integrating technology into the teaching and learning process, particularly in the ESL classroom. In earlier research, it was discovered that Asian countries lacked significant contemporary literature on the subject. Therefore, this study aimed to find out: 1) the difficulties encountered by ESL instructors when implementing online learning during the COVID-19 epidemic 2) the effects of ESL teachers' ICT proficiency on the adoption of e-learning during the COVID-19 epidemic, 3) the effects on availability of infrastructure and resources in e-learning implementation during the COVID-19 pandemic, and 4) the impacts of the suitability of the working environment in e-learning implementation during the COVID-19 pandemic. In addition, this study examines the status of the demographic backgrounds and language proficiency of the teachers on e-learning implementation and aims to understand the willingness and preparedness of the teachers in the implementation of e-learning during the COVID-19 pandemic.

1.1 Teaching ESL in Asian countries

The modern range of vision and understanding of the importance of the English language in the Asian region has evolved in response to the arrival and growth of distinct varieties of Asian English, which have played an important role in the world events of English in recent years. (Bolton, 2008) When teaching English as a second language (L2), teachers must balance a number of competing individual and professional motivations, as well as a deep understanding of their own national identity, a strong bond with their mother tongue or first language (L1), and a healthy dose of self-reflection (Waterworth, 2016). English teachers are part of the school staff, and they, like other teachers, are constantly defending their subject. In most Asian countries, English is a required component of the main curriculum in both elementary and secondary schools. Teachers may have reservations about their ability to teach English depending on the quality of their teacher education and the instructions they receive through their English training, their individual commitment to learning and efforts made to improve their English abilities, and their level of self-assurance. In ASEAN countries, English is the most widely taught second language. Apart from Mandarin, no other Asian languages are taught as a second language in ASEAN countries.

There are 11 Asian countries that begin teaching English as a second language as early as grade one, implying that student in these countries study English for 10 to 13 years, excluding tertiary English education. Some Asian countries, including Sri Lanka, the Philippines, Bangladesh, Hong Kong, Malaysia, Thailand, India, Taipei, Taiwan, Singapore, Pakistan, and the United Arab Emirates, begin English language education in the first grade. In China, nine cities in Taiwan and Korea begin English

language instruction in the third grade. Only one Asian country begins English language instruction in the fourth grade. Israel, Iran, and Vietnam begin English language instruction in the sixth grade. English language education in Indonesia begins in the seventh grade, which is the same as in Japan. Compared to some countries in Europe, most countries in Asia are arguably earlier in teaching English language education in schools. Further, most countries in Asia have a national curriculum to teach English at the primary and secondary levels.

Table 1: Teaching English as a second language grade wise (ELT Trends in Asia-Mulya *et al*., (2021)

STARTING GRADE	COUNTRY
Grades 1 to 10	Philippines
Grade 1 to 12	Malaysia, Bangladesh, Thailand, Sri Lanka, Singapore, UAE, India and Taiwan
Grade 1 to 13	Hong Kong
Grade 1 to postgraduate	Pakistan
Grade 3 to 12	Korea
Grade 3 to college	China
Grade 4 to 12	Israel
Grade 6 to 12	Vietnam and Iran
Grade 7 to 12	Taiwan (in some cities), Indonesia and Japan

The National Curriculum for English was based on the national level in most of the Asian nations. But it was different in some Asian countries like India and Indonesia, where they can make their own syllabus, while in some cities in Taiwan the curriculum could be revised.

The textbooks for primary and secondary levels in public schools were issued by the majority of Asian governments. This includes Israel, China, Sri Lanka, Korea, Pakistan, Japan, Iran, Malaysia, India, the Philippines, Bangladesh, and Vietnam. That is, the central government was very concerned about English education in specific countries at the primary and secondary levels. In countries such as the UAE, Hong Kong, Thailand, Taiwan, Singapore, and Indonesia, English language textbooks at the primary and secondary levels were free for commercial use. Except for Sri Lanka, Japan, Pakistan, Bangladesh, Iran, and India, various Asian countries have used computers for ESL education, according to the findings of the above research. The extent to which computers were used for ESL teaching varied from country to country in Asia.

1.2 COVID-19 Pandemic and E- Learning

The COVID-19 pandemic has disrupted educational systems as it has had a large impact on society, and it has also interfered with and distracted approximately 1.6 billion learners worldwide. The spread of COVID-19 was rapid, and many cases were reported all over the world, as social distancing and other health guidelines were regarded as some of the most important requirements for limiting the disease's spread. This has had a negative impact on the economies and social systems of over 200 countries worldwide as lockdown and social distancing measures were implemented to stop the increase of COVID-19, forcing schools and exam centers to close. (Pokhrel & Chhetri, 2021).

Online and electronic learning methods are considered e-learning methods because they are a type of distant education process in which the learning process is conducted using technology infrastructure and the instruction for the learning process is provided via the internet and online methods (Siemens Gasevic & Dawson 2015). Online learning can be defined as a method used in advanced materials that

are expected to be placed on an online learning platform (Clark and Meyer 2016). Furthermore, this is regarded as internet learning, which is distinguished by the ability to be conducted from any location, at any time, on demand, as this mode saves money and eliminates the need to focus on transportation, (Bijeesh 2017). It is revealed that various online applications or software can be used via mobile phones, laptops, or any electronic communication device in this modern day, including Zoom video conferencing, Blackboard, Google Classroom, Microsoft Teams, WhatsApp, Signal, Telegram, and Edmodo. It was revealed that WhatsApp is regarded as a very cost-effective and efficient application with high download speeds that can be used in the e-learning process and for communication. (Amry, 2014).

1.3 E-Learning Challenges

Many countries, both developed and developing, were observed to face numerous challenges in the e-learning process. However, when compared to most developed countries, it can be seen that universities in developing countries face a number of unique challenges (Aung & Khaing, 2016). It was discovered that adapting to the online environment and virtual class concepts is one of the most difficult tasks for instructors, teachers, and learners. According to one of the research projects, Sri Lanka's internet penetration will nearly remain at 47% by 2020 (World Bank 2020). Learners must obtain dependable technological devices in order to gain access to the internet or the online environment (Bolliger, 2004).

According to an article published in Thai PBS World (2021) in Thailand, distance education issues occurred in the country as schools in some states were ordered to close during this pandemic situation. They were mostly concerned about kindergarten children because they were not suitable for online learning and needed physical development as well. The difficulties they mentioned were that, for kindergarten students, not only teachers but also parents had to adapt. Even though it was a pandemic, some parents had to travel for work or business and left their children with grandparents, servants, or other relatives; hence, the parents couldn't help the small children as they, too, were busy and had some barriers in technology. Some Thai kindergarten teachers were discovered to be unfamiliar with new technology, acquiring devices such as smart phones, computers, laptops, and tripods to record their teaching aids and lessons. Furthermore, the teachers were interviewed by the Thai Public Television Station and stated that games as one of the study materials helped to improve interaction, while the provided play dough and coloured pencils helped to increase the child's development and creativity. As a result, these were the challenges they faced during the pandemic. Due to a lack of internet connectivity in these areas, as well as a lack of resources and infrastructure development, it was determined that parents should also arrive at the institute to pick up their children's homework, arts and crafts, and extracurricular activities, as well as recorded clips and materials, to further benefit their children at home. Some families experienced the lack of equipment as another challenge to conducting online learning. In Thailand some teachers and parents as well were affected by the Virus; therefore, teachers could not conduct lectures or record videos as the teaching options were all constrained.

The COVID-19 pandemic created unprecedented barriers for teachers to adapt to online education. Students who gathered in school according to their schedules and teachers and were subjected to the normal learning environment were disrupted until March 2020. Initially, students concentrated on the teachers; they worked alone or in groups to reproduce their knowledge in exams. According to Fraillon *et al*., (2014), however, the use of ICT in the learning process has resulted in the limitation of these activities. The school lockout created alternative forms of education which were the only way to keep teaching and learning going. Teachers had to adjust to online education and use a variety of digital tools and resources to solve problems and embrace new teaching and learning practices and teachers were required to keep up with their students in order to consider the social integration of the students' learning groups in addition to their teaching objectives.

The benefit of adequate infrastructure and online resources, as well as teachers' use of online education technology during sessions, is clear. Schools are critical in establishing the necessary infrastructure for teachers, such as computing and smart boards linked to the Internet, to encourage teachers to use online teaching and teaching tools. Teachers, however, were unable to obtain the necessary materials due to a lack of funds from the schools (Salem & Mohammadzadeh, 2018).

Though a suitable working environment is an important factor in online platforms, new issues are affecting teachers' readiness to use Emergency Remote Teaching (ERT) education technology online. Teachers require an optimal working environment at home to enable efficiency in education and learning because a healthy working environment is linked to work performance and satisfaction (Raziq & Maulabakhsh, 2015). Furthermore, the same teacher seldom gives the same lesson twice in the same format or on the same topic (Harrington & Walker 2004). Lecturers' routines have the potential to demotivate pupils. E-learning working environments, on the other hand, are a flexible method of teaching (Harrington & Walker 2004), as they may be utilized whenever it is most convenient (Clarke 2001).

Aldowah, Umar, and Ghazal (2018) investigated the impact of educators' social and geographical characteristics on personal and curriculum difficulties in virtual education and identified the most important factors to consider when implementing e-learning in all universities. According to the study, there have been significant differences in the teaching experience in terms of socioeconomic features and personal and curriculum issues in virtual higher education; however, sex, age, online instructions, and technological maturity have not been significantly differentiated.

A study revealed that faculty members of a higher education institute analyzed the following age-related concerns regarding their competencies in ICT integration: It is found and evident that among those between the ages 18 and 24 showed more competencies in ICT skills in of the females and the males. It was shown that ICT integration in teaching practice was lower among teachers who were middle years and young teachers of having the teaching experiences that was between ten and nineteen years of service in their teaching careers. Further another study identified the teachers who have more than ten years of experience, as well as twenty or more years of experience, and who have shown greater technological and technical savviness. And also, it was shown that the estimated 25% of the respondents in the faculty who engaged in the survey had not shown any interest in the technology. As it was shown, ICT knowledge is not related to age but rather with interest and usage of the technology (Adams, Nelson, & Todd, 1992). Further, it had been done much research related to the analysis of the impact of gender of teachers on ICT competence and the skills. It was revealed that the female teachers have lower levels of ICT competence and lack of knowledge on the ICT in the process of teaching and that their interest in the ICT is lower compared to the male teachers (Volman, 2001). The male teachers have shown a higher level of ICT skills in implementing the teaching (Wozney, Venkatesh, & Abrami, 2006). Likewise, another study revealed that the female teachers in Queensland State, Australia, were focused more on the ICT adoption in their teaching processes compared to the male teachers (Jamieson-Proctor *et al*., 2006).

1.4 Implementation of e-Learning

Implementation of the e-learning process appears to be one of the more challenging processes, even though it has been developed in many developed countries. The readiness for the e-learning system can be considered one of the challenging factors, as it is required to be accepted and well engaged by both the teachers and the students. **(**Eltahir, 2019). According to some studies, one of the main tasks to achieve in the implementation of an e-learning system in most developing countries is poor internet and network connections, as well as a lack of development of ICT infrastructure (Ghavifekr *et al*., 2016). According to additional research, the implementation of the learning process can be difficult due to issues with available system features, network & internet connections the computer skills of teachers and students involved in the process. This can be a hindrance to the successful implementation

of the e-learning system. It is critical to recognize that the e-learning process has provided numerous benefits to the education systems of most countries, but there have been numerous challenges in the implementation process. The most common challenges of e-learning implementation can be identified as the initial investment to develop the content, as this is one of the most difficult stages of the e-learning process because it is required to develop software or use a pre-made program to develop the initial content for the e-learning process.

Furthermore, it was discovered that communication between the student and the instructor is considered more complicated because of the lack of human physical integration and the lack of transformation of emotions and facial expressions. As a result, communication between the teacher and the student can be more complicated, and the effectiveness of the virtual classes can be difficult to yield the required objectives of the implementation. Furthermore, as previously discussed, the technological skills of the teachers or students can be one of the factors, as the technical savvy in using technological devices in developing countries of the students and teachers can be lacking as the e-learning process cannot be implemented.

1.5 Theoretical and Analytical Framework

The structure can be defined as the theoretical framework of a study because it is the underpinning theory of a scientific research. It explains why research is being conducted to investigate a specific research problem. A systematic review of relevant literature demonstrated comprehension of the general ideas that reflect the relationships between the critical related assumptions that the theory actually infers Gabriel (2008). It can also be demonstrated that these ideas, concepts, and themes, when combined, can reflect the theory, which can be used to explain the meaning, and the connections that can be related to the educational or social science background. As a result, the application of these factors can be used to better understand concepts. Therefore, three theories were used in this study: Activity Theory, Protection Motivation Theory (PMT), and Technology Acceptance Model (TAM). Activity theory was used effectively to comprehend the goals of E-Learning in an academic setting, which included all of the important representations and the influence of values, language tools, social and cultural norms, and behaviors. In the context of COVID-19, PMT's importance to online teaching and learning is demonstrated in a significant way. To safeguard vulnerable populations in unaffected areas, the constant execution of protective measures is required. This hypothesis was used to investigate the perceived difficulties to online learning that educators faced during the epidemic. The study demonstrated the Technology Acceptance Model (TAM) to analyse how people make decisions about adopting new technology.

2 Methods

2.1 Research Model and Hypotheses

This conceptual framework illustrates the connection between independent variables and the Dependent variable. Five independent variables identified in this study and serve as input to the Dependent Variable (DV) of the study. Among them, four independent variables propose a hypothesis as H1, H2, H3 and H4 and these hypotheses were tested and a quantitative cross-sectional study research design was implemented.

Conceptual Framework

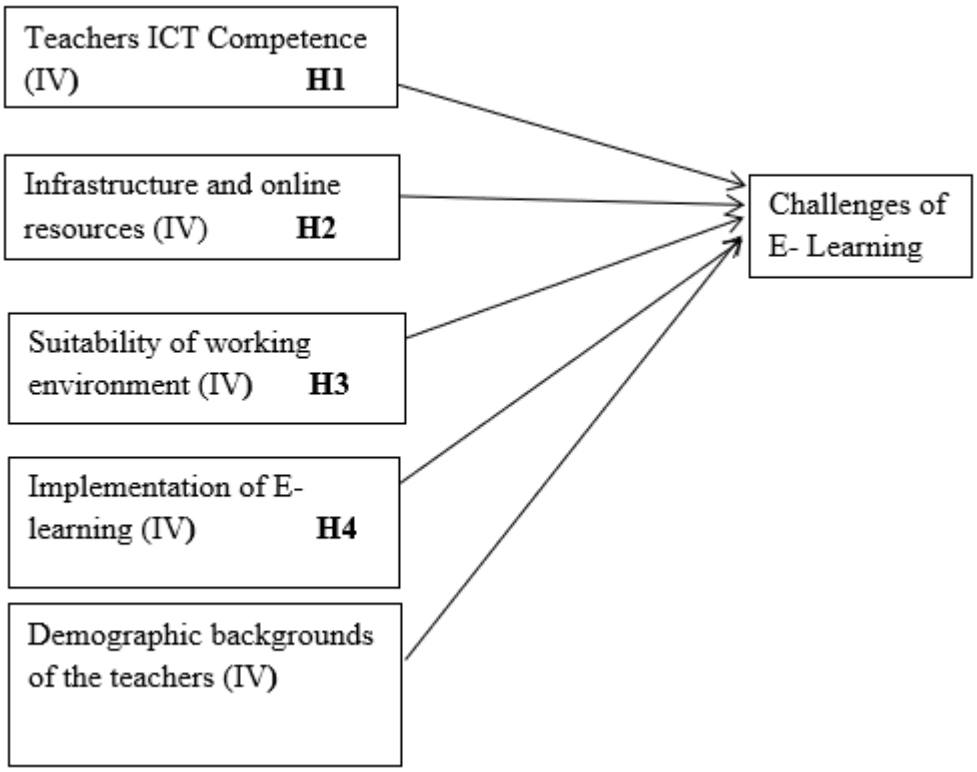

Figure 1: Conceptual Framework

The following hypotheses were proposed for this study.

H1 Teachers' ICT competence makes a positive impact on the implementation of e-learning platforms.
H2 Teachers equipped with required resources and infrastructures could better implement learning platforms.
H3 Teachers who enjoy pleasant working environments could better implement e-learning platforms.
H4 Teachers who face lesser challenges could better implement and use e-learning platforms.

2.2 Research Design

A quantitative cross-sectional study research design was implemented to establish the causal relationships between the variables of the study. A total of 300 ESL teachers participated in the study from six (6) Asian countries was chosen, as Malaysia, Indonesia, Sri Lanka, China, India, and Thailand. The number of ESL teachers in each country was difficult to estimate. As a result, sample sizes were chosen to be convenient rather than uniform, such as Malaysia 61, Indonesia 32, India 56, Thailand 37, China 66, and Sri Lanka 48, and there was no previous research done on this topic to get an idea of how to decide on sample size, and the COVID-19 pandemic and its consequences came as a surprise to the entire world of researchers and academicians.

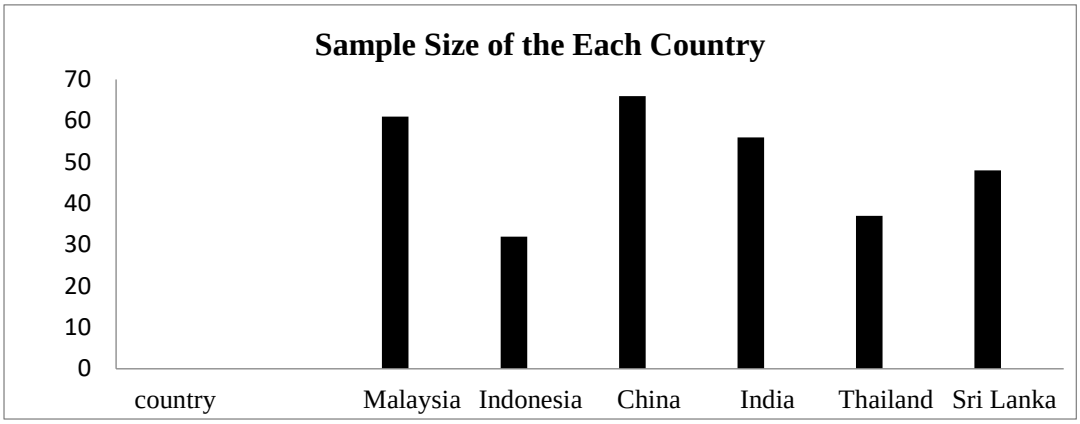

Figure 2: Sampling Techniques

2.3 Instrument of Data Collection

A survey questionnaire was used to collect data for this study. The study questionnaire was designed to have six sections. (1) Demographic backgrounds of the participants; (2) ICT competence of teachers which was adopted from "Teachers' ICT Skills Scale (TICTS)" by Türel, Ozdemir, and Varol (2017), (3) Available online resources and infrastructure which were adopted from Kisanga and Ireson (2015), (4) Suitability of the working environment which was adopted from Mousavi *et al*., (2020), (5) Implementation of e-learning which was adopted from Firmansyah (2021) to evaluate the use of E-Learning and (6) Challenges of e-learning which was adopted from Ja'Ashan (2020). Each section contained six items. 5-point Likert scale questions were used to determine how much the teachers agreed or disagreed with the topics under consideration (1 being extremely disagreed, 2 being disagreed, 3 being neutral, 4 being agreeable, and 5 being strongly agreeable).

Data was collected using Google forms. A Google Form was sent to the participants via email, Instagram, Facebook, and WhatsApp. The data collection began in December 2021 and continued for 12 weeks. To avoid any ethical issues and to protect the privacy of the participants', electronically informed consent was obtained from the participants. The participants were granted the right to withdraw from the study at any time. The principles of anonymity and confidentiality were applied in this context. The questions were not biased, coercive, or deceptive to the participants because of their race, age, gender, or nationality. Other ethical concerns included disclosing the study's motivations and intentions, as well as the right to participate in the study, privacy, and the manner in which the study was managed. The survey data was cleaned for any missing information and transferred to the Statistical Package for Social Sciences (SPSS) software version 23 for analysis. The analysis used both descriptive and inferential statistics. To test the relationship between the dependent and independent variables, a standard multiple regression model was used.

The validity and reliability of the questionnaire used for this study was tested using SPSS. All variables were above the approved standard of 0.7 Cronbach's alpha coefficient (Table 2).

Table 2: Cronbach Alpha Value

Variable	Cronbach's Alpha	No of Questions
Teachers' ICT Competence	0.701	6
Infrastructure and online resource On	0.784	6
Suitability of Working Environment	0.904	6
Challenges of E-Learning	0.806	6
Implementation of E-Learning	0.890	6

3 Results

3.1 Demographic Profiles of The Respondents in The Implementation of E-Learning

Table 3 below summarizes the demographic data of the participants of this study. The results show that the majority of the participants were male (65.0%) compared to female (35.0%) and a slight majority (55%) of the participants were between the ages of 26 and 45. Besides, the majority of participants (50.7%) are bachelor degree holders, while the remaining respondents (32.0%) are postgraduate and diploma holders (17.3%). As a result, the data's validity may be assured because the majority of participants had advanced degrees. China (22.0%), Malaysia (20.3%), India (18.7%), Sri Lanka (16.0%), Thailand (12.3%), and Indonesia were among the countries with the highest percentages of responders across the research topic (10.7%). Because different Asian countries were represented in the sample, the results of this study can be applied more extensively. According to the study's findings, (31.3%) of respondents had fewer than five years of experience, while others had six to ten years of experience (29.7%), eleven to fifteen years of experience (26.7%), and more than sixteen years of experience (12.3%). For this investigation, this was a sizable representation.

Table 3: Demographic profiles of the respondents

Variable		**F**	**%**
Gender of the respondents	**Male**	**195**	**65.0**
	Female	**105**	**35.0**
Age of the respondents	18-25 years	40	13.3
	26-35 years	73	24.3
	36-45 years	92	30.7
	46-55 years	63	21.0
Educational level of the respondents	Diploma	52	17.3
	bachelor’s degree	152	50.7
	post-graduate (masters, PhD)	96	32.0
Nationality of the respondents	Malaysian	61	20.3
	Indian	56	18.7
	Indonesian	32	10.7
	Thailand	37	12.3
	Chinese	66	22.0
	Sri Lanka	48	16.0
Teaching experience of the respondents	Less than 5 years	94	31.3
	6-10 years	89	29.7
	11-15 years	80	26.7
	Above 16 years	37	12.3

3.2 t-Test Statistics

Table 4 summarizes the study's findings, which revealed statistically significant differences between male and female respondents in terms of infrastructure and online resources availability, work environment acceptability, and use of e-learning (P 0.05). The survey, however, found no statistically significant differences in the instructors' ICT proficiency between male and female respondents.

Table 4: t-test Statistics

Variable	Mean/Standard Deviation		T	P
	Male	Female		
Teachers' ICT-Competence	20.61(5.17)	19.43(5.71)	1.820	0.108
Infrastructure and online resources	20.24(3.02)	20.49(/2.58)	-0.719	0.016
Suitability of working environment	21.44(3.56)	20.77(4.85)	1.364	0.000
e-learning implementation	20.39(4.48)	19.27(5.06)	1.979	0.006

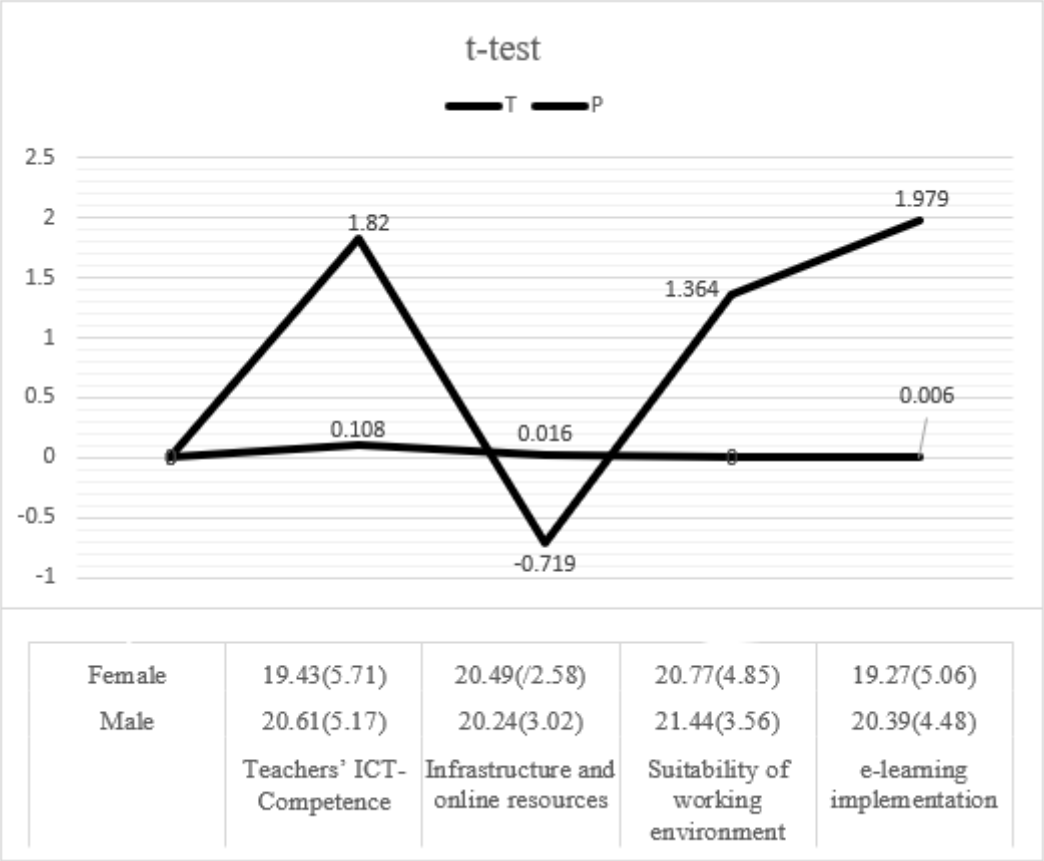

Figure 3: t-test Results

3.3 One Way ANOVA

A one-way analysis of variance (ANOVA) was used to determine whether there was any statistically significant relationship between respondents' educational levels and the use of e-learning [F (14, 285) = 2.67, p =.001]. However, no statistically significant associations were found between respondents' ages, nationalities, levels of e-learning deployment, or prior teaching experiences.

Table 5: One-Way ANOVA

Variables		Sum of Squares	Df	Mean Square	F	Sig.
age of the respondents	**Between Groups**	26.93	14	1.92	1.39	0.158
	Within Groups	394.82	285	1.39		
	Total	421.75	299			
educational level of the respondents	**Between Groups**	16.40	14	1.17	2.67	0.001
	Within Groups	125.15	285	0.44		
	Total	141.55	299			
nationality of the respondents	**Between Groups**	73.74	14	5.27	1.67	0.061
	Within Groups	898.51	285	3.15		
	Total	972.25	299			
teaching experience of the respondents	**Between Groups**	20.59	14	1.47	1.45	0.130
	Within Groups	289.41	285	1.02		
	Total	**310.00**	**299**			

To check the validity of the above hypotheses, the Pearson Correlation analysis was conducted by pooling the questions under each variable to get an average value for easy analysis. The results were as follows.

Table 6: Pearson Correlation Matrixes

Correlations						
		ICT competence	Require resources and infrastructures	Working environment	Challenges	Implement e-learning platforms
ICT competence	Pearson Correlation	1	0.868**	0.780**	0.453**	0.816**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	300	300	300	300	300
Required resources and infrastructures	Pearson Correlation	0.868**	1	0.767**	0.597**	0.834**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	300	300	300	300	300
Working environment	Pearson Correlation	0.780**	0.767**	1	0.524**	0.782**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	300	300	300	300	300
Challenges	Pearson Correlation	0.453**	0.597**	0.524**	1	0.592**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	300	300	300	300	300
Implement e-learning platforms	Pearson Correlation	0.816**	0.834**	0.782**	0.592**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	300	300	300	300	300
** Correlation is significant at the 0.01 level (2-tailed).						

As per the above Pearson Correlation Matrix, the correlations between independent variables and dependent variables were generated. The correlations and P values of the hypotheses are indicated below.

Table 7: Results of Hypotheses

Hypotheses	Pearson Correlations	P Value	Hypotheses Accept/Reject
H1-Teachers' ICT competence makes a positive impact on the implementation of e-learning platforms.	0.816**	0.000	Accepted
H2-Teachers equipped with required resources and infrastructures could better implement e-learning platforms.	0.834**	0.000	Accepted
H3-Teachers who enjoy pleasant working environments could better implement e-learning platforms.	0.782**	0.000	Accepted
H4-Teachers who face lesser challenges could better implement and use e-learning platforms.	0.592**	0.000	Accepted

As per the results shown in Table 7, the second hypothesis (H2), which states that teachers who have the necessary infrastructure and resources can better adopt e-learning platforms, has the strongest association (0.834**). The P value for this hypothesis was 0.000, which is less than 0.05. In order to accept the alternative hypothesis, the null hypothesis is therefore rejected. Similar significant correlations between the first and third hypotheses (0.816** and 0.782**) with P values below 0.05 allowed them to be rejected as alternatives to the null hypothesis. The deployment of e-learning platforms is positively impacted by teachers' ICT proficiency, and teachers who have pleasant working surroundings may do so even more effectively. The fourth hypothesis is also showing a positive correlation (0.592**), with P value = < 0.05, hence, the alternate hypothesis 'Teachers who face lesser challenges could better implement and use e-learning platforms', can be accepted. Accordingly, all the hypotheses of this research were accepted.

4 Discussion

This section discusses the results of the examined four hypotheses under this study:

4.1 H1 Teachers' ICT Competence Makes Positive Impacts on the Implementation of E-Learning

This hypothesis that teachers' ICT competence makes positive impacts on the implementation of e-learning was accepted and found to be in alignment with the past studies conducted.

This study found that the element of teachers' ICT competency has a significant impact on the deployment of e-learning in schools. The study tested the alternative theory that strong ICT abilities lead to greater technology integration and improve student achievement. It is obvious that in order to conduct online classes, teachers must possess the necessary ICT. According to Lipowsky & Rzejak (2015), it is shown that ICT tools, particularly digital teacher competence and teacher education opportunities to learn digital competence, are instrumental in adapting to online teaching during COVID-19 school closures. Furthermore, the findings of Fraillon *et al*., (2014) emphasized that the digital training of instructors should favor the use of ICT in the classroom for pedagogical purposes that contribute to improving the teaching and learning process.

There is little evidence linking prior experience to effective e-learning in the literature; hence, demographic characteristics of participants and their ICT competencies were not significantly correlated in this study, but an estimated 25% of faculty respondents did not participate in innovation, which was discovered and found to be interesting for those with less than 10 years of experience as well as tenure of 20 years or more. Adam's conclusion regarding the relationship between staff members' age and ICT proficiency was that it was critical for them to learn how to use new technologies and then spread them throughout the classroom, regardless of their age (Adams, 2008).

There is a gap in the literature regarding the influence of teachers' ages on ICT adoption in African and Kenyan educational systems. The study also considered the teachers' training and teaching experiences as a demographic factor. The US National Centre for Education Statistics (2000) discovered that teachers with less experience are more likely to integrate ICT into the delivery of educational activities than more experienced male instructors. According to the study report, instructors with three years of experience used computers 48% of the time, while teachers with four to nine years of experience used computers 45% of the time. For those with 10 to 19 years of classroom experience, computer use accounted for 47 percent of teaching time, and for those with more than 20 years of experience, it accounted for 33 percent.

4.2 Teachers Equipped with Required Resources and Infrastructures Could Better Implement E-Learning Platforms

This hypothesis that teachers equipped with the required resources and infrastructure could better implement e-learning platforms was accepted and found to be in alignment with the past studies conducted. In a related study, the governments have noticed the problem and made attempts to provide learning resources accessible via online learning platforms or television networks in various countries (Zhou *et al*., 2020). Because students studied from home throughout the outbreak, appropriate infrastructure was needed to guarantee the success of the teaching and learning process online (Crawford *et al*., 2020).

The study's findings revealed statistically significant differences between male and female respondents in terms of infrastructure and online resource availability, work environment acceptability, and use of e-learning (P 0.05). The strongest association (0.834**) is found for the second hypothesis (H2), which states that teachers who have the necessary infrastructure and resources can better adopt e-learning platforms. This hypothesis had a P value of 0.000, which is less than 0.05. The null hypothesis is thus rejected to accept the alternative hypothesis. Similar significant correlations (0.816** and 0.782**) with P values less than 0.05 allowed the first and third hypotheses to be rejected as alternatives to the null hypothesis.

The outcome of the data analysis performed using SPSS also revealed that the implementation of online learning is significantly influenced by the availability of resources and infrastructure. The study's conclusions showed that there are enough resources for teaching and learning online. A greater mean and a smaller standard deviation (M = 3.52; SD = 1.38) were used to establish this. The second hypothesis, "Teachers equipped with the necessary resources and infrastructures might better deploy e-learning platforms," had the strongest association, and its P value was 0.000, or less than 0.05. The alternative theory was approved as a result. However, teachers were unable to get the essential supplies due to a shortage of funds from the schools. As a result, the authorities of the schools must play an essential role in providing the necessary infrastructure and resources for instructors, as they are two of the most important factors affecting teachers' desire to use online instructional technology.

4.3 H3 Teachers Who Enjoy Pleasant Working Environments Could Better Implement E-Learning Platforms.

This hypothesis that teachers who enjoy a pleasant working environment could better implement e-learning platforms was accepted and it was found to be same as in previous studies. Teachers who work in a pleasant environment may do so even more effectively. The fourth hypothesis also shows a positive correlation (0.592**) with a P value of 0.05, implying that the alternate hypothesis is correct. The study's data analysis showed that the suitability of the workplace has a big impact on how e-learning is implemented. There is enough data to support the hypothesis (H3) and draw the conclusion that teachers who have a good working environment experience fewer implementation issues for e-learning than do teachers who don't. The findings of this study are like those of Raziq and Maulabakhsh (2015), who noted that the suitability of the working environment is a new issue affecting the readiness

of teachers to utilize ERT education technology online. Since a healthy working environment is linked to work performance and satisfaction, teachers need optimal working condition at home to enable efficiency in education and learning. The efficiency of ERT will not be impaired if teachers cannot focus on online instructions.

The Pearson Correlation Analysis was used to test the validity of the study's hypotheses by pooling the questions under each variable to obtain an average value for easy analysis. ANOVA and coefficients were also obtained using SPSS to ensure the accuracy of the results. According to the study, the significance values (p values) of the following four were accepted because they were less than 0.05. (1) ICT competence of teachers, (2) required infrastructure and online resources, (3) suitability of working environment, and (4) e-learning challenges.

4.4 H4 Teachers Who Face Lesser Challenges Could Better Implement and Use E-Learning Platforms

This hypothesis that teachers who face fewer challenges could better implement e-learning platforms was accepted in this study. Studying the barriers to e-learning in this study identified that insufficient or unstable internet connectivity, inadequate computer labs, a lack of computers/laptops, and technical problems were the foremost challenges for implementation of e-learning. In alignment with these findings, recent research by Nguyen *et al*., (2020) demonstrated that the main barriers to e-learning are based on several stakeholder perspectives of infrastructure, technology, management, support, execution, and pedagogical aspects. Similarly, another study illustrated that e-learning tools should meet the users' requirements to gain their trust and improve their acceptance of e-learning. Kanwal & Rehman (2017) Moreover, one more study classified e-learning challenges into learners, teachers, curriculum, organizational and structural factors that need more collaboration for their solutions Assareh & Bidokh (2011). Likewise , another literature showed that to better implement on-line learning include facilities, teacher digital competence and student learning motivation need to be minimized by the obstacles that occur so that on line learning and teaching is provided with quality and hard skills that students and teachers can master and teachers' digital competence is a challenge that needs to continue to be improved so that the learning provided is of higher quality. Mukarromah & Wijayanti (2021).

Policymakers can use the study's findings to plan curriculum by considering teachers' ICT skills as well as access to infrastructure and online resources such as uninterrupted internet access, computer hardware and software, smart boards, classroom tables and chairs, and so on. Furthermore, the educational system may offer more webinars so that more teachers can learn how to use and operate all the online educational technology and gain competency in ITC skills, allowing them to be freer and more confident in handling online lessons. School administration teams, particularly in Asian countries, may recognize the importance of various technologies, and school culture may foster effective collaboration among instructors in the development of technological abilities. To meet this new demand, policymakers and institutions may seek assistance from international organizations such as UNESCO, non-governmental organizations (NGOs), and other international funding organizations such as the IMF, ADB, and others. Governments in Asian countries may also provide instructors with the bare minimum of resources required to conduct effective online teaching and learning, particularly for teachers in rural areas. This can be accomplished by ensuring that every school's internet connection is stable and that the bare minimum of computers/laptops/tablets is always available to support e-learning processes. This study helps the students to identify the limitations and barriers faced by teachers when following e-learning and to understand the need for cooperation to achieve the best results. This study also highlights the efforts made by teachers and institutions to implement e-learning; as a result, parents will be aware of the barriers and limitations that teachers face in this situation. This enables parents to assist teachers and institutions in overcoming these obstacles and improving teaching quality.

The aim of this study was to discuss the Challenges faced by English as a second language teachers in Asia with the implementation of e-learning during the COVID-19 pandemic. This study examined, among other things, the instructors' ICT experience, access to infrastructure and resources, and the suitability of the work environment, as indicated by studies on the use of online educational technology by teachers during COVID-19. Five independent variables identified in this study served as input to the final outcome (DV) of the study. Among them, four independent variables proposed hypothesis (H1, H2, H3 and H4 that were tested, and a quantitative cross-sectional study research design was implemented. This study used quantitative cross-sectional methodology. The data analysis has investigated the difficulties teachers had when implementing e-learning during the COVID-19 epidemic. Different statistical techniques, including the mean value, standard deviation, Pearson Correlation, correlation matrix, and linear regression, were used to examine the received data. To examine the degree of satisfaction with the goal variables under the primary theme of the research, each variable from the study questionnaire was employed separately.

This study used quantitative cross-sectional methodology, and participants were given online survey questionnaires. For this study, we believe a mixed-technique approach would have been preferable. While conducting research in a small number of nations using the mix method is challenging, I believe my findings would be stronger if I also applied some qualitative method techniques. Additionally, although we have included the instructors' demographic backgrounds as a study variable, we have not developed or used questionnaire items to gather data on their age, gender, educational background, work experience, etc. Further we have not explicitly examined the effects of age, gender, educational background, or teaching experiences on the application of e-learning; instead, we have simply examined the importance of the participants' gender with the provided hypothesis. That is among the most significant restrictions we discovered during our research. The sample size was restricted to 300 ESL instructors from a chosen group of six Asian nations. If we had chosen more representative samples from other Asian nations, such as those from East Asia, West Asia, Central Asia, etc. We believe the results would have been more useful. Because of the closure of schools and educational institutions owing to the COVID-19 outbreak.

In another related study, Lau, and Sim (2008) investigated the extent of ICT adoption among 250 Malaysian secondary school teachers. They discovered that older instructors were more prepared and liked using computers in the classroom than their younger colleagues. The older instructors' extensive experience in managing classrooms, instructing, and utilizing computer technology that can be easily integrated into their type of classrooms. The difference is due to two factors: First, young teachers are frequently challenged in their first years of teaching and must devote significant time to learning the school's policies and curriculum. Secondly, young teachers tend to focus more on using ICT than integrating the dissemination of education.

Research on how instructors' teaching experiences affect educational quality has some implications (teaching and learning). However, as technology serves as a distraction and students' initial preparedness to absorb course material declines, a gradual increase in technology use between the sexes eventually leads to diminished returns. In comparison to females, men had a 62 percent advantage (Mungania, 2003). Accordingly, all the hypotheses of this research were accepted.

5 Conclusion

There are several recommendations that should be considered while thinking about the research that was done on this subject regarding the elements impacting the implementation of online learning. One suggestion is to require instructors to attend ICT training classes to improve the ICT proficiency of instructors. It is proposed that the government and associated education ministries set up the necessary infrastructure and tools to support student online learning. The availability of infrastructure and resources promotes the implementation of online learning programs. To prevent any disruptions to learning or teaching, the proper infrastructure and resources should be put in place. Creating a

supportive environment for online learning in schools is advised for the necessary authorities in educational institutions. This study finding may help future researchers carry on further in depth and in a much broader spectrum of this new technological tool of e-learning. In earlier research, it was discovered that Asian countries lacked significant contemporary literature on the subject. As a result of this topic's novelty, additional research in this area using more recent titles in teaching and learning is advised.

6 Declarations

6.1 **Ethics approval and consent to participate:** In the data collection process, electronically informed consent was obtained from the participants.

6.2 **Conflict of interests:** Not applicable

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