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A STUDY ON THE TECHNOLOGY ACCEPTANCE IN USING ONLINE EDUCATION AMONG SECONDARY SCHOOL TEACHERS IN KINTA DISTRICT PERAK

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ABSTRACT

This study explores the factors influencing teachers' technology acceptance in using online education. It also measures the relationship between variables, the best predictor, and the mediating role of variables of online teaching among secondary school teachers in the Kinta district in Perak. The study employs the quantitative research approach. The survey is distributed to a group of teachers selected based on the subjects taught. The data collected was analysed using Structural Equation Modelling (SEM). This study has proven that Intention to Use (IU) is the strongest predictor for Usage Behaviour (UB). Apart from that, Attitude (ATT) seems to have an excellent influence on Perceived Ease of Use (PEOU) and Usefulness (PU). Results reveal that although many problems arise throughout the implementation period, teachers are still passionate and eventually find ways to adapt to the technology. These results are hoped to provide some insight to MOE, the District Education Office, the schools, and others interested in making education more accessible, fun, and less burdening to teachers. Findings of the study can be used as a reference for the development of a new policy such as the Digital Education Policy (DEP) in the new era of education.

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KAJIAN BERKAITAN PENERIMAAN TEKNOLOGI BAGI PENGGUNAAN PENDIDIKAN DALAM TALIAN DALAM KALANGAN GURU SEKOLAH MENENGAH DI DAERAH KINTA PERAK

ABSTRAK

Kajian ini bertujuan mengkaji faktor-faktor yang mempengaruhi penerimaan teknologi guru dalam menggunakan pendidikan dalam talian. Ia juga mengukur hubungan antara pembolehubah, peramal terbaik, dan peranan pengantara pengajaran dalam talian guru sekolah menengah di daerah Kinta, Perak. Kajian ini menggunakan pendekatan penyelidikan kuantitatif. Borang soal selidik telah diedarkan kepada guru-guru yang dipilih berdasarkan mata pelajaran yang diajar. Data yang dikumpul telah dianalisis menggunakan *Structural Equation Modeling* (SEM). Kajian ini telah membuktikan bahawa *Intention to Use* (IU) adalah peramal terkuat untuk *Usage Behaviour* (UB). Selain itu, *Attitude* (ATT) mempunyai pengaruh yang besar terhadap *Perceived Ease of Use* (PEOU) dan *Perceived Usefulness* (PU). Keputusan menunjukkan bahawa walaupun banyak masalah timbul sepanjang tempoh pelaksanaan, guru masih bersemangat dan berusaha mencari jalan untuk menerima dan menggunakan teknologi. Keputusan ini diharapkan dapat memberikan sedikit panduan kepada KPM, Pejabat Pendidikan Daerah, sekolah-sekolah dan lain-lain yang berminat untuk menjadikan pendidikan lebih mudah diakses, menyeronokkan dan dapat mengurangkan bebanan guru. Dapatan kajian ini boleh dijadikan rujukan bagi pembangunan dasar baharu seperti Dasar Pendidikan Digital (DEP) dalam era baharu pendidikan.

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LIST OF ABBREVIATIONS

AR	Augmented Reality
Att	Attitude
AVE	Average Variance Extracted
DI	Differentiated Instruction
DOSM	Department of Statistics Malaysia
ESL	English as a Second Language
HTMT	Heterotrait-Monotrait Ratio of Correlations
ICT	Information Communication Technology
IPT	Institutes of Higher Learning
IU	Intention to Use
KSSM	Kurikulum Standard Sekolah Menengah
LMS	Learning Management System
MCO	Movement Control Order
MV	Motivational Support
OTL	Online Teaching and Learning
PC	Perceived Convenience
PEOU	Perceived ease of use
PLS	Partial Least Squares
PU	Perceived usefulness
SEM	Structural Equation Modelling
SPSS	Statistical Package of the Social Sciences
TALIS	Teaching and Learning International Survey

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TAM	Technology Acceptance Model
TPACK	Technological Pedagogical Content Knowledge
TRA	Theory of Reasoned Action
UB	Usage Behaviour
UNESCO	Nations Educational, Scientific and Cultural Organisation
VLE	Virtual Learning Environment
VR	Virtual Reality
WHO	World Health Organisation

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CHAPTER 1

INTRODUCTION

1.1 Introduction

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This chapter will explain the background of the study, the problem statement, the objectives, the research question, the theoretical framework, the limitations of the study, and the conclusions for this chapter.

1.2 Research Background

In this era of globalisation, education is a crucial element for everyone. It can also be used as one of the criteria for evaluating a national civilisation. Malaysia is a country that is very competitive in developing the education sector. To meet the target amidst the increasingly competitive global environment, the Education Blueprint is established. Notably, the blueprint is a comprehensive plan for the rapid growth of the education system from 2013 until 2025 (Ministry of Education, 2013). The Malaysian

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Ministry of Education (MoE) often monitors the development of the global education sector to ensure that Malaysia is not left behind in the current flow of educational development. The Education Act (1961) has strengthened the position of the education system in Malaysia. Among others, the purpose of the act is to fulfil the intellectual content of the country.

A good education will contribute to developing other sectors, such as the economy, agriculture, and even national politics. Certainly, the world will refer to schools and teachers when referring to education. Schools are essential early educational institutions for imparting knowledge. Teachers convey education in schools through teaching and learning sessions. Each session is planned according to the syllabus and the level of students. Meanwhile, the national syllabus is supervised by the relevant bodies to ensure that it is equivalent to the current level of knowledge. Notably, teachers are crucial in conveying information and ensuring students have adequate knowledge.

According to Manolev (2019) as well as Ghavifekr and Rosdy (2015), most respondents agreed that technology helps manage the classroom and allows students to be more focused and behave better. Teachers have always known education as the basic knowledge development. However, the introduction of technology in the world of education has been a great help to teachers in attracting students' attention for the entire lesson. Moreover, in line with the development of technological sophistication today, the role of teachers as the core feeder has now been expanded. Teachers can now serve as facilitators. In addition, students are provided with all the mediums that can help

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them find knowledge, such as computers and the internet. Thus, technology is the best catalyst for teachers to teach students to be more independent.

Applying technology in a teaching and learning platform is one of the initiatives in the field of education. The ministry also attempted to address the learning problems for students who had to stay at home in the fight to control the vicious spread of COVID-19. Using applications such as Zoom, Skype, Google Meet, Webex, and many more indirectly allows teachers to meet with students online. Additionally, it also served as a medium and space for communication between both teachers and students.

With the current pandemic, online platforms are suddenly becoming mandatory locations to communicate with students. Traditional teacher-student interaction and learning techniques must replace new and modern teaching methods. Hence, incorporating Information, Communication, and Technology (ICT) in education helps teachers achieve the global standard by replacing the regular teaching methods with a more advanced teaching style using technology (Delcker & Ifenthaler, 2021; Ghavifekr & Rosdy, 2015; Hero, 2020). As a result, the boundaries are now being overcome. Students can now learn from a teacher sitting in another corner of the world, and there are no more issues in conveying knowledge.

Most educators approve that using technological tools can improve teaching and learning to be more enjoyable and attract students' interest. According to Manolev (2019), Chen and Tseng (2012), and Cady, Aydeniz, and Rearden (2011), e-learning can be considered as versatile in that it offers a learning environment that is convenient, accommodating, and distant. Each teacher strives to enhance their capabilities and

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knowledge to diversify their learning methods, which is one of the efforts to attract students.

Hence, the most basic requirement for online learning is the teachers' acceptance of the technology. The resistance to accepting this new way of teaching using technology has been a significant issue to the educational society. Therefore, to address this particular problem, a Technology Acceptance Model (TAM) is the most suitable model to assess the teacher's acceptance of the technology. According to Davis (1989), two significant determinants were evaluated in the TAM model. The first is Perceived Ease of Use (PEOU), and the second is Perceived Usefulness (PU). In addition, technology acceptance, as written by Maslin (2007), was defined as a person's inner or emotional state regarding their voluntary or intention to apply a particular knowledge (Mulenga & Phiri, 2018).

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The TAM by Davis, 1989, has widely been employed to describe how users adapt or prefer technology. This is due to the fact that TAM provides background information to get to know the teachers' perceptions of online teaching. Thus, this study has examined the gap and identified the results of the synthesis of the research study concerning the teachers' intention and acceptance of using online teaching, using the variables included and presented in the TAM model.

1.3 Problem Statement

Previous studies (Gabriel et al., 2021; Prasasti, 2021; Tawafak et al., 2021) have thoroughly described problems related to the effectiveness of online communication.

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Communication has become increasingly challenging in line with the COVID-19 pandemic problems threatening the present world. Notably, educational institutions are one of the sectors severely affected by the present situation.

The development of information technology is perceived to be beneficial and positively impact the education sector. Online learning has now been more and more accepted as one of the methods of conducting long-distance education (Adedoyin & Soykan, 2020; Ali, 2020) in both secondary education and K-12 environments (Aberšek & Aberšek, 2011; Ahmed, 2010; An et al., 2021; Arnesen et al., 2019; Bahhouth, Bahhouth & Maysami, 2011). This is due to the vast development of the internet and the advancement in ICT.

The 21st century demanded various challenges of educational and training needs in schools, Higher Education Institutions (IPT), industries, and the trade sector (Caena & Redecker, 2019; Rios et al., 2020; Wrahatnolo & Munoto, 2018). Some challenges include the poor quality of graduates entering the teaching colony, the teaching pedagogy that has not been updated, the lack of teaching resources, and the lack of professional development support (Malik, 2018). Therefore, the existence of this technology is perceived to benefit teachers, especially in terms of delivering educational content. Thus, applying technology in the classroom should be prioritised to produce effective lessons (Falloon, 2020).

Even though studies have proven the advantages of an online learning environment, many teachers still have a negative perception and reaction in accepting and using it in their teaching (Panigrahi et al., 2018; Rasheed et al., 2020). The

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complexity of using an online learning platform can indeed be a big issue for veteran teachers. Those were the turning points in whether the technology could be perceived as convenient. According to Nilam et al. (2020) and Volery and Lord (2000), a virtual classroom commences with the help of ICT based on the traditional classroom.

Teachers with years of experience teaching conventional students might feel reluctant to use technology. They have been accustomed to having face-to-face teaching sessions and being completely present during lessons. At the same time, the lack of computer proficiency may result in a reluctance to accept and use technology in their teaching. According to Swaramarinda (2018) and Hu, Chau, Clark, and Ma (2003), educators with more than 20 to 30 years of teaching and a conservative style may be hesitant to accept technology as their full authority in the old teaching style. This is possibly attributed to the fear of technological complexity.

Online learning can be perceived as a new teaching approach in Malaysia. It is often used as a facilitating tool or to find supporting material for conventional learning. Most teachers utilise it to upload materials or notes to the website, make announcements, or read and answer emails. All these are relatively convenient for younger teachers. With the rapidly growing development and use of technology, teachers are forced to prepare for the implementation of e-learning. This includes online video conferencing, discussion sessions via chat room, and face-to-face telephone conversations online. Consequently, the much older teachers might feel reluctant as they need ample time to prepare.

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Dealing with new technology, one's attitude is the main factor in facilitating learning and understanding. However, one's attitude against the new technology would be crucial in ensuring all the information and lessons taught are understandable (Andreeva et al., 2020; Lawton & Gerschner, 1982). Other than that, the demographics and experience of the teachers also contributed to their attitude toward handling technology. Male and female teachers have different approaches when communicating in a conventional learning environment like online. In addition, their experience in teaching will also reflect in the use of technology in an online learning environment.

With the current pandemic cases that are still increasing, all learning sessions are strictly conducted at home. Convenience regarding time, place, and execution will play a vital role. It is a significant factor in making it easy to use the platform. This will affect whether teachers continue using it to communicate or as a tool for sharing assignments with students. However, staying at home is challenging, especially for moms (teachers) where time is always crucial. Therefore, a user-friendly atmosphere would be the top priority in an e-learning environment (Chang, Cheung & Lai, 2000; Radović et al., 2019).

The easier it is to operate the technology, the happier the user wants to be engaged. Hence, to accommodate with the teacher's ease of use, they wants an effortless system that could cater to their daily time management and workload issues. However, developing and implementing a new skill that is unaccepted and not adequately used by target users wastes resources, time, and money (Cowen, 2009; Kapp & Defelice, 2019). Hence, technology should always aim to lift some weight off the teacher's shoulders, even without boundaries.

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Moreover, if the teacher considers that online learning benefits its teaching, it will encourage them to be more open in accepting the technology. An online platform is indeed perceived as useful when the tools or applications help teachers conduct classes similar to those conducted in a traditional environment. In other words, there is a two-way interaction.

In a study conducted by Panigrahi et al. (2018), Betts and Heaston (2014), Bacoe et al. (2012), and McQuiggan (2012), the teachers indeed felt reluctant to use the various types of online learning techniques. The main reason might be due to the scepticism in a different genre, the concerns on the reliability of it, and the fear of the student's performance, workload, and many others. This indicates that the surrounding attitude will eventually affect the teacher's Intention to Use (IU) technology. Put differently, a new technology user needs to be among other technology users to motivate each other and be guided along the way.

However, according to Hawkins et al. (2012), most teachers demonstrated an undesirable attitude toward conveying lessons through the e-learning environment (Rasheed et al., 2020). This may be due to the lack of knowledge of online pedagogy since an ignorant person will feel reluctant to embrace it. Therefore, unless they are exposed to the skills in using technology, their Usage Behaviour (UB) will remain unchanged (Halili & Sulaiman, 2019; Safi et al., 2018).

The internet UB of a person can also help gain enough information to strengthen one's skills in conducting classes online. The more engaged a person is in using the internet, the more knowledge they gain. In spite of everything, a habit of surfing the

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internet can help in times of need. Online communication tools are now at the top of the list. Unquestionably, there is no suitable way to bridge knowledge during this pandemic. Notably, various factors will influence the teacher's acceptance and adoption of the technology. Those factors would be the variables to emphasise in this study. It is an attempt to extend the TAM by Davis (1989), highlighting the factors that affect the teacher's intention towards using technology.

Based on the problems above, the study of the TAM, a study on the teacher's acceptance of using online teaching is very much required.

1.4 Research Objectives

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RO1: To measure the level of Perceived Convenience (PC), Attitude (ATT), PU, PEOU, IU, and UB of online teaching among secondary school teachers.

RO2: To measure the relationship between PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers.

RO3: To measure the best predictor for IU in the technology among secondary school teachers.

RO4: To investigate the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.

RO5: To determine the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.

RO6: To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers.

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RO7: To determine the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers.

1.5 Research Questions

RQ1: What is the level of PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

RQ2: What is the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

RQ3: What is the best predictor for IU in the technology among secondary school teachers?

RQ4: What is the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?

RQ5: What is the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?

RQ6: What is the mediating role of intention in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers?

RQ7: What is the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?

1.6 Framework of the Study

This study presents a model of technology acceptance by the users. This model is the first modified version based on Davis's TAM in 1986 (Lai, 2017). It guides any review

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of the literature research that explored factors influencing the teachers' perceptions of online teaching. This model is selected since it includes the factors of users' technical experiences and their perception of how using the technology will affect their role as educators.

The TAM was later developed when researchers were required to understand the PEOU and PU elements more deeply. In this writing, researchers attempt to investigate the teachers' demographic, experience, and technological complexity and observe whether it affects the PU, PEOU, or both. In addition, researchers will gather more information on the effect of technological complexity on the Att and intentions of the teachers that would lead to PU and PEOU.

Figure 1 illustrates the TAM and other contributing factors assessed in this research. These factors include the demographic and experience variables. Other than that, ATT and intention are also crucial. Each of these factors is further discussed in this writing.

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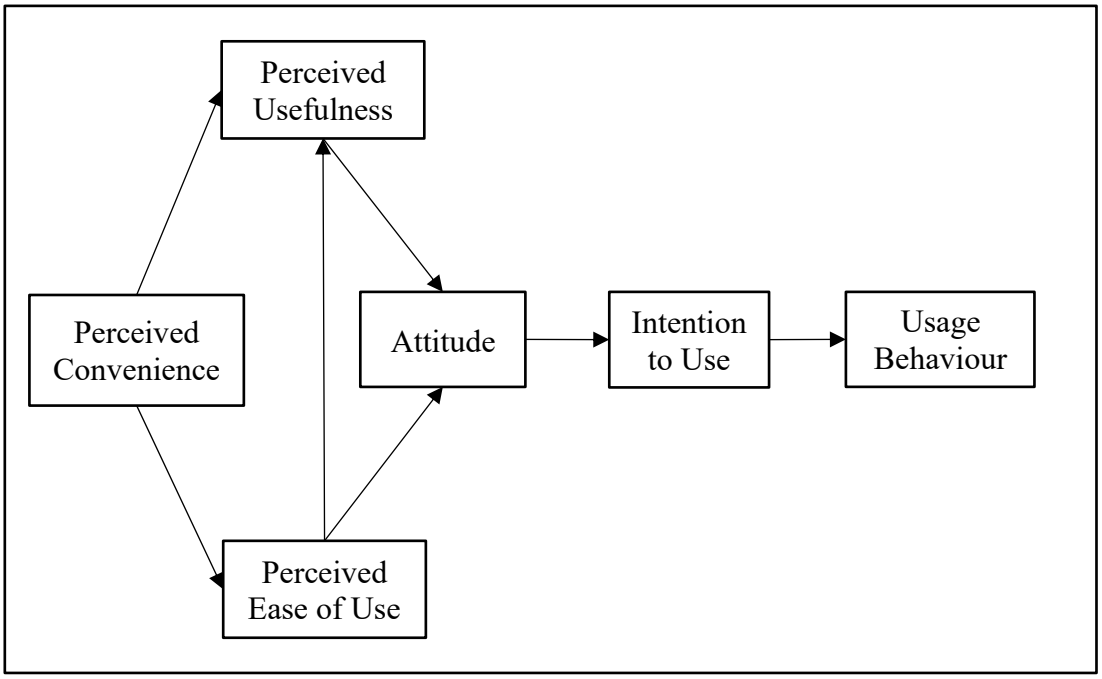


Figure 1.1. Theoretical Framework

1.7 Significance of the Study

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The study's findings will impact both theoretical and pedagogical aspects of how teachers communicate using technology. Increasing teachers' knowledge about technology acceptance in Malaysia is significant. ICT and education have now collided in almost all educational institutions. However, there is no guarantee that they will be entirely accepted in the community (Chen, 2011). Therefore, the success of an existing Online Teaching and Learning (OTL) system could serve as a model apart from contributing more research references to the body of knowledge.

Other than that, this new knowledge would also benefit the teachers, schools, and even MOE in improving the quality of teaching and learning. According to Falloon (2020) and Hong et al. (2001), by learning the teachers' intentions and Att toward

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technology, higher education management will better understand how to help develop a better and acceptable online learning programme for existing and future educators. Accordingly, this study aims to provide the education system, or at least the school, with the information necessary to help teachers be more progressive in adapting to technology in the long run.

Moreover, this study can further enhance the development of TAM in the context of a niche group of educators in the Kinta Utara, Perak district. The model has widely been employed to interpret the factors influencing users' behaviour in using technology in various areas of knowledge. Here, we focus on the teachers' perception of technology.

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1.8 Definitions of Key Terms

1.8.1 Perceived Usefulness (PU)

PU is the degree to which the prospective user feels the behaviour will benefit their work performance (Davis et al., 1989). For example, suppose a teacher believes that online classes benefit him/her, in other words, elevating students' achievement and engagement and allowing efficient instructions that improve the students' attention. In that case, they will be more likely to accept the idea of online learning. To sum it up, PU is the feeling the teacher holds toward the benefit of the online learning class.

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1.8.2 Intention to Use (IU)

An intention is an action or something a person wants to do at a certain stage that is not attributed to a person's mental state (Russell, 2018). IU demonstrates a person's desire to apply something in the future. In this study, IU would best describe how a person reflects on the use of technology in their life (Teo & Zhou, 2014). According to Ajzen (1991) and Turner et al. (2010), IU is sometimes used as a variable since it has been proven reliable in the actual usage of technology among users. For this case, IU should refer to the readiness and preparation of the respondents in continuing online teaching.

1.8.3 Perceived Ease of Use (PEOU)

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According to Davis et al. (1989), PEOU is the extent to which the potential user feels the effort they invested into the system will be minimal. Therefore, they may be reluctant if more effort is required to conduct the online lesson. Furthermore, PEOU will refer to the level of difficulties the respondent faces when conducting an online class.

1.8.4 Usage Behaviour (UB)

UB refers to a continuous commitment to the product. As a matter of fact, it can be considered as the initial adoption of it (K. Park, 1998). Fishbein and Ajzen, 1975, in Theory of Reasoned Action (TRA), described usage as easily being influenced by individual differences via the effect of subjective norms. Subjective norms, on the other

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hand, refer to the person's belief that he or she should perform the behaviour since they are influenced by the person who matters to them.

1.8.5 Perceived Convenience (PC)

PC is the convenience level of time, place, and execution (Candemir, 2018). This study refers to what the respondent perceives or favours when using an online learning lesson. Convenience in time is the freedom to conduct lessons at any time of the day. Apart from that, the convenience of place is the ability to conduct lessons anywhere possible. Lastly, execution is the convenience of respondents conducting a lesson by themselves.

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1.8.6 Attitude (Att)

Att towards use can be an individual's feeling of performing a specific target behaviour. The TAM involves ATTs that predict intentions and assume a rationale that is a deliberate or planned process (Edison & Geissler, 2003). Additionally, ATT can be defined as a positive or negative or even a mixed emotion of something or someone expressed through emotion or action. It is a fundamental factor determining our perceptions and behaviour towards all aspects (iEduNote, 2021).

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1.9 Operationalisation of Variables

As portrayed in the conceptual framework above, this study involved variables listed below. Correspondingly, details on the variable are also included.

1.9.1 Perceived Usefulness (PU)

PU is the teacher's feelings toward the benefit of the online learning class to the students and their work performance. This variable will be using the questionnaire from the original study of TAM by Davis (1985). Ten items were adapted to suit the needs of the study.

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1.9.2 Intention to Use (IU)

IU will measure the willingness of the teacher to continue using online teaching. This variable also had ten items. Almost half of the item is adapted from Chao (2019) and Teo et al. (2011). Note that the researcher and supervisor developed the remaining items.

1.9.3 Perceived Ease of Use (PEOU)

PEOU will refer to the level of difficulties that the respondent faced when conducting an online class. Some of the items from the original TAM by Davis were also adapted,

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and the researcher and the supervisor developed some. In total, there were ten items altogether.

1.9.4 Usage Behaviour (UB)

This research will use UB to measure the strength of teacher intention to perform online teaching. In other words, it refers to the continuous commitment of the teacher in adopting online teaching. The researcher and supervisor developed all of the items in this section.

1.9.5 Perceived Convenience (PC)

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PC will measure the convenience level of time, place, and execution. Convenience in time is the freedom to conduct lessons at any time of the day. Apart from that, the convenience of place is the ability to conduct lessons anywhere possible. Lastly, execution is the convenience of respondents conducting a lesson by themselves. PC contains items adapted from the study of Srivastava et al. (2020). The researcher and supervisor developed the remaining items. In total, there are ten items presented for this variable.

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1.9.6 Attitude (ATT)

For this research, in particular, we are examining the ATT of the teachers toward using technology to conduct online teaching. In this variable, five items were adapted from George's (2004) study. The researcher and the supervisor developed five items to ensure they cater to the listed hypotheses. Accordingly, there are ten items for this variable. All variables will be measured using the 5-point Likert scale, with one being strongly disagreed and five being strongly agreed.

1.10 Summary

In conclusion, the problems teachers face regarding using technology in conducting lessons using the TAM are discussed in this chapter. The research will further develop and substantiate the assertions in chapter two. It will not only illustrate the problems faced by the teachers but also the specific predictors that were selected to prove the hypotheses.

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

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The chapter shall include the background and pieces of literature on the Technology Acceptance Model (TAM). The framework, development of hypotheses, and definitions will be mentioned and discussed in this chapter. It will eventually prove the unique work of this research.

2.2 Technology Acceptance Model (TAM)

The TAM is widely used in researching technology use. TAM is adapted from a previous model of the Theory of Reasoned Action (TRA) by Ajzen and Fishbein in 1980. According to TRA, behaviour can be predicted by an individual's attitude toward performing the behaviour in question through the intervening effect of behavioural intention (Ajzen, 1988; Fishbein & Ajzen, 1975). It is also hypothesised that social

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pressures or subjective norms influence an individual's intention to perform a behaviour. This results from the individual's perception of what others will think about them if they perform the behaviour questioned (Vallerend, Deshaies, Cuerrier, Pelletier & Mongeau, 1991).

TAM is undoubtedly credited to Fred Davis, as he originally proposed in 1985. Davis wanted a simpler model to be explained and examined in terms of the use of technology at work. It has become the most recognisable model for explaining users' behaviour towards technology. Davis used four major variables in his model: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude (ATT) toward using, and Actual system Use (AU). It is stated that the Att demonstrated while using comprises two major variables: PU and PEOU (Davis, 1985), as displayed in Figure 2.1.

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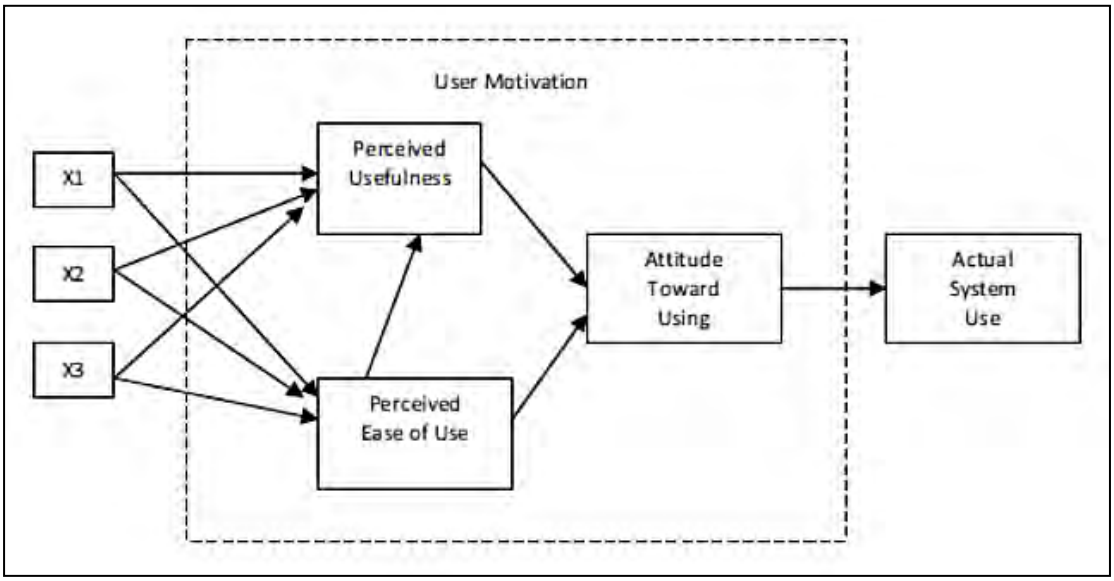


Figure 2.1. Original Technology Acceptance Model (TAM)

In recent years, TAM has been employed in research in different areas, technologies, subjects, and fields. It can be used to measure the use of technology in various fields to help companies or agencies improve their quality regarding the

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technology itself or the employee. However, most information system research has recently considered TAM as their theory (Lee et al., 2003). Consequently, studies have indicated an inadequacy of TAM in catering to the relationship between the technology and the actual adoption of the technology (Sullivan, 2016).

TAM is more relevant to measuring individuals' technology acceptance and usage rather than in a corporate environment (P. Ajibade, 2019). However, data from a study reveals that TAM successfully predicts adoption behaviours in international settings but exhibits a certain glitch in different cultures. This is attributed to the fact that it originated in the United States of America and is designed to cater to those particular nations (McCoy et al., 2007).

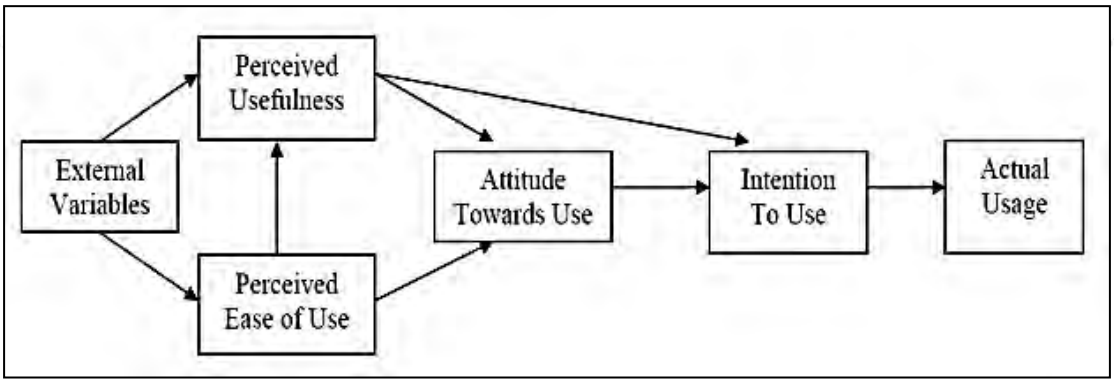


Figure 2.2. The first modified version of the Technology Acceptance Model (TAM)

However, to cater to the vast development of technology, Davis first modified the model to explain computer Usage Behaviour (UB) further, as illustrated in Figure 2.2. This first revised model aims to explain the acceptance that leads to behaviour with a wide range of technology and the user population. The basic TAM only assessed two variables, PU and PEOU, while this new modified version included ATT to describe the variables better.

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This version will be used in this study since the researcher will examine how Att affects the PU, PEOU, and PC, eventually leading to the subjects' Intention to Use (IU) and, finally, adopt the system. Davis, Bogozzi, and Warshaw proposed the modified version of TAM in 1989. The version suggested by Venkatesh and Davis in 1996, TAM2, focuses on behaviour intention that eliminates the construct of ATT (Lai, 2017). Finally, in fulfilling the research objectives (RO) and hypotheses listed, the first modification, TAM, is selected for further use in this study.

2.3 COVID-19 Pandemic and Online Education Platform Usage

In January 2020, the World Health Organisation (WHO) announced the virus Corona as a pandemic. This virus was later named COVID-19 and has since had a major impact on the economic sector and education worldwide. The first wave of the virus brought a big surprise to health systems in all countries. As Mike Ryan, Executive Director of the WHO, mentioned in his January 29, 2020 speech, *"This is not just a bad flu season. Take one look at what is happening in some health systems worldwide. Look at the intensive care units; they are completely overwhelmed. Doctors and nurses utterly exhausted."*

The virus highlighted as arising from Wuhan, China, has now been reported worldwide. Thus, the government must prevent this virus from spreading to the vulnerable, such as the elderly and children. In the early days of the pandemic, WHO promoted a social distancing policy in all countries to limit the number of cases and lower the possibility of getting infected. Furthermore, countries have been advised to

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take extra precautions. The Movement Control Order (MCO) closes all the sectors, including the economy, entertainment, and education (Feuer et al., 2020).

During the global health crisis, the education sector is responsible for protecting the well-being and welfare of the students. Apart from that, they also have to ensure the continuity of their core business in developing students' academic progress. Acting as a route in relieving poverty to the state, sustainability in security and development strategies were necessary for higher education (Wahab et al., 2020). In the effort to flatten the infection curve globally, all countries, international, multisectoral collaborative efforts are fully required to ensure the health system can maintain the necessary capacity to fight the flux of COVID-19 cases apart from protecting the vulnerable in the world's population (Vervoort et al., 2021).

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The first-ever MCO has affected 290.5 million students worldwide due to the closure of education facilities. Now, after more than a year of combating the virus, there are still students worldwide affected by the school's partial or full closure. According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), as this health crisis still prevails, more than 100 million children worldwide have been dealing with reading and writing problems, putting them below the proficiency level. As a solution, countries have implemented online teaching methods to cope with the situation.

Considering the various online platforms, education is suddenly rushing to convert the curriculum from conventional to technological. Correspondingly, online teaching and attending one is challenging for teachers and students, especially in

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primary school. However, despite MCO, teaching and learning must be implemented to ensure no single child is left behind (Tamin & Mohamad, 2020).

Statistics on Information Communication Technology (ICT) usage reported by the Department of Statistics Malaysia (DOSM) in 2020 revealed a slight growth in internet users. Table 1 below summarises the usage of ICT for three consecutive years, comparing internet users with computers and mobile phones.

Table 2.1

Usage of Information Communication Technology (ICT)

	Mobile Phone (%)	**Computer (%)**	**Internet (%)**
2020	98.2	80.0	89.6
2019	97.9	72.1	84.2
2018	97.9	70.5	81.2

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Still, the increase in ICT use does not reflect the whole picture of online education since the skills matter. In 2020, five top ICT skills were listed in the statistics conducted by the DOSM. The highest percentage of the skill was using copy and paste tools to replicate or copy information within a document (87.7%). The following skills are duplicating or moving a file or folder (86.4%), followed by connecting and installing new devices (72.0%), creating an e-mail as well as attaching files (69.0%), and transferring files between a computer and other mobile devices (68.3%).

The data above indicates that more than half of the population was already equipped with a basic knowledge of ICT. It is a significant relief to the education community to comprehend that the online teaching journey will be conducted smoothly

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without the fear of students being left in the dark. Nevertheless, there is more that needs to be fulfilled by the teachers. Notably, the pandemic has greatly impacted the whole teaching and learning structure. Therefore, it is a challenge when conventional learning suddenly becomes irrelevant.

In the race against time and education, prompt measures must be taken. It is proven that using ICT to spread and gain knowledge could increase students' scores when virtual-based integration occurs (Ayob & Adnan, 2019). Thus, online platforms are the best mediums for teachers to reach students and convey knowledge. Furthermore, online learning would greatly help implement learning since technology can be a bridge for faculty in imparting knowledge to students (Sanjaya, 2020).

For example, an Online Teaching and Learning (OTL) readiness study examines the links between teacher background characteristics, including gender, age, and experience, and instructors' readiness levels (Scherer et al., 2021). Thus, understanding the extent to which such characteristics may explain whether or not teachers think they are ready for OTL is crucial since it may assist in identifying possible support needs (Christensen & Knezek, 2017; Cutri et al., 2020; Scherer et al., 2023). Remarkably, parents are suddenly becoming the most extensive support system in helping the students, and teachers make this whole teaching and learning process easier. Not all parents work from home. Hence, the teachers might face various challenges. However, teachers already equipped with the knowledge of software and ICT will be familiar with teaching online when the closing of school is imposed.

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Most teachers have claimed to have maintained a good rapport with parents and students. In a study in Germany, almost 90% of teaching staff managed to interconnect with the students and parents regularly. However, only 20% reported conducting an online lesson at least once a week. However, almost 70% did not use any digital devices to provide any online lessons (König et al., 2020). Research has summarised various suggestions which are hoped to be improved recently. The main factor to be taken seriously is improving the support service, such as providing comprehensive maintenance to maintain a positive learning ATT (Chen, Peng, et al., 2020).

Beginner instructors exhibit lower levels of confidence in their teaching than experienced teachers with five or more years of experience, according to the Teaching and Learning International Survey (TALIS) (Scherer et al., 2019). According to teacher turnover studies conducted in the United States (US), young teachers leave schools at a higher rate than their middle-aged colleagues, and women are more likely to leave schools (Borman & Dowling, 2008; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2001; Kukla-Acevedo, 2009). These findings may be attributed mainly to the fact that younger female teachers leave schools for family reasons. Nevertheless, these teachers are also more likely to return to teaching later in their careers (Allen, 2005).

Many teachers' computer literacy has grown to ensure that even new instructors can swiftly assess a range of software packages and filter, import, and export information to better fit their curriculum needs (Mumtaz, 2000). According to Downing and Dyment (2013), Hung (2016), Martin, Budhrani, and Wang (2019), and Scherer et al. (2021), more experienced instructors think they are more (or worse) suited for OTL than less experienced teachers. This assumption can lead to an overemphasis on

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assistance for new instructors while putting veteran teachers in danger by providing insufficient assistance (Scherer et al., 2023).

2.4 Teachers and Online Learning Platforms

As the pandemic worsens, the online platform is the only available platform to maintain contact and convey knowledge to students. Even though more teachers believe that school or departmental policy is a vital reason for adopting digital courseware, it still negatively affects their behavioural intention to continue using the system (Halili & Sulaiman, 2018; Park et al., 2007).

In their study, Dakduk et al. (2018) demonstrated that when a person has a decent amount of time to learn to use a particular technological application, it increases the knowledge of how to use it better, and their act of assistance will become less appealing. Whether to keep using it will depend on how easy, good, and pleasant it is. Subsequently, throughout the beginning of creating and adopting this new learning setting, a person should be resilient, innovative, and perseverant since they are pioneers in an unfamiliar terrain (Anderson, 2004; Malik, 2018).

The first problem for educators is the lack of an online learning platform where all students and teachers can easily communicate. Additionally, preparing online learning material is the utmost and extreme challenge educators face, setting aside the time consumed. Moreover, the teachers are unequipped with knowledge on how to boost the student's motivation and engagement throughout the session. Apart from that, the study results reveal the teachers' visions in developing a solid online platform,

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designing online templates, and improving teaching quality is challenging to attain (Nugroho et al., 2021).

Even though there is doubt about implementing e-learning, the administration's perception of the ease of use of the technology and their ability to master Learning Management Systems (LMS) and other application tools played a significant role in their satisfaction with OTL. In addition to continuous training and support, social influence significantly changes the institutional culture (Wingo et al., 2017). In some cases, educators were concerned about how online platform would jeopardise their overall images. They were also unaware of how the teaching would be evaluated, mainly in promotion and occupancy developments. Notably, the barriers or issues that are pretty common in OTL are time, commitment, and workload. It is proven that instructors would gain more experience as soon as they adapt to the online environment. The institutions provide mentoring, training, support, and recognition for educators, making it easier for them to use the online platform, and they are more grateful (Wingo et al., 2017).

Most teachers were very optimistic about the impact and benefit of the courses. They would gladly learn more about the pedagogy of online teaching, which is very encouraging. They also indicated that they were very familiar with Google Classroom. Furthermore, the teachers were also encouraged to incorporate the course into their teaching practice. In contrast, all of the teachers indicated that they were unfamiliar with Microsoft Teams (Badiozaman et al., 2020). The teachers, however, do not consider the applicability as high as that of Google Classroom. Hence, the qualitative results confirm this and outline the need for specific professional development

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programmes that include pedagogical and technological support (Badiozaman et al., 2020).

In conclusion, integrating ICT in the classroom will require serious consideration to achieve higher competency in the country's education system. This will help put the nation on par with other nations and produce a better future in the workforce. Apart from that, the younger generation has all been conditioned with gadgets as early as their first day of life. Notably, integrating ICT could broaden the spectrum of teaching and learning while bringing it to another level of education.

2.5 Malaysian Teachers Online Learning Platform

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Surprisingly, it has been almost two years since we adopted online teaching in Malaysia. Thus, there is almost no reason for teachers to neglect the advantages served throughout the days of MCO. However, with the lack of courses and practises on how to deal with certain courseware used in online teaching, more and more educators are having a tough time conducting classes online (Farah et al., 2021). A survey constructed from an interview was used to explore feelings and emotions and discover what happens in school. It was then discovered that teachers are still attached to the idea of Differentiated Instruction (DI), as it is becoming worse when classes have to be held online due to the pandemic (Idrus et al., 2021).

A study that has been conducted recently suggested that almost all of the teachers were computer literate and had no problems in implementing a Virtual Learning Environment (VLE) in their classes. Thus, computer literacy should not be a

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problem. Most teachers in this study had a long teaching experience, with more than half of respondents having teaching experience of ten years or more. In addition, most respondents had between six months and nearly one year of experience implementing VLE (Haziqah et al., 2021).

There was a significant relationship between the respondents' teaching experience and using VLE experience. This indicates that the respondent's year of teaching experience influenced their experience in teaching pedagogy. However, there is no significant relationship between computer literacy and experience in using VLE. This concludes that teachers with more teaching experience were not essentially the teachers with high computer literacy skills and vice versa (Haziqah et al., 2021).

Technology-enhanced teaching and learning are more effective compared to traditional methods. Using ICT tools and equipment creates an active learning environment that is more engaging and effective for teachers and students. In a study conducted with teachers in Kuala Lumpur, Malaysia, the teachers were not allocated ample time to learn and become familiar with ICT (Ghavifekr & Rosdy, 2015; König et al., 2020). The use of ICT in teaching has more to do with practice and theory. Therefore, teachers should be provided ample time to learn and explore to use it in online teaching. The need for teachers to be knowledgeable and polish their skills and knowledge in ICT could improve their teaching methods and approach to meet the demands of 21st-century learning (Ghavifekr & Rosdy, 2015; Nilam et al., 2020).

As educators, teachers must first be ready to adopt something new. As for this online learning, the teacher's readiness to use a VLE as a teaching tool was moderate.

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This might be attributed to the fact that they are not ready to use all the features of the VLE. The teacher's acceptance was also moderate, similar to the acceptance of usefulness. Some teachers accepted the implementation of VLE and deemed it useful in their teaching process, while others did not (Haziqah et al., 2021).

This is one of the reasons for teacher incompetence in integrating online classrooms into teaching and learning, as they have inadequate support in using technology devices. Results reveal that teachers lacked effective training in using technology-based materials (Tamin & Mohamad, 2020). However, primary English as a Second Language (ESL) teachers lack enough support and guidance to manage and practise Google Classroom with their pupils (Ghavifekr & Rosdy, 2015).

On the other hand, Allam et al. (2020) suggested that the readiness to use technology-enhanced teaching and learning is only moderate. Moreover, teachers already know how to use technology but have not previously encouraged students to utilise technology devices in their learning. Some teachers agreed that they do not teach their pupils to find information using technology but use it as a teaching and learning tool. In addition, teachers in school had limited access to technological devices such as computers and network connections.

Primary school teachers stated that many students could not participate in virtual classes. Internet access is challenging, particularly in rural areas (Hassan, 2020). This situation could affect teachers' ATT toward online teaching. Att can result in better achievement and indirectly boost motivation. According to the Oxford Learner's Dictionary, ATT represents how a person thinks and feels about something/someone;

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how a person behaves towards something/someone represents how they think and feel. Moreover, one's ATT towards different things or people varies from time to time. For example, in the past, online platforms were widely used as a teaching tool in the classroom to attract and increase students' interest in certain subjects. There are 33.59 million internet users in Malaysia in 2024, or 97.4% of the country's population, which is the same as the previous year. The average daily use is 8 hours and 177 minutes, which is an increase of 2.5%, or an additional 11 minutes, over the prior year's internet usage time (Howe, 2024).

A study examining teacher thinking has been proven significant in the connection between teachers' thinking, beliefs, and ATT concerning their behaviour and actions (Ramli & Yusoff, 2020). Moreover, teachers' perceptions were an essential factor influencing their behaviour (Idrus et al., 2021). A study proved the existence of a positive relationship between the teacher's self-efficacy and the teaching practice of DI, which in turn proved to have a key influence and can predict teachers' practice of DI in the classroom (Ramli & Yusoff, 2020). Notably, the most common factor affecting mobile learning (m-learning) acceptance is self-efficacy, followed by individual norms, satisfaction, mobile anxiety, ease of use, social influence, innovativeness, and satisfaction (Ramli & Yusoff, 2020).

It is believed that the longer the teacher's experience, the more complex it is to adopt this new teaching platform. Apart from that, a study has proven that their readiness, perception of usefulness, and ease of using the VLE in teaching were some factors that contribute to the teachers' acceptance. Malaysian teachers have good computer literacy skills as they do not have problems using basic ICT skills. This

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includes Microsoft Office, internet browsers, and social networking sites (Haziqah et al., 2021).

However, some teachers felt they still had difficulties using VLE during classes. Accordingly, more training and practice might be required to familiarise them with all the tools in VLE. However, there was no significant relationship between experience and the teacher's perception. Still, there is a significant rather weak relationship between VLE experience and the level of readiness, acceptance, and ease of use. The results suggest that teachers' teaching experience has a slight influence on the perception of the teacher. The teachers' experience with VLE influences their readiness, acceptance, and ease of use (Haziqah et al., 2021).

Another study has demonstrated that the teachers' levels of stress and working motivation throughout the MCO were moderate. Stress also has a relatively weak relationship with work motivation (Sulaiman et al., 2021). Eventually, we have to admit that this pandemic has changed the landscape of our educational platform in Malaysia and the world. Most individuals, including children, already have the basics of operating and using computers, installing software, and using search engines (AlSaqqaf & Ke, 2021).

2.5.1 The Relationship Between Attitude with Perceived Usefulness and Perceived Ease of Use

E-learning readiness is the ability of an individual to use e-learning resources and multimedia technology to progress and improve the quality of learning, as suggested

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by Kaur and Abbas in Yilmaz (2017). It is discovered that e-learning readiness consists of numerous aspects such as self-efficacy in computer/internet use, online communication, self-directed learning, student control, and the motivation itself towards e-learning (Borotis & Poulymenakou, 2004; Demir & Yurdugül, 2015).

Users more motivated to use electronic courseware would perceive the system's usefulness and ease of use (Baki et al., 2018; Park et al., 2007). PEOU is the level at which the users expect the target system to be as effortless as possible (F. D. Davis, 1989). A study by Hansen et al. (2018) and Park et al. (2007) proved that behavioural intention directly affected PEOU.

Online communication self-efficacy and independent learning are positively related to e-learning and engagement. It is a prerequisite to thoroughly engaging and attentive learning with an e-learning platform. However, the belief in mastering technological devices is also essential, as the main platform of e-learning is technological devices. The teacher mentioned they did not obtain a detailed explanation of the topics; hence, they experienced confusion. They also experienced stress since there were countless tasks to be performed individually.

Interference with home learning and a lack of parental monitoring would be the key concerns in an online self-learning environment. However, methodical advancement of distance learning is assured with timely online training, adequate online materials, accessible live broadcast capabilities, and a solid teaching platform (Ang & Zhang, 2021). While relaxing circumstances and technical complexity are not

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on the list, computer self-efficacy, perceived satisfaction, and students' impression of external control all substantially impact PEOU (Huang et al., 2020).

In their research on the school-working environment, Bascia and Rottmann (2011) underlined the importance of school-working conditions for teacher motivation, effectiveness, job satisfaction, and student learning opportunities. Previous research has highlighted some of the most critical factors contributing to the quality of teachers' work. This includes enough resources, moderate workloads, collegial teamwork, professional development opportunities, leadership support, and decision-making possibilities (Toropova et al., 2021). When educators' confidence and competence increased, they considered their comprehension of IT to have risen significantly. They modified their working techniques, and their enthusiasm for their jobs increased. Accordingly, students benefited the most from instructors' skilful use of tools for generating high-quality instructional materials and enhanced access to resources (Mumtaz, 2000).

When Motivational Support (MV) is provided to teachers, they are more likely to find Augmented Reality (AR) and Virtual Reality (VR) user-friendly for reference. The high degree of PEOU affects teachers' Att towards using AR and VR in practice. This means that educators with AR/VR-based instruction acknowledge its usefulness and ease of use in teaching and learning (Jang et al., 2021). Based on the argument, this research derived the following hypotheses.

H4: PEOU is positively correlated with ATT.

H5: PU is positively correlated with ATT.

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H12: Att mediates the relationship between PEOU, PU, and Perceived Convenience (PC).

2.5.2 The Relationship Between Perceived Convenience with Perceived Usefulness and Perceived Ease of Use

A congested network and unstable signal, a phenomenon of jamming in the middle of teaching, would harm making the session smoother and clearer, especially in communication among the teachers and students (Wendong, 2020). Studies have proven that both teachers and students were satisfied with online teaching. Nevertheless, they faced several problems, such as difficulties adapting to the new teaching method and unfamiliarity with the software or network platform, eventually making it harder to use (Zheng, 2020).

Curvilinear linkages, on the other hand, were observed in certain studies on general teaching self-efficacy. For example, Klassen and Chiu (2010) identified an inverted U-shaped association between years of teaching experience and three types of self-efficacy (classroom management, teaching methods, and student participation). According to this research, self-efficacy peaks with experience and declines with further experience (Scherer et al., 2019).

Interference in home learning and lack of learning monitoring would be the main concern in online self-learning. However, timely online training, ample online resources, accessible live broadcast tools, and stable teaching platforms have ensured the systematic progress of online teaching (Ang & Zhang, 2021). PEOU is significantly

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influenced by computer self-efficacy, Perceived Enjoyment (PE), and students' perception of external control, while easing conditions and technological complexity are out of the list (Huang et al., 2020).

In a student satisfaction research, the students stated that after the second month of use throughout the semester, positive opinions and self-efficiency through the e-portfolio were often at the top of their list as tools to manage their learning and evaluation. Nonetheless, the expected effect on their learning was not very significant. However, the students emphasised that the e-portfolio was valuable as a progressive personal learning tool (Razali et al., 2021; Olatz & Luis, 2009). All of the above literature could be derived from the listed hypotheses.

H1: PC is positively correlated with PU.

H2: PC is positively correlated with PEOU.

2.5.3 The Relationship Between Perceived Ease of Use and Perceived Usefulness

PEOU positively affects students' interest in using Google Classroom (Yolandari et al., 2020). Almost 77.5% of science teachers had difficulties with online learning sessions. Among the factors contributing to the problems are technology, students, and teachers. Internet access was a technological factor equal to a large barrier (42.4%) in online learning. Students also contribute to the challenges of low motivation, lack of time management skills, and communication devices such as smartphones. Despite that, the teachers are also responsible for difficulties using online learning applications and explaining concepts (Wisanti et al., 2021).

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Both educational institutions and individual teachers have proven to be entirely satisfactory in preventing the decline of the education system. However, they have lost contact with 6-10% of students, and teacher workloads have increased significantly, creating time management challenges for individuals (Giovannella et al., 2020). Music teachers argued that teaching online was time-consuming and losing a satisfactory work-life balance was stressful. They were also aware of the strengths and limitations of the e-learning platform for professional development and requested more institutional support and opportunities (Biasutti et al., 2021).

Work satisfaction is defined by Evans (1997) as *"a state of mind determined by the extent to which the individual perceives her/his job-related needs to be met"* (p. 328). Furthermore, workplace comfort and job fulfilment are two significant components of teacher work satisfaction. The former refers to an individual's contentment with job conditions and circumstances. In contrast, the latter refers to satisfaction with personal accomplishments within relevant job aspects (Toropova et al., 2021).

However, there is a positive connection between time management and learning outcomes. Furthermore, it highlighted that students' time management throughout the online classes was more determined by the variable of following the schedule set earlier. The study recommends that students practise time management independently during distance learning with the help of teachers and schools (Sari et al., 2021). Deriving from the above literature, hypothesis 3 is listed.

H3: PEOU is positively correlated with PU.

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2.5.4 The Relationship Between Perceived Usefulness and Intention to Use

Teachers were only moderately content with teaching virtually, implying that it is not a satisfactory replacement for in-person teaching for virtual voice teaching (Murdaugh et al., 2020). Teachers indicate their preferences for blended learning in future activities (Giovannella et al., 2020). Furthermore, it has also been established that PU directly impacts IU (Mohammad AlHamad, 2020; Wahab et al., 2020).

According to one research, teachers' intentions to utilise technology in their everyday teaching are relatively high, increasing confidence in developing digital skills as they begin to recognise the importance of technology in the education system (Rahayu & Wirza, 2020). It is apparent from the study's results that educators believe online learning platforms are effective in their employment (66.2%) and boost their productivity (64.4%) and job performance (64.2%).

Even though teachers tended to use instructional strategies that replicated standard classroom dynamics, the opportunity to work in this comfort zone led to a positive feeling about using technology, a perception of increasing mastery of digital skills, and a change in approach to educational processes. This led to an expansion in the perceived sustainability of online teaching, with around a third of teachers expressing a desire to adopt a blended configuration for future educational activities (Giovanella et al., 2020).

Preservice teachers' Technological Pedagogical Content Knowledge (TPACK) significantly affected their self-efficacy and PEOU of handling technology. It also

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positively influences their PEOU and PU of using technology in the classroom. Moreover, it eventually affected the teacher's IU technology (Joo, Park & Lim, 2018). In promoting the usefulness of technology, higher education educators have to become role models for students by implementing and demonstrating advanced approaches to technology-enhanced learning (Fokides, 2020). This study also demonstrated that a lack of technical skill and experience might cause anxiety, confusion, and a lack of confidence, resulting in a rejection of online education (Tsegay et al., 2022).

In a Structural Equation Modelling (SEM), results reveal that PU, Att towards technology use, the organisation's culture, and teachers' perception of the significance of school policies on technology use significantly impacted IU regarding technology usage (Huang & Teo, 2020). A complete 84 surveys of student teachers in Sweden demonstrated that the student teachers' PU directly influenced IU (Mohammad AlHamad, 2020; Ma et al., 2005). All could be derived from the following hypotheses.

H8: PU is positively correlated with IU.

2.5.5 The Relationship Between Perceived Ease of Use and Intention to Use

The challenging part of conducting an online job is receiving online support. In addition, the support teams were also working from home. All the problems and issues that arose had to be addressed online or through a phone call. Apart from that, one's colleagues were the best source of support, which can be performed online or through a phone call due to the absence of regular contact (Ruoslahti, 2020). Respondents also reported the lack of time and resources to replace the additional time in converting hard

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copy materials to online, which is an administrative matter (Ruoslahti, 2020). Unlike traditional learning, online learning has an advantage in terms of the time and location to conduct and be in class. Nonetheless, the shifts to the unavailability of effective supervision in study locations, tasks, and companions could lead to weak initiative and low efficiency (Chen et al., 2021).

PEU has been proven to indirectly influence teachers' IU (Teo et al., 2019; Wahab et al., 2020). During the COVID-19 outbreak in India, the main challenges in communicating lessons online were a lack of basic facilities, external distractions, interruptions from family members during the learning session, and conducting evaluations (Joshi et al., 2020). Teachers' difficulties using ICT, particularly in creating material for online learning, explaining the material, assessing it, and receiving feedback, lead them to believe that online learning platforms are either worse than traditional teaching and learning or inconvenient to use (Rahayu & Wirza, 2020). Asharaf et al.'s (2021) study demonstrated that efforts to integrate blended learning in Chinese schools would be challenging due to teachers' ATT and pedagogical abilities, as well as the exam-oriented nature of the Chinese education system. This suggests that the Chinese education system's shift to online learning may be difficult and fascinating (Tsegay et al., 2022).

According to the study's findings, teachers' technology-related personal characteristics (such as computer expertise, computer self-efficacy, and personal innovativeness), personality traits (such as extraversion, conscientiousness, and openness to experience), and demographic characteristics (such as age), all significantly

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predict teachers' IU VR technology in management education (Gupta & Bhaskar, 2023).

A study was conducted in Sweden to investigate student teachers' perceptions of technology use and computer technology use concerning their IU. It suggested that the student-teacher subjective norm, the least possible influence of external expectations, had no significant effect on their IU computer technology, either directly or indirectly. However, PEOU indirectly affected the student teacher's IU (Teo et al., 2019; Ma et al., 2005). All the arguments listed are sufficient to develop this hypothesis.

H9: PEOU is positively correlated with IU.

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2.5.6 The Relationship Between Attitude, Intention to Use, and Usage Behaviour

Apart from facing various issues in conducting an online lesson, 77.4% of teachers attempted to use the online platform by giving material online and creating slide presentations. Others sometimes did group discussions online. Meanwhile, a smaller percentage of educators used online classes only for task assignments and to evaluate learning outcomes. However, praise should be given to science teachers' efforts since science teachers can learn through reading, discussion, and hands-on activities. They were able to manage online learning without optimising students' varied learning experiences (Wisanti et al., 2021).

A survey response revealed that all variables significantly impact UB except for self-monitoring. At the same time, behavioural intention is a mediator between PU,

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PEOU, and UB (Vinnikova et al., 2020). IU appears to be implemented and facilitated by the usefulness of m-learning services. Therefore, its practicality leads to more acceptance among students in higher education (Al-Adwan et al., 2018; Alzaza, 2013).

Note that institutional aid can be provided in a variety of ways. Institutional support, for example, through establishing a shared vision for OTL, may motivate instructors to embrace new technology-enhanced teaching approaches (Tondeur et al., 2019). Furthermore, institutional support for teacher collaboration has increased teachers' innovativeness and improved teaching practices (Blomeke, Nilsen, & Scherer, 2021; Scherer et al., 2023).

A survey question used to collect data from college teachers and students reveals that system features, interface features, and individual differences are the key to the UB, as well as the behavioural IU mobile library applications. Furthermore, these factors can be considered as the external driver of users' behavioural intention, while the internal driver of users' UB intention is individual differences (Ming et al., 2021). Based on the argument, this research could be derived from the following hypotheses and research questions.

H6: ATT is positively correlated with IU.

H7: IU is positively correlated with UB.

RQ1: What is the level of PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

RQ2: What is the relationship between PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

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2.5.7 The Mediating Role of Perceived Usefulness in Mediating Attitude and Intention to Use

On the other hand, Davis (1989) specified PU as the level at which a person believes their job performance would be boosted or enhanced using a particular system. Diksani et al. (2014) also stated that they will use a system if they consider a system beneficial. When they feel that it is not useful, it will be ignored. The most striking finding was that PU was 50% more prominent than ease of use in determining usage, underscoring the value of developing appropriate functional capabilities into new systems (Davis, 1991).

Performance expectancy, effort expectancy, and hedonic motivation are the best predictors of the IU blended learning among senior and middle-ranking executives, suggesting that blended learning seemed to have more advantages in learning, making it more efficient and of higher quality. They believe the easier it is to use, the more entertaining and pleasing it is, and the more likely they will intend to use it (Dakduk et al., 2018). Correspondingly, college students perceive e-learning as benefiting the learning process rather than helping them prepare for study. When using blended learning, students could access learning material before class. Students were already provided with the instructions and learning outlines for independent study. Therefore, it will be more convenient for the lecturers to conduct classes as the students are already equipped with the learning material (Syaifuddin, 2017).

PU positively correlated with students' interest in using Google Classroom as a pillar system for understanding e-learning (Yolandari et al., 2020). Teachers need to

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encourage and support students' effective use of self-regulation strategies. Learners with low self-regulation might not realise the benefits of concept mapping in problem-solving activities. Using the combination of teaching and learning tools with the use of technology in an online platform promotes active learning while enabling the development and acquisition of self-regulated learning among students in the medical and health-related professions (Alt & Naamati-Scneider, 2021).

Educators appreciate online learning platforms since they offer learners a sense of self-connection to both sides, a supportive environment, and transparency despite the lack of physical presence in the same room (Wasserman & Migdal, 2019). Aside from that, teachers demonstrate good acceptance of the online system even though more than half of respondents disagree with the usefulness of engaging with a learning environment on the internet (Rahayu & Wirza, 2020). A study was conducted to observe the relationships between a number of factors pertaining to older people's PEOU, ATT, and IU technology in daily life. More than 400 respondents were enrolled in the programme, and data analysis demonstrates that perceived technology's ease of use positively impacts perceived technology utility (PU). Similarly, the development of favourable ATT toward utilising digital tools is perceived as an indirect consequence of the PU on the IU resources (Liesa-Orús et al., 2023).

Technostress does not directly influence users' intentions to continue utilising portable technology. Instead, PU is a significant factor in users' intentions to continue. Teachers' ATT toward mobile technology and its PU are negatively impacted by technostress (Khlaif et al., 2023). The results demonstrated that the two most critical factors in predicting the use of e-learning were ATT toward e-learning and e-learning

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experience. In contrast to earlier research, PU and simplicity of use were not significant predictors of behavioural intention (Mailizar et al., 2021). The findings demonstrated that IU is directly impacted by both Att toward usage and PEOU. Perceived knowledge and usefulness for teachers, however, demonstrated an indirect relationship. These findings highlighted the need to persuade student teachers that utilising technology in the classroom is simple (Luik & Taimalu, 2021).

This study analyses three key characteristics: Att, PU, and perceived social impact. These variables may influence their behavioural intent to utilise gamified applications. This study, which uses a sample of 157 female EFL teachers, is quantitative. Teachers' behavioural intentions to utilise gamification are significantly predicted by ATT, PU, and perceived social impact, according to data collected through a questionnaire (Asiri, 2019).

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The SEM results revealed that teachers' behavioural IU technology was significantly influenced by PU, ATT toward using technology, organisational culture, and teachers' perceptions of the significance of school policies on technology use. ATT was strongly influenced by PU and PEOU, while PU was highly influenced by PEOU. Furthermore, organisational culture had a notable impact on the perceived significance of school policy. By providing empirical evidence of the influence of organisational culture and the perceived significance of policy on teachers' adoption of technology in the Chinese setting, the findings contributed to a deeper understanding of technology acceptance theories (Huang et al., 2021).

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PEOU was revealed to be a moderate determinant of PU and Att toward usage. In contrast, PU was highlighted as a high predictor of behavioural IU technology, according to results from the SEM analysis (Eksail & Afari, 2020). The literature above will lead us to the listed hypothesis and answer the research question that will be further discussed in the findings later.

H10: PU mediates the relationship between ATT and IU.

Based on the literature above, this study formulates the research questions.

RQ3: What is the best predictor for IU in the technology among secondary school teachers?

RQ4: What is the mediating role of PU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?

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2.5.8 The Mediating Role of Perceived Ease of Use in Mediating Attitude and Intention to Use

PEOU is the degree to which a person believes using a certain system would be effortless (Davis, 1989). Accessibility is a level of comfort for a person in achieving goals related to the behaviour of communication (Hofmann & Müller, 2022; Muhammad Rohim, 2018). A study discovered that the workplace impacts the nature and quality of the learning experience, mainly through funding, time management, technology, and other sources. Apart from that, learning influences the workplace in that pedagogical change agents apply their knowledge about student-centred methods to classroom practice (Jagers et al., 2019; Crossman, 2005).

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It has been proven that user factors do not directly influence satisfaction, while platform availability has the most influence on user satisfaction (Chen et al., 2020). Using online education could result in several problems, such as the untimely transmission of video information, slow access to the platform, and untimely responses to questions in class. Students hope for consistent supervision after class and timely comments from the teacher to improve the learning effect (Chen et al., 2020). To improve learning outcomes, a virtual educational environment must be monitored regularly. Additionally, most learning systems demonstrate delayed video transmission and substantially slower access (Chen, Cong, et al., 2020). Moreover, respondents highlighted that online video education saves time and is much more affordable than traditional focus group methods (Almujlli et al., 2022).

Correspondingly, PU positively impacts e-learning intentions. Teachers utilise e-learning since they have no other option for fulfilling their responsibilities than e-learning, not since it is more convenient. Furthermore, we have discovered that e-learning goals are influenced by gender and experience. Throughout the pandemic, educators of all genders and backgrounds still use e-learning as a teaching tool. Notably, the IU e-learning is higher among younger teachers. They have good intentions regarding using e-learning to offer the materials since they are more comfortable with it and have sufficient digital skills. Moreover, the simplicity and ease of use of e-learning will be more apparent to seasoned educators. In addition to their experience, male educators stated that it is simpler to understand how simple e-learning is. However, rather than citing system ease as a justification for e-learning, senior educators expressed greater worry regarding system usability (Ngabiyanto et al., 2021).

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According to a study, PU and simplicity of use impact instructors' and students' behavioural intentions to utilise social media for e-learning in Nigerian colleges (S. S. M. Ajibade et al., 2022). For PE and PU, PC was important. This demonstrates that people who find the Electronic Learning System (ELS) convenient find it practical and simple. The aggregate findings demonstrated the significance of User Training (UT) to PE and PU. This suggests that instruction may emphasise the benefits and simplicity of using the ELS. For INT, Satisfaction (ST) was necessary. The findings supported previous research indicating that people are more inclined to re-use technology if they find it easy to use and are happy with their learning methods. This study is one of the few that examined the variables influencing students' ELS re-use in the Philippines. In terms of creating an ELS that would encourage students to re-use it has crucial ramifications for educational institutions, particularly in this day and age where these institutions have created courses to be taught online even though there are immunisations for COVID-19 (Bautista et al., 2021).

The experiment results demonstrated that primary school students' ATT toward using MT was influenced by PU, PC, PE, and PEOU. Furthermore, ATT toward utilising constructs and PU directly impacted continuing intention to use (CI) (Eskandari & Valente, 2022). According to the findings, PC directly impacted PU. ATT toward using Moodle was considerably positively impacted by PU, PC, and PEOU. The attitude toward utilising Moodle directly impacts the intention to continue using it (Hsu & Chang, 2013).

However, data still reveal remote teaching to be a burden regarding evaluation and feedback timeliness (Ulla & Perales, 2021). The research, on the other hand,

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indicates that 69% of the participants believed it is simple to utilise online assessment applications. In comparison, 67% believed that online learning platforms are convenient. As a result, instructors have more discretion over when, when, and how they conduct their classes. This study formulated the hypothesis and derived the listed research question based on the literature above.

H11: PEOU mediates the relationship between ATT and IU.

RQ5: What is the mediating role of PEOU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?

2.5.9 The Factors Affecting Usage Behaviour

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The lack of preparation for online learning is why learning is ineffective, mainly since online learning is considered complicated to implement. There are improper facilities, internet access, willingness to learn from both sides and teamwork with the parents (Fauzi & Khusuma, 2020). The ineffectiveness can also occur since the media required is vast and varied, students have unequal facilities, and most students and parents, including teachers, are not adequately informed about the proper use of technology (Junan, 2021; Vicky Dwi Wicaksono, 2019).

In an online teaching mode, teachers choose their schedules and time. Thus, it is an advantage to learning itself and also more convenient. Moreover, online tutors' or teachers' incomes merely rest on the organisations they teach, and qualifications and experience are not the priority (Verma et al., 2021).

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In addition, self-efficacy, PEOU, and platform practicality have influenced respondents' satisfaction with online learning platforms (Chen, Peng, et al., 2020). A study conducted in Pakistan and Malaysia revealed that an education's assurance and quality play no significant role in determining teachers' acceptance of online education in Pakistan. Note that information quality and instructor responsiveness are not issues in the Malaysian context (Guoyan et al., 2021). It has been demonstrated that an institution's well-developed teaching and learning management system positively impacts an instructor's commitment (San-Martin et al., 2020).

Despite their lack of online teaching expertise and preparation, instructors were ready to employ various digital technologies and make online learning work for them and their students (Gumundsdóttir & Hathaway, 2020). Schools with administrative help, mentorship programmes in the early phases of their careers, and opportunities for networking and cooperation have lower attrition rates than schools without these aspects, according to (Toropova et al., 2021).

Self-efficacy impacts Chinese university students' contentment with online learning platforms in using the computer, the PEOU, and the practicality of the platforms (Jiang et al., 2021). Correspondingly, this study derived the hypothesis and formulated the research questions based on the literature above.

H13: UB is predicted by PEOU, PU, ATT, and IU.

RQ6: What is the mediating role of intention in the relationship between PC, PEOU, PU, and ATT to UB in online teaching among secondary school teachers?

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RQ7: What is the mediating role of ATT in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?

2.6 Conceptual Framework

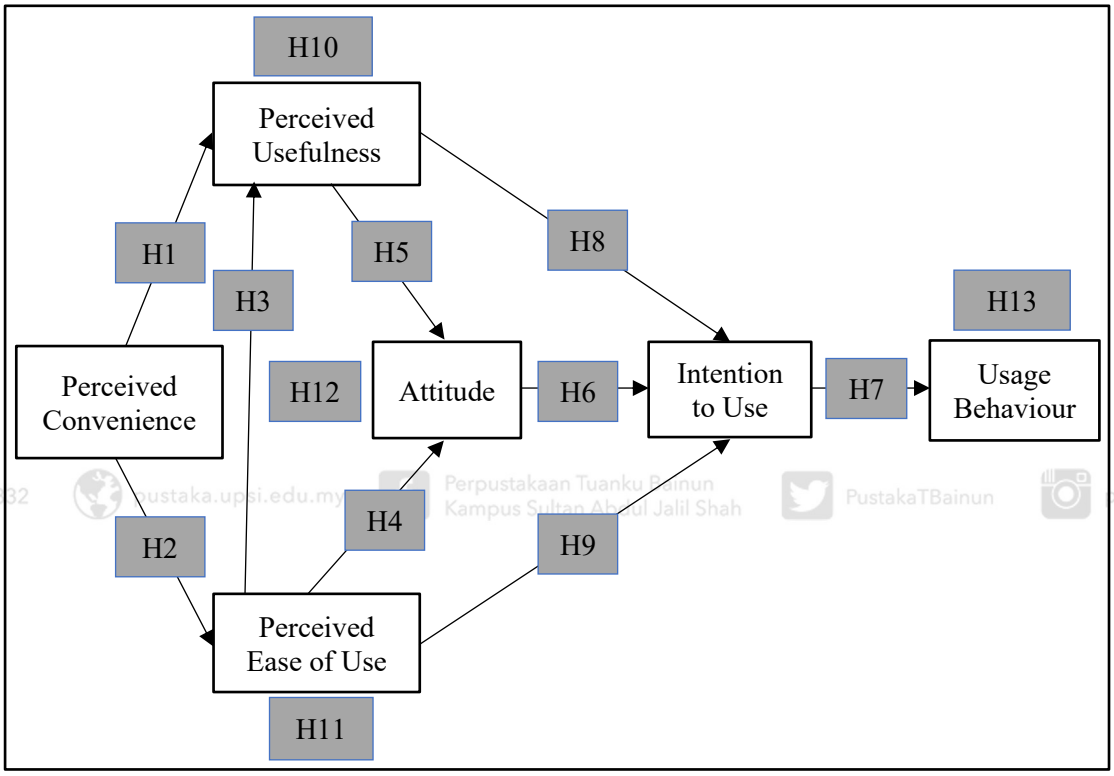


Figure 2.3. Conceptual Framework

2.7 Summary of Hypotheses

H1: PC is positively correlated with PU.

H2: PC is positively correlated with PEOU.

H3: PEOU is positively correlated with PU.

H4: PEOU is positively correlated with ATT.

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H5: PU is positively correlated with ATT.

H6: Att is positively correlated with IU.

H7: IU is positively correlated with UB.

H8: PU is positively correlated with IU.

H9: PEOU is positively correlated with IU.

H10: PU mediates the relationship between ATT and IU.

H11: PEOU mediates the relationship between ATT and IU.

H12: Att mediates the relationship between PEOU, PU, and PC.

H13: UB is predicted by PEOU, PU, ATT, and IU.

2.8 Summary

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In conclusion, this chapter has already provided a brief study to the reader. It also explains the model used, why it was selected, and how it is applied in this study. Apart from that, the researcher also mentioned that the pandemic is still plaguing the nation and contributed to online teaching and technology use. In the next chapter, the researcher will list the method used in the study. This is in addition to the target population, the sampling technique, the data collection procedure, the instruments, and many others.

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CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

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This chapter will summarise the research approaches that were implemented in this study. The researcher will describe the selected research design and provide information on the participants. This includes the criteria for inclusion, the demographic of the sample, and how they were selected. Instruments used were also described in this chapter, along with the procedures to execute the study. Consequently, the researchers will discuss the methods used to analyse the data collected. Finally, the ethical issues that resulted from the study will also be reviewed here.

3.2 Research Approach

This study will follow the quantitative research method approach. The purpose of this research design is to determine to what extent the relationship between two or more

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variables. The quantitative approach offers the researcher the advantage of reaching a higher sample size, which makes reaching a more precise and generalised conclusion more convenient. Furthermore, a larger sample could reduce the outliers in the sample group, influencing the results the research wants to achieve impartially (Unite for Sight, 2021). Moreover, quantitative research allows the researcher to collect information in real-time to ensure that statistical analysis can occur almost immediately.

However, result duplication is possible in this kind of approach. Researchers could eliminate the problem since it only focuses on the findings. There can also be variations over time, yet the final results that were developed in the research stay accurate. Alternatively, quantitative research can focus on a specific point they want to study in the population. Note that this research focuses on the teacher population. It is a process that allows the researcher to understand the reason behind each final decision, behaviour, or action from a general viewpoint (Allen, 2017). In addition, the research was anonymous to encourage the respondents, making them more likely to share an honest review.

Quantitative research will also not require the researcher to observe the respondents directly. This creates a better response rate as respondents would not feel pressured to complete the questionnaire. The data will be collected using an online survey due to the current pandemic, high infectivity, isolation, and strict social distancing (Hur & Chang, 2020). Online surveys are growing popular since they provide convenience rather inexpensively (Andrade C., 2020). Furthermore, the survey can be considered a fast and efficient way of obtaining information from a large group of samples (Nayak & Narayan, 2019).

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Although the time and difficulty of the questions could be a barrier, it can always be controlled by administering a pilot test. Data collection using this method will be numeric. Correspondingly, data will be processed using a statistical application that permits this research to discover complex causal relationships other than determining to what extent a variable influences another.

3.3 Locality of the Study

The research will focus on the state of Perak. There are 1,102 schools in Perak with a capacity of 44,461 teachers and 20,211 secondary school teachers. Narrowing it to a much smaller population, this study will focus on the district of Kinta Utara, which consists of 52 secondary schools. The teacher population in Kinta Utara is 8,704, including 4,264 secondary teachers (Ministry of Education, 2019).

3.4 Target Population

The respondents for this research will be secondary school teachers. There are several reasons why these respondents are preferred. Firstly, this group of respondents deals with a much more mature group than primary school students. Secondly, all the students and teachers have been exposed to an online learning platform as a tool to assist students in becoming more independent. Above all, most secondary school students are well equipped with at least a smartphone. Thirdly, the researcher has had professional access to secondary school. Lastly, the new educational system, *Kurikulum Standard Sekolah*

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Menengah (KSSM), implemented to shift from teacher-centred to student-centred teaching, could be a good sign for online teaching.

Next, the locations of Kinta Utara, Ipoh, and Perak have been selected as the focus of this study. Firstly, it is attributed to the fact that Perak is a big state with 12 districts (Kerajaan Negeri Perak, 2021). The whole of the state consisted of 250 secondary schools. Secondly, many types of schools can be discovered in each district: vocational school, sports school, regular school, international school, and appreciably more. Lastly, the location was preferred due to the convenient accessibility of the researcher in distributing questionnaires. Moreover, researchers want to take precautions with the pandemic still emerging and rising cases. The schools selected or targeted by researcher include SMK Jalan Tasek, SMK Bercham, SMK Bandar Baru Putra, SMK Ulu Kinta, SMK Tanjong Rambutan, SMK Tambun, SMK Gunung Rapat, SMK Ampang, Sekolah Tunku Abdul Rahman, SMK Anderson, SMJK Sam Tet, SMK Convent and SMK Seri Intan. The total number of teachers in all the schools is almost 600.

Finally, the first characteristic is that the respondents should be permanent secondary school teachers on duty for at least six months. Most importantly, the respondents should at least have experience conducting and using online teaching technology.

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3.5 Sampling Technique

There are currently 52 schools in the district of Kinta Utara, with a capacity of 4,264 teachers. For this study, the researcher proposes to use cluster sampling. It is a method in which the population is then divided into groups externally and internally. This group is called a cluster, with each selected cluster being a mini version of the entire population (Corporate Finance Institute, 2022).

Cluster sampling is also very convenient for dealing with a large population (Moss, 2015). Therefore, this research sampling method is used for every purpose that satisfies the necessary conditions for analysis and takes samples of large populations (Aoyama, 1954). Furthermore, the method does not only let researcher group their selection but also generalise. This is a benefit for such generalisations are likely to be regarded as externally valid (Sharma G, 2017). Thus, the main purpose of this sampling method is to lessen the possibility of a sample bias in the group of cases to be included in the trial.

3.6 Sample Size

There are multiple ways of determining the sample size. According to Roscoe (1975), the sample group range should be between 30 and 500. In addition, Krejcie and Morgan (1970) have produced a table that enables researchers to determine their sample size without using any calculations or formulas. Therefore, this research will use the Raosoft Sample Size Calculator to determine the required sample size. With 4,264 secondary school teachers in the Kinta Utara, Perak district, the sample size should be 353

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respondents. The system has suggested that the margin of error be fixed at 5%, a 95% confidence level, and a 50% response rate distribution.

3.7 Data Collection Procedure

The survey will be distributed online and offline, depending on the current pandemic situation. Online data collection will use Google Forms, comprising the same questions as offline data collection. Schools will be provided the link, and the person in charge will have to select groups of teachers that match the criteria. In contrast, the offline survey would require each school to be divided into two groups. The first is for teachers teaching Forms One and Two, while the other groups should include respondents teaching Forms Three to Five. These respondents will then be divided into smaller groups according to the subjects they are taught. Subsequently, the sample will be selected randomly from the clusters created to lower the margin error.

The time allocated to answer each set of questionnaires will only be legitimate after the pilot test. The researcher will personally collect the questionnaire from the group of respondents. Below are the guidelines for administering data collection.

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Table 3.1

Data Collection Guidelines

DATE	TIME	SCHOOLS TARGETED	NUMBER OF RESPONDENTS
Week 1 (21 Mac – 25 Mac)	9.00 a.m. – 4.00 p.m.	SMK Bercham	35
		SMK Tambun	35
		SMK Jalan Tasek	35
Week 2 (28 Mac – 1 April)	9.00 a.m. – 4.00 p.m.	SMK Gunung Rapat	35
		SMK Ampang	35
		Sekolah Tunku Abdul Rahman (STAR)	35
Week 3 (4 April – 8 April)	9.00 a.m. – 4.00 p.m.	SMK Bandar Baru Putra	35
		SMK Tanjong Rambutan	35
		SMK Ulu Kinta	35
Week 4 (11 April – 15 April)	9.00 a.m. – 4.00 p.m.	SMK Seri Intan	20
		SMK Anderson	35
		SMJK Sam Tet	35
		SMK Convent	35
TOTAL			**440**

3.8 Instruments

This research will use a questionnaire to gather information from the target population. The questionnaire will have eight sections: demographics, psychographics, Perceived Convenience (PC), Perceived Usefulness (PU), Attitude (ATT), Perceived Ease of Use (PEOU), Intention to Use (IU), and Usage Behaviour (UB). Most items are adapted from past research, while the researcher and supervisor must develop some items to cater to the hypotheses listed. The questionnaire will be using a 5-point Likert scale developed by Rensis Likert. This scale is commonly used to measure the respondents' opinions or attitudes toward a specific subject or market research. It is beneficial as one

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of the most essential and commonly used psychometric instruments in educational and social science research (Joshi et al., 2015). Notably, the Likert scale measures the respondent's agreement or disagreement with various statements with a five-, seven-, or nine-point agreement scale.

In the first section of the research tool, the item for the subject's demographic is listed. The researcher develops this to understand the background of the subject better. It consists of nine questions to quantify the respondent's background. The questions include age, gender, teaching experience, level of education, subjects, income level, residency area, internet usage, and devices owned.

Secondly, respondents will be inquired about their psychographic details. Here, the researcher attempts to discover more about their lifestyle. This section consists of eight questions or statements. The questions are about working space, internet speed, problems conducting lessons, applications used, challenges faced, and knowledge of computers and digital devices. The next section is about the first variable, which is PC. This section consists of ten items. Some items are adapted from a study by Srivastava et al. (2020), while the researcher and supervisor develop most of them. This item will be adapted to suit the needs of the researcher's hypotheses. Furthermore, the items listed will be analysed using the 5-point Likert scale.

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Table 3.2

Items for Perceived Convenience

ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADOPTED	ITEMS DEVELOPED
-	Perceived convenience	8		1. I always allocate time for my classes. 2. My class schedule is very convenient. 3. I made the necessary preparations for my classes. 4. I have an appropriate space to conduct my classes at home. 5. Using an online learning platform saves me time. 8. I find it easy to use online assessment applications. 9. I like using digital pedagogy tools in my class (ex, Padlet, and Mentimeter). 10. Overall, I find online learning platforms very convenient.
Srivastava et al. (2020)	Perceived convenience	2	6. I can conduct my class without interruption (ex, kids, chores, etc.) 7. It is easy for me to incorporate digital technology into my teaching.	

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The next variable is the PU and PEOU. To measure this variable, the researcher will adopt questions from past research conducted by various researchers, as listed. However, some items are also being developed by the researcher and supervisor. All of these items will also be using the 5-point Likert scale. Listed below is the list of items adapted and developed.

Table 3.3

Items for Perceived Usefulness

ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADAPTED	ITEMS DEVELOPED
-	Perceived Usefulness	1		1. An online learning platform is very useful for enhancing my students' understanding.
Wozney et al., 2006		4	2. Online learning platforms increase academic achievement. 3. Online learning platforms promote student collaboration. 4. Using an online learning platform is effective because I believe I can implement it successfully. 5. Online learning platforms promote the development of communication skills (e.g., writing and presentation skills).	

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ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADAPTED	ITEMS DEVELOPED
Davis (1985)		5	6. Using online learning platforms improves my job performance. 7. Using an online learning platform allows me to accomplish more work than possible and increases my productivity. 8. Online learning platforms enable me to accomplish tasks more quickly. 9. Using online learning platforms gives me greater control over my work. 10. Overall, I find online learning platforms useful in my job.	
-	Perceived Ease of Use	7		1. The user manual is my number one source of reference. 2. I did not have difficulty connecting to the internet. 3. I did not have difficulty installing and using the video conferencing app. 4. My job is easier with an online learning platform. 5. I feel it is easy for me to conduct classes and communicate online.

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ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADAPTED	ITEMS DEVELOPED
				6. I can communicate clearly with my students with a digital platform. 7. Online learning platforms make it easier for me to manage my classes.
Davis (1985)		3	8. I find it easy to get it to do what I want. 9. The application often behaves unexpectedly (ex, screen pause, unsaved work, loss of audio, etc.) 10. Overall, I find the online learning platform easy to use.	

The next variable to be measured is ATT. This item is adapted from research conducted by Wozney et al. (2006). There were three items that the researcher discovered relatively suitable for testing the hypotheses. Correspondingly, the researcher and supervisor also developed several questions. This item will also be measured using the 5-point Likert scale. Below is the list of items adapted and developed.

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Table 3.4

Items for Attitude

ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADOPTED	ITEMS DEVELOPED
-	Attitude	7		1. I had to know about conducting classes online. 2. I think online teaching is an important skill all teachers should have. 3. I think that the current generation prefers online learning platforms. 4. I think an online learning platform is the easiest way for me to conduct my classes. 5. I think my students prefer digital learning, too. 9. Digital learning is a must for current teaching and learning. 10. Overall, I am very much relying on technology to conduct my online classes.

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ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADOPTED	ITEMS DEVELOPED
Wozny et al. (2006)		3	6. I think that online learning platforms make teachers feel more competent as educators. 7. I think that online learning platforms give teachers the opportunity to be learning facilitators instead of information providers. 8. I think an online learning platform does not limit my choices of instructional materials.	

Next are the items for IU. There are ten items listed. Some questions have been adapted from various past research, as listed, while the researcher and supervisor have also developed some items. All the items listed below will also be using the 5-point Likert scale.

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Table 3.5

Items for Intention to Use

ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADAPTED	ITEMS DEVELOPED
Almekhlafi & Almeqdadi, 2010	Intention to use	3	1. I can troubleshoot common computer problems. 2. I can use various media and formats, including telecommunications, to collaborate, publish, and interact with peers, experts, and other audiences.	

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ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADAPTED	ITEMS DEVELOPED
			3. I can use technology resources to facilitate order and complex thinking skills, including problem-solving, critical thinking, informed decision-making, knowledge construction, and creativity.	
Klecker et al. (2005)		1	4. Classes were equipped with the proper technology setup.	
Wozny et al. (2006)		1	5. It is an effective tool for students of all abilities.	
Shih et al. (2010)		1	6. It helps me keep track of my teaching progress.	
-		4		7. It does not make classroom management more difficult. 8. It eases the pressure on me as a teacher. 9. It can help me achieve goals related to my work. 10. Overall, I find the online learning platform is a great help in lowering my workload.

Last but not least is the UB. The researcher and supervisor developed these ten items to cater to this variable's needs. These items will also be measured using the 5-point Likert scale.

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Table 3.6

Items for Usage Behaviour

ORIGINAL STUDY	ITEMS MEASURED	NUMBER OF ITEMS	ITEMS ADOPTED	ITEMS DEVELOPED
-	Usage Behaviour	8		1. I use an online meeting application to conduct my class (ex, Google Classroom/ Zoom/ Webex/ Skype, etc.) 2. I use digital applications to conduct the assessment (ex, Quizziz, Kahoot, Form Builder, Google Forms, etc.) 3. I upload my teaching materials to cloud storage (ex, Google Drive, YouTube, TikTok, Instagram, Telegram, etc.) 4. I communicate with my students using mobile applications (e.g., WhatsApp, Telegram, Google Classroom, Google Meet). 5. I use social networking sites to connect with my students (ex: Facebook, Instagram, TikTok, YouTube, etc.) 6. I use teaching videos on YouTube in my teaching. 7. I create my class content using PowerPoint presentations. 8. I collaborate with other teachers to develop content for the students. 9. I put all my teaching material online to assist my online teaching. 10. Overall, I am very satisfied with online teaching platforms and will continue to use them in the future.

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3.9 Pioneer Study

A pilot test will be conducted to assess the research instruments. A group of 30 respondents will be selected from random schools to answer the questionnaires. This will only be conducted after an expert has validated the questionnaires. It ensures that the items included measure what they are supposed to measure. Notably, the validity of the questionnaire is significant as it is the main tool in gathering information. The pioneering study was scheduled to be conducted by the middle of January, and the results were analysed using the Statistical Package of the Social Sciences (SPSS). The pioneering study will also guide researchers in minor corrections regarding each item's language or difficulty level. Moreover, this pioneering study will provide the researcher with an overview of the respondents' time to complete the survey.

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3.10 Validity and Reliability

The questionnaire developed will be submitted to an expert to be examined and improved prior to the pilot test. The expert assessment will provide the content validity for the researcher to use the questionnaire further. The SPSS software will help the researcher obtain the reliability of the questions listed in the research instrument using Cronbach's Alpha. Cronbach's Alpha is a statistic that researchers often cite to validate that tests and scales constructed or adopted for research are fit for purpose (Taber, 2018).

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3.11 Technique of Analysis

Several techniques were employed in completing the research. The objectives, research questions, and hypotheses listed below will be analysed using frequency analysis to measure the mean. It is used to determine if there is a difference or relation in certain variables. The frequency analysis is widely used to evaluate hypotheses with only two variables. The mean value from each data set is required to calculate the frequency other than the standard deviation and the number of data values in each group.

RO1: To measure the level of PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers.

RQ1: What is the level of PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

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Many types of research analysis will be used to complete and test the research objective, research question, and hypotheses. The next type of analysis used is the correlation analysis. It is often used to test variables' relationships or measure how things are related (Glen, 2022). Listed below are the research objective, research questions, and hypotheses that will be used in correlation analysis.

RO2: To measure the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers.

RQ2: What is the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

H1: PC is positively correlated with PU.

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H2: PC is positively correlated with PEOU.

H3: PEOU is positively correlated with PU.

H4: PEOU is positively correlated with Att.

H5: PU is positively correlated with Att.

H6: Att is positively correlated with IU.

H7: IU is positively correlated with UB.

H8: PU is positively correlated with IU.

H9: PEOU is positively correlated with IU.

3.11.1 Structural Equation Modelling (SEM) Analysis

Structural Equation Modelling (SEM) is a statistical analysis technique used to measure and analyse the relationship between observed and dormant variables (Beran & Violato, 2010). At the same time, it is used to analyse structural relationships using factor and multiple regression analyses (Statistics Solution, 2022).

The researcher will use the SmartPLS to calculate the data. It is software using the Partial Least Squares (PLS) path modelling technique (Leguina, 2015; Wong, 2013). The software could compute various results assessment criteria for reflective and formative measurement models, including the Heterotrait-Monotrait ratio of correlations (HTMT) and goodness of fit (Ramayah et al., 2018).

The table below will be used as a guideline for testing the variables' validity, reliability, and relationship and summarising this study's conceptual model (Rahma Salimah et al., 2021).

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Table 3.7

Goodness-of-fit measures

Types of Fitness Value	Acceptable Value of Fitness
Factor Loading	greater than or equal to .50**
Composite Reliability	greater than or equal to .70**
Average Variance Extracted (AVE)	greater than or equal to .50**
Heterotrait-Monotrait Ratio of Correlations (HTMT)	below than or equal to .90**
p-value	below than or equal to .05**
VIF	less than 4.0**
R^2	greater than 0.1**
Q^2	greater than 0**
SRMR	less than .10**

*Source: Garson (2016)

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Finally, all of the research objectives, research questions, and hypotheses listed below will be using the SEM.

RO3: To measure the best predictor for IU in the technology among secondary school teachers.

RO4: To investigate the mediating role of PU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers.

RO5: To determine the mediating role of PEOU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers.

RO6: To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and ATT to UB in online teaching among secondary school teachers.

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RO7: To determine the mediating role of ATT in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers.

RQ3: What is the best predictor for IU in the technology among secondary school teachers?

RQ4: What is the mediating role of PU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?

RQ5: What is the mediating role of PEOU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?

RQ6: What is the mediating role of intention in the relationship between PC, PEOU, PU, and ATT to UB in online teaching among secondary school teachers?

RQ7: What is the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?

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H10: PU mediates the relationship between ATT and IU.

H11: PEOU mediates the relationship between ATT and IU.

H12: Att mediates the relationship between PEOU, PU, and PC.

H13: UB is predicted by PEOU, PU, ATT, and IU.

The table below is a summary of the analysis technique.

Table 3.8

Table of Analysis

ITEM	DESCRIPTION	ANALYSIS
Research Objective 1	To measure the level of PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers.	Frequency Analysis (Measure Mean)
Research Objective 2	To measure the relationship between PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers.	Correlation Analysis

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ITEM	DESCRIPTION	ANALYSIS
Research Objective 3	To measure the best predictor for IU in the technology among secondary school teachers.	Structural Equation Modelling (SEM)
Research Objective 4	To investigate the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.	Structural Equation Modelling (SEM)
Research Objective 5	To determine the mediating role of PEOU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers.	Structural Equation Modelling (SEM)
Research Objective 6	To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and ATT to UB in online teaching among secondary school teachers.	Structural Equation Modelling (SEM)
Research Objective 7	To determine the mediating role of ATT in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers.	Structural Equation Modelling (SEM)
Research Question 1	What is the level of PC, ATT, PU, PEOU, IU, and UB of online teaching among secondary school teachers?	Frequency Analysis (Measure Mean)
Research Question 2	What is the relationship between PC, ATT, PU, PEOU, IU, and UB in terms of online teaching among secondary school teachers?	Correlation Analysis
Research Question 3	What is the best predictor for the IU technology among secondary school teachers?	Structural Equation Modelling (SEM)
Research Question 4	What is the mediating role of PU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?	Structural Equation Modelling (SEM)
Research Question 5	What is the mediating role of PEOU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?	Structural Equation Modelling (SEM)
Research Question 6	What is the mediating role of intention in the relationship between PC, PEOU, PU, and ATT to UB in online teaching among secondary school teachers?	Structural Equation Modelling (SEM)
Research Question 7	What is the mediating role of ATT in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?	Structural Equation Modelling (SEM)
Hypothesis 1	PC is positively correlated with PU.	Correlation Analysis
Hypothesis 2	PC is positively correlated with PEOU.	Correlation Analysis
Hypothesis 3	PEOU is positively correlated with PU.	Correlation Analysis
Hypothesis 4	PEOU is positively correlated with ATT.	Correlation Analysis
Hypothesis 5	PU is positively correlated with ATT.	Correlation Analysis

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ITEM	DESCRIPTION	ANALYSIS
Hypothesis 6	ATT is positively correlated with IU.	Correlation Analysis
Hypothesis 7	IU is positively correlated with UB.	Correlation Analysis
Hypothesis 8	PU is positively correlated with IU.	Correlation Analysis
Hypothesis 9	PEOU is positively correlated with IU.	Structural Equation Modelling (SEM)
Hypothesis 10	PU mediates the relationship between ATT and IU.	Structural Equation Modelling (SEM)
Hypothesis 11	PEOU mediates the relationship between ATT and IU.	Structural Equation Modelling (SEM)
Hypothesis 12	ATT mediates the relationship between PEOU, PU, and PC.	Structural Equation Modelling (SEM)
Hypothesis 13	UB is predicted by PEOU, PU, ATT, and IU.	Structural Equation Modelling (SEM)

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3.12 Summary

In conclusion, this chapter stated the selected approach, describing in detail the participants targeted in the research and the instruments used. It also explains the pioneer study that will be conducted to acknowledge the reliability and validity of the instruments used. Moreover, the data collection procedure and the data analysis techniques were also presented as a guideline for future reference. Accordingly, the results and findings of this research will be presented and discussed in the following chapters.

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CHAPTER 4

DATA ANALYSIS

4.1 Introduction

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This chapter presents the findings of the study and fulfils the objectives listed in the earlier chapter. This chapter focuses on analysing all data collected from targeted respondents. The discussion is arranged systematically, starting with the demographic information and then followed by the analysis. Topics discussed in this chapter include: (a) demographic information; (b) psychographic information; (c) respondents' perceived convenience (PC); (d) respondents' perceived usefulness (PU); (e) respondents' attitude (Att); (f) respondents' perceived ease of use (PEOU); (g) respondents' intention to use (IU) and (h) respondents' usage behaviour (UB).

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4.2 Demographic Information

A total of 400 respondents are participating in the study. Tables 4.1 to 4.9 demonstrate the demographic information of the respondents based on their gender, age, teaching experience, education level, subjects taught, income level, residency area, duration of internet use of the respondents, and the digital devices they own.

Results in Table 4.1 below suggest that the number of female respondents is higher in this study. There are 328 female respondents, 82%, while only 18% of the respondents are male, which is equal to 72 respondents. This is attributed to female teachers being enrolled more than male teachers in schools.

Table 4.1
Gender

Gender	Frequency	Per cent
Male	72	18.0%
Female	328	82.0%
Total	**400**	**100.0%**

Next, table 4.2 below summarises the fragment of age categories. This indicates that 11.3% of the respondents are between 23 and 30 years old. 40.3% of respondents came from the age category of 31-40 years old, and 25.8% came from the age category of 41-50 years old. However, 91 respondents are from the age category of 51-60 years old, 22.8%. It is delightful to observe that the spread of age groups between the respondents is very good.

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Table 4.2

Age

Age	Frequency	Per cent
23-30 years old	45	11.3%
31-40 years old	161	40.3%
41-50 years old	103	25.8%
51-60 years old	91	22.8%
Total	**400**	**100.0%**

Table 4.3 below summarises the fragments of the teaching experience of all the respondents involved in the study. 10.3% of the respondents have been teaching for six to 11 months. Most respondents (30.8%) have been teaching for one to 10 years; 23.3% have been teaching for 11 to 20 years; 23.3% for 21 to 30 years; and 7.8% have been teaching for more than 30 years. The teachers teaching for less than six months are not included among the respondents since it is fair to suggest that they have not practised the real situation of online teaching as it may occur due to a lack of experience.

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Table 4.3

Teaching Experience

Months/Years	Frequency	Per cent
6-11 months	41	10.3%
1-10 years	123	30.8%
11-20 years	93	23.3%
21-30 years	112	28.0%
31-35 years	31	7.8%
Total	**400**	**100.0%**

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Examining the level of education for all the respondents, 2.5% had a Diploma in Education. However, most respondents are degree holders (88.5%), and the rest are at Masters' level (9.0%).

Table 4.4

Level of Education

	Frequency	Per cent
Diploma (Education)	10	2.5%
Degree	354	88.5%
Masters	36	9.0%
Total	**400**	**100.0%**

Regarding subjects taught, it is summarised that for the five major subjects, 10.4% have been teaching Bahasa Melayu, 10.0% of respondents are teaching English, 10.4% are teaching Mathematics, and 12.7% are teaching science. Apart from that, another subject teacher involved in the study comprises Reka Bentuk Teknologi (8.6%), History (9.5%), Geography (12.2%), Moral Education (8.1%), Islamic Education (7.7%), Physical Education (5.4%), and others (5.0%). Others in Table 4.5 below refer to minority respondents teaching Arts and Visual, Biology, Physics, Chemistry, Economics, and Additional Mathematics.

In conclusion, the respondents' range is good in terms of the data. Researchers managed to obtain respondents from the core subjects, as stated earlier in the chapter. With this range of data, it is valid to suggest that the research is indeed applicable in representing the whole community. It is also valid for use as a reference in future studies.

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Table 4.5

Subjects Taught

Subjects	N	Per cent
Bahasa Melayu	46	10.4%
English	44	10.0%
Mathematics	46	10.4%
Science	56	12.7%
Reka Bentuk Teknologi	38	8.6%
History	42	9.5%
Geography	54	12.2%
Moral Education	36	8.1%
Islamic Education	34	7.7%
Physical Education	24	5.4%
Others	22	5.0%
TOTAL	442	100.0%

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The table below provides the income level of the respondents involved. As we can observe, most respondents (30.3%) had an income level of RM 5,001-RM 7,000, followed by an income level of RM 7,001-RM 9,000 with 27.8%. Only 13.3% of the respondents had an income level of RM 3,000 and below, and only 6.3% had an income of RM 9,001 to RM 11,000. This income level data does not include the allowance allocated to respondents; it comprises only the net salary received. It also reveals that half of the respondents can be categorised as M40 and a group in the T20 category income level.

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Table 4.6

Income Level

		Frequency	Per cent
RM 3000 and below		53	13.3%
RM 3001 – RM 5000		90	22.5%
RM 5001 – RM 7000		121	30.3%
RM 7001 – RM 9 000		111	27.8%
RM 9001 – RM 11000		25	6.3%
	TOTAL	**400**	**100.0%**

In the residential area, most (62.0%) of the respondents live in the urban side of the states, and 35.8% live in the suburbs. However, 2.3% of the respondents still live in rural areas. The Kinta district can be categorised as being on the urban side of the state. Vast developments are being made in every part of the district. Apparently, for some people, the urban lifestyle is slightly too much. Thus, they tend to live quite far from the school they teach.

Table 4.7

Residency Area

	Frequency	Per cent
Urban	248	62.0%
Suburban	143	35.8%
Rural	9	2.3%
Total	**400**	**100.0%**

Further, the data indicates the percentage of years a respondent has been using the internet. Only 7% of the respondents declared that they had been using the Internet for more than 30 years. This might be attributed to the fact that it was hard to access

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when the Internet was introduced in 1969 by the United States (ARPA). Also, 4.5% have been using it for 26 to 30 years, and only 8% have started using it in the last five years. However, despite the ups and downs of the internet coverage faced by multiple internet providers in Malaysia, more than 80% of the respondents have used it for over six years.

Table 4.8

How long have you been using the internet?

	Frequency	Per cent
1 - 5 years	32	8.0%
6 – 10 years	59	14.8%
11 – 15 years	91	22.8%
16 – 20 years	108	27.0%
21 – 25 years	64	16.0%
26 – 30 years	18	4.5%
31 years and above	28	7.0%
Total	**400**	**100.0%**

The last demographic information table summarises the electronic devices owned by respondents. Most respondents owned a smartphone, whether newly bought or used, for over four years. The second most owned are laptops, with 10.4% of newly owned laptops in one to three years and 13.3% owning more than four years old. Another popular electronic device used by the respondents is a tablet. However, only 20.1% owned a tablet. Nevertheless, most respondents own more than one electronic device for daily usage.

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Table 4.9

Do you own an electronic device?

	N	Per cent
Smartphone (owned 1-3 years)	206	29.9%
Tablet (owned 1-3 years)	85	12.3%
Laptop (owned 1-3 years)	72	10.4%
Smartphone (owned 4 years and above)	181	26.2%
Tablet (owned 4 years and above)	54	7.8%
Laptop (owned 4 years and above)	92	13.3%
TOTAL	**690**	**100.0%**

4.2.1 Summary of Demographic Analyses

To summarise the demographic section, it is clearly stated that the number of male teachers participating in the study is minimal. This is due to the relatively low number of male teachers at schools. Another reason is that female teachers are more tolerant towards completing the questionnaire. In addition, the age gap provided in Table 4.2 could be a factor in determining the teachers' acceptance of online education. However, there is a percentage of teachers with a master's degree, and only a small percentage of them have been teaching for more than 30 years.

Subject distribution among respondents is good as it represents most of the main subjects in schools. This is crucial to ensure that the data collected portrays the whole situation in school. Most respondents live in urban residences with an income of RM 3,000 and above. Thus, a residency area and money should not be the reason for not having internet connections and proper technological devices. Moreover, from Table

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4.8, respondents have been exposed to the internet for over a year, and all have owned at least one electronic device.

4.3 Psychographic Information

Psychographic data includes personality, lifestyle, social status, activities, interests, opinions (AOI), and Att. It is commonly collected in marketing to discover more about their target. In this study, the researcher focused on the lifestyle to investigate what kind of devices respondents had, how many devices they had, how they managed their time and money, what kind of applications they tended to learn and use, their internet speed, the challenges they faced and their knowledge on handling whether digital devices and their computer literacy.

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Table 4.10 until Table 4.27 below will represent respondents' psychographic data. It summarises the percentage of respondents who have their own working space or do not have it at their residence. It is clear that 64.5%, equal to 258 respondents, claimed to have their own working space or room to conduct lessons, and the remaining did not have one. Notably, working space is a very convenient way of portraying a good teaching environment. It also stated that the teachers are fully prepared and ready.

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Table 4.10

Do you have your own working space or room?

	Frequency	Per cent
Yes	258	64.5%
No	142	35.5%
Total	**400**	**100.0%**

Table 4.11 below summarises the internet speed used by respondents. Most respondents (49.7%) have been using the 4G coverage. The remaining 44.4% of the respondents already use 5G coverage, home wireless internet, and home fibre. Only 5.9% still use the 3G coverage. In this new millennium, most places cater to 4G and 5G. Most households are already using internet streaming to read news and watch movies.

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Table 4.11

Internet Speed Used

	N	Per cent
Smartphone internet (3G)	29	5.9%
Smartphone internet (4G)	243	49.7%
Smartphone internet (5G)	87	17.8%
Home wireless internet (10 MB and below)	44	9.0%
Home fibre (10 MB – 100 MB)	86	17.6%
Total	**489**	**100.0%**

Table 4.12 summarises data on how many respondents are familiar with or have any knowledge of the listed application. In contrast, table 4.13 summarises how many use the application in online lessons. The data reveals that respondents are very familiar with all the applications, especially WhatsApp, Telegram, and Google Meet, with

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17.3%, 16.6%, and 13.7%. Accordingly, the percentage of them using it is undoubtedly higher. In Table 4.13, the most used application in online learning is WhatsApp, with a percentage of 20.7%, followed by Telegram (19.7%) and Google Meet (16.1%). Meanwhile, Webex (1.1%) and Skype (1.3%) are the least known and used apps.

Table 4.12

Knowledge of using applications

	N	Per cent
SMS	200	9.1%
E-mail	180	8.2%
WhatsApp	380	17.3%
Telegram	364	16.6%
YouTube	168	7.7%
Google Classroom	128	5.8%
Google Meet	300	13.7%
Google Drive	188	8.6%
Zoom Meeting	64	2.9%
Webex Online Meeting	24	1.1%
Skype	28	1.3%
Microsoft Office	164	7.5%
Others	4	0.2%
Total	**2192**	**100.0%**

Table 4.13

Application Used in Communicating with Students

	N	Per cent
SMS	59	3.7%
E-mail	70	4.4%
WhatsApp	333	20.7%
Telegram	316	19.7%
YouTube	133	8.3%

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	N	Per cent
Google Classroom	107	6.7%
Google Meet	258	16.1%
Google Drive	152	9.5%
Zoom Meeting	52	3.2%
Webex Online Meeting	18	1.1%
Skype	21	1.3%
Microsoft Office	84	5.2%
Others	3	0.2%
Total	**1606**	**100.0%**

The table below states the challenges faced by respondents throughout their journey of conducting online teaching at their residences. 9.9% of the respondents stated that they do not have a proper time frame to conduct lessons. This is understandable since working from home and caring for the household could make a person lose track of time. Meanwhile, 19.9% have a minimum skill level in using technology, and being secluded does not offer them many options for getting assistance. Even though it is believed that staying home is a blessing, 13.6% of the respondents claim to be wrapped up with household chores, 10.3% claimed to have personal problems, and 3% suffered from poor health conditions. Despite that, money is not a serious problem since only 1.2% claim to be facing problems with regard to finance. Some problems cannot be controlled, such as our surroundings. 10.7% of the respondents clarified that they do not have a conducive environment, 7% commented on loud noises, 4.4% with uncontrolled kids cases, and 14.7% due to too many responsibilities. With 5.3%, others face challenges such as technological problems, lack of internet coverage, and low student engagement.

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Table 4.14

Challenges Faced in Conducting Online Teaching at Home

	N	Per cent
No proper time	92	9.9%
Less skill in using technology	185	19.9%
Busy with household chores	126	13.6%
Personal problems	96	10.3%
Poor health condition	28	3.0%
Money problem	11	1.2%
Non-conducive environment	99	10.7%
Loud noises	65	7.0%
Uncontrolled kids	41	4.4%
Too much responsibility	137	14.7%
Others	49	5.3%
Total	**929**	**100.0%**

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Table 4.15 and Table 4.16 summarises the rate of respondents' knowledge regarding computer literacy and digital device usage. Regarding computer literacy, 1.3% of the respondents rated it as excellent, 40.5% rated it as very good, 51.5% as good, and the remaining 6.8% stated having fair computer knowledge. From the data on the respondent's age and teaching experience, it is safe to summarise that the percentage of excellent comprises the younger age group since their generations were already born with the technology. Most respondents are in the middle age group, from the early 30s to late 40s.

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Table 4.15

Knowledge Rating in Computer Literacy

	Frequency	Per cent
Excellent	5	1.3%
Very Good	162	40.5%
Good	206	51.5%
Fair	27	6.8%
Total	**400**	**100.0%**

In the table below, 0.5% have declared themselves excellent at using digital devices. This percentage comprises the younger generation of educators. More than 30% stated they were very good, 54% of the respondents were good at using digital devices, 11.8% had fair knowledge, and 0.3% had minimum knowledge. With the current technological environment, it is acceptable that most educators have been equipped with at least basic technology skills. The remaining with fair and poor knowledge of digital devices comprise mostly veteran respondents. These respondents were raised in a typical, traditional way of teaching; hence, they were unfamiliar with using technology to catalyse learning environments.

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Table 4.16

Knowledge Rating in Digital Devices Usage

	Frequency	Per cent
Excellent	2	0.5%
Very Good	134	33.5%
Good	216	54.0%
Fair	47	11.8%
Poor	1	0.3%
Total	**400**	**100.0%**

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At the end of the questionnaire for the psychographic section, Table 4.17 summarises how many respondents face problems conducting lessons remotely. It is stated that 68.8% of the respondents responded that they do not have any problems conducting lessons remotely. This suggests that even though problems arise, most are willing to use all means available to convey lessons. However, 31.3% still have doubts and responded that they have problems substituting the regular teaching method with online teaching.

Table 4.17

Do you have problems conducting lessons remotely?

	Frequency	**Per cent**
Yes	125	31.3%
No	275	68.8%
Total	**400**	**100.0%**

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4.3.1 Summary of Psychographic Analyses

In the psychographic section, the first question is whether respondents had their own working space or room to conduct classes. More than half of them claimed to have a place to conduct classes. On the other hand, most respondents have had internet access with a minimum 3G speed. Nowadays, internet connection is easier to access than it was ten years ago. From Table 4.12, respondents recognise almost all the applications listed. In Table 4.13, only several were frequently used in communicating with the students. This is due to the application's nature, which is perceived to be easy to use

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and access by both the teacher and students. Additionally, the applications also support the sharing of documents.

Apart from that, when conducting lessons remotely, most respondents faced problems with maintaining the balance between work and household chores. It is attributable to the fact that throughout online teaching, all the students, including their children, are at home. Subsequently, it is fair to suggest that the environment where the lessons are conducted also plays an essential role. From the survey, the computer literacy and digital device knowledge rating is good and very good. It indicates that most respondents should at least have no problems operating a basic technological and digital device. Apart from all the problems and challenges faced, more than half of the respondents in Table 4.17 stated they have no problems conducting lessons remotely.

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4.4 Analysis Level of Variables

There were six variables listed in the study. The variables were PC, PU, Att, PEOU, IU, and UB. In this analysis, the researcher examines the percentage calculated from all the data collected from 400 respondents.

4.4.1 Perceived Convenience

This analysis was conducted to achieve research objective 1, measuring the PC of online teaching among secondary school teachers. This research operationalises PC to measure the convenience level of time, place, and execution. The result reveals that

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69% of the respondents agree that online assessment applications are easy to use. 67% of them also think that online learning platforms are very convenient.

Table 4.18

The Level of Perceived Convenience Among Teacher's Acceptance in Using Online Education

Items Code	Items	N	Mean	Std. Deviation	Percentage
C8	I find it easy to use online assessment applications.	400	3.45	0.787	69.0%
C10	Overall, I find online learning platforms very convenient.	400	3.35	0.805	67.0%
C9	I like to use digital pedagogy tools in my class (ex, Padlet and Mentimeter)	400	3.33	0.848	66.6%
C7	It is easy for me to incorporate digital technology into my teaching.	400	3.32	0.833	66.4%
	OVERALL	**400**	**3.36**	**0.818**	**67.25%**

5-point Likert scale ranging from 1 = Strongly Disagree (0-20%); 2 = Disagree (21-40%); 3 = Neither (41-60%); 4 =Agree (61-80%); 5 = Strongly Agree (81-100%)

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It is also suggested that 66.6% of the respondents prefer using digital pedagogy tools in their classes, and 66.4% agree that it is easy for them to incorporate digital technology in their teaching. In conclusion, 67.25% of the respondents agree they have the freedom of time, place, and how they will use the online platform.

4.4.2 Perceived Usefulness

This analysis was conducted to achieve research objective 1, measuring the PU of online teaching among secondary school teachers. PC operationalised by this research

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to measure the feelings the teacher holds toward the benefit of the online learning class to the students and work performance. From Table 4.19 below, 66.2% of the respondents agree that online learning platforms benefit their jobs. Additionally, 65.8% agree that online learning enables respondents to accomplish tasks quickly and offers them greater control over their work (64.6%).

Table 4.19

The Level of Perceived Usefulness Among Teacher's Acceptance in Using Online Education

Items Code	Items	N	Mean	Std. Deviation	Percentage
D10	Overall, I find online learning platforms useful in my job.	400	3.31	0.816	66.2%
D8	Using online learning platforms enables me to accomplish tasks more quickly.	400	3.29	0.847	65.8%
D9	Using online learning platforms gives me greater control over my work.	400	3.23	0.912	64.6%
D7	An online learning platform allows me to accomplish more work than possible and increases my productivity.	400	3.22	0.841	64.4%
D6	Using online learning platforms improves my job performance.	400	3.21	0.885	64.2%
D5	Online learning platforms promote the development of communication skills (e.g., writing and presentation skills).	400	3.19	0.853	63.5%
	OVERALL	**400**	**3.24**	**0.859**	**64.8%**

5-point Likert scale ranging from 1 = strongly disagree (0-20%); 2 = disagree (21-40%); 3 = neither (41-60%); 4 = agree (61-80%); 5 = strongly agree (81-100%)

Additionally, more than 64% of them agree that using online learning platforms allows them to accomplish more work than would otherwise be possible. At the same

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time, it increases their productivity while improving their job performance (64.2%) and promoting the development of communication skills (63.5%). In conclusion, 64.8% of the respondents agree that online learning class significantly benefits teachers and students.

4.4.3 Attitude

This analysis was conducted to achieve research objective 1, that is, to measure the level of Att of online teaching among secondary school teachers. This research operationalises Atts to measure individuals' feelings about accepting and using online education. Based on Table 4.20 below, 65.6% of the respondents agree that they heavily depend on technology to conduct classes online, and online learning platforms do not limit the choices of instructional material used (63.0%).

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Table 4.20

The Level of Attitude Among Teacher's Acceptance in Using Online Education

Items Code	Items	N	Mean	Std. Deviation	Percentage
E10	Overall, I am very much relying on technology to conduct my online classes.	400	3.28	0.804	65.6%
E8	I think online learning platforms do not limit my choices of instructional materials.	400	3.15	0.820	63.0%
E6	I think that online learning platforms make teachers feel more competent as educators.	400	3.07	0.862	61.4%
E7	I think that online learning platforms give teachers the opportunity to be learning	400	2.97	0.877	59.4%

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Items Code	Items	N	Mean	Std. Deviation	Percentage
	facilitators instead of information providers.				
E5	I think my students prefer digital learning to face-to-face learning.	400	2.89	0.932	57.8%
	OVERALL	**400**	3.07	0.859	61.4%

5-point Likert scale ranging from 1 = strongly disagree (0-20%); 2 = disagree (21-40%); 3 = neither (41-60%); 4 = agree (61-80%); 5 = strongly agree (81-100%)

Nevertheless, 61.4% of the respondents agree that online learning platforms make them feel more competent as educators. 57.8% of the respondents neither agree nor disagree that the students prefer digital learning over face-to-face learning. More than 50% of the respondents were unsure that online learning platforms allow them to be learning facilitators instead of information providers. To conclude, at least 61.4% of the respondents agree that online learning platforms benefit them.

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4.4.4 Perceived Ease of Use

This analysis was conducted to achieve research objective 1, measuring the PEOU of online teaching among secondary school teachers. This research operationalised PEOU to measure respondents' difficulties when conducting an online class. Firstly, sharing the same percentage level (65.0%) as in Table 4.21, respondents agree that they can communicate clearly with the students and, at the same time, find the online learning platform easy to use. This results from a good connection that provides high-speed internet when using applications throughout the learning session.

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Table 4.21

The Level of Perceived Ease of Use Among Teacher's Acceptance in Using Online Education

Items Code	Items	N	Mean	Std. Deviation	Percentage
F6	With the digital platform, I can communicate clearly with my students.	400	3.25	0.898	65.0%
F10	Overall, I find the online learning platform easy to use.	400	3.25	0.771	65.0%
F8	I find it easy to get it to do what I want.	400	3.12	0.848	62.4%
F7	Online learning platforms make it easier for me to manage my classes.	400	3.10	0.882	62.0%
F5	I feel that it is easy for me to conduct classes and communicate online.	400	2.87	0.975	57.4%
	OVERALL	**400**	**3.12**	**0.875**	**62.4%**

5-point Likert scale ranging from 1 = strongly disagree (0-20%); 2 = disagree (21-40%); 3 = neither (41-60%); 4 = agree (61-80%); 5 = strongly agree (81-100%)

Moreover, over 62.0% find it easy to make the application do what they want it to do. In addition, 62.0% agree that online learning platforms make managing their classes easier. More than half (57.4%) of the respondents are unsure whether online tools make it easier to conduct classes and communicate online. In brief, 62.4% of the respondents find conducting and using online teaching tools easy.

4.4.5 Intention to Use

This analysis was conducted to achieve research objective 1, measuring the level of IU online teaching among secondary school teachers. This research intends to measure the

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willingness of the teacher to continue using online teaching. The table below indicates that 65.6% of the respondents find that online learning platforms not only help lower their workload but also help them achieve goals related to their work (64.4%). Moreover, respondents stated that online learning helps them track their teaching progress (64.0%) and makes classroom management more manageable and convenient (63.8%).

Table 4.22

The Level of Intention to Use Among Teacher's Acceptance in Using Online Education

Items Code	Items	N	Mean	Std. Deviation	Percentage
G10	Overall, I find the online learning platform is a great help in lowering my workload.	400	3.28	0.775	65.6%
G9	It can help me achieve goals related to my work.	400	3.22	0.814	64.4%
	It helps me keep track of my teaching progress.	400	3.20	0.765	64.0%
G7	It does not make classroom management more difficult.	400	3.19	0.866	63.8%
G8	It eases the pressure on me as a teacher.	400	3.15	0.873	63.0%
G5	It is an effective tool for students of all abilities.	400	3.08	0.864	61.6%
G4	Classes were equipped with the proper technology setup.	400	3.07	0.897	61.4%
	OVERALL	**400**	**3.17**	**0.839**	**63.4%**

5-point Likert scale ranging from 1 = strongly disagree (0-20%); 2 = disagree (21-40%); 3 = neither (41-60%); 4 = agree (61-80%); 5 = strongly agree (81-100%)

The table also suggests that 63.0% of the respondents agree that online learning platforms ease the pressure on them. Moreover, more respondents (61.6%) agree that it is an effective tool for students of all abilities. Almost 61.4% of the respondents stated

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that classes were equipped with a proper technology setup. Based on the research question, 63.4% of the respondents are willing to continue using online teaching.

4.4.6 Usage Behaviour

This analysis was conducted to achieve research objective 1, which is to measure the UB of online teaching among secondary school teachers. UB, operationalised by this research, measures the respondent's continuous commitment to adopting online teaching. From Table 4.23 below, 67.4% of the respondents agree to continue using online teaching in the future. Most (65.8%) also uploaded their teaching materials online to assist with the online session. Uploading teaching materials in an online platform helps teachers easily access material anywhere possible.

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Additionally, 65.4% of the respondents collaborate with other teachers to develop student content. Even though senior teachers are more insightful as their experience in the field is a lot, veteran teachers often benefit from collaborating with a more advanced or newer teacher in preparing material online

Table 4.23

The Level of Usage Behaviour Among Teacher's Acceptance in Using Online Education

Items Code	Items	N	Mean	Std. Deviation	Percentage
H11	I will continue to use it in the future.	400	3.37	0.858	67.4%
	I put all my teaching material online to assist my online teaching.	400	3.29	0.784	65.8%

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Items Code	Items	N	Mean	Std. Deviation	Percentage
H9	I collaborate with other teachers to develop content for the students.	400	3.27	0.801	65.4%
H10	Overall, I am very satisfied with the use of the online teaching platform.	400	3.26	0.713	65.2%
H7	I create my class content using PowerPoint presentations.	400	3.20	0.860	64.0%
H6	I use teaching videos on YouTube in my teaching.	400	3.12	0.784	62.4%
H5	I use social networking sites to connect with my students (ex, Facebook, Instagram, TikTok, YouTube, etc.)	400	2.88	0.918	57.6%
	OVERALL	**400**	**3.20**	**0.817**	**64.0%**

5-point Likert scale ranging from 1 = never (0-20%); 2 = rarely (21-40%); 3 = sometimes (41-60%); 4 = often (61-80%); 5 = always (81-100%)

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Overall, 65.2% of the respondents are satisfied with online teaching platforms, and quite a high percentage of respondents claim to create their class content using PowerPoint presentations (64.0%). In addition, 62.4% of respondents use teaching videos on YouTube in their classes. In comparison, 57.6% of the respondents sometimes use social networking sites such as Facebook, Instagram, TikTok, and YouTube, to name a few, to connect with the students. To conclude, 64.0 % of the respondents continuously commit to adopting online teaching.

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4.5 Summary of Mean Analysis

Based on the mean analyses conducted, the findings concluded that the level of PC, Att, PU, PEOU, IU, and UB is between medium and high. Therefore, the research managed to achieve its research objective and answer its research question as listed:

RO1 **:** To measure the level of PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers.

RQ1 **:** What is the level of PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

Table 4.24

Mean Analysis

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	N	Mean	Std. Deviation
Perceived Convenience (PC)	400	3.3625	.68402
Perceived Usefulness (PU)	400	3.2412	.67635
Attitude (Att)	400	3.0685	.66250
Perceived Ease of Use (PEOU)	400	3.1185	.69083
Intention To Use (IU)	400	3.1661	.67426
Usage Behaviour (UB)	400	3.1971	.55959

Table 4.25

Mean Score

Mean Score	Interpretations
1.00 – 1.80	Very Low
1.81 – 2.60	Low
2.61 – 3.20	Medium
3.21 – 4.20	High
4.21 – 5.00	Very High

Source: Moidunny (2009)

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4.6 Correlation Analysis

This analysis was conducted to achieve research objective 2, which measures the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers. Correlation analysis is performed to uncover whether there is a relationship between variables and how good the relationship is. In addition, this study utilises the Pearson correlation represented by *r* and a value between -0.1 and 0.1. It is also essential to acknowledge that if the value is 0, it signifies no significant relationship between the variables. In addition, the value -0.1 indicates a significant negative relationship, and 0.1 indicates a positive relationship between variables.

Table 4.26

Correlation Strength Table

Coefficient Size (R)	Strength Description
0.70 – 1.00	Extremely Strong
0.50 – 0.69	Very Strong
0.30 – 0.49	Moderately Strong
0.10 – 0.29	Weak
0.01 – 0.09	Very Weak
0	No Relationship

*Source: Akoglu (2018)

Table 4.27

Correlation Analysis

Variables	PC	PU	Att	PEOU	IU	UB
1 Perceived Convenience (PC)	1					
2 Perceived Usefulness (PU)	.290**	1				
3 Attitude (Att)	.162**	.323**	1			

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	Variables	PC	PU	Att	PEOU	IU	UB
4	Perceived Ease of Use (PEOU)	.267**	.359**	.254**	1		
5	Intention To Use (IU)	.323**	.273**	.232**	.187**	1	
6	Usage Behaviour (UB)	.476**	.304**	.229**	.295**	.275**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	400	400	400	400	400	400

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.25 summarises the correlation analysis of the variables. It is indicated that all the variables are correlated with each other. PU (.290) and PEOU (.267) have a weak relationship with PC. Apart from that, PEOU (.254), IU (.232), and UB (.229) also exhibit a rather weak correlation with Att. Similarly, UB had a weak relationship with Att (.229), PEOU (.295), and IU (.275).

However, IU (.323) has demonstrated a moderately strong relationship with PC. Nevertheless, Att, PEOU, and UB demonstrated a moderately strong correlation. Finally, UB (.476) also correlates moderately strongly with PC.

4.7 Structural Equation Modelling (SEM) Analysis

Structural Equation Modelling (SEM) analysis was conducted to examine research objectives three to seven, which are; *"To measure best predictor for IU of the technology among secondary school teachers;"* four, *"To investigate the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers;"* five, *"To determine the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary*

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school teachers;" six, *"To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers;"* and seven, *"To determine the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers."*

SEM analysis was also conducted to examine research question number three; *"What is the best predictor for IU of the technology among secondary school teachers?" four, "What is the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?" five, "What is the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?" six, "What is the mediating role of intention in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers?" and seven, "What is the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?"*

SEM analysis was also conducted to assess hypothesis nine, *"PEOU is positively correlated with IU," ten; "PU mediates the relationship between Att and IU," eleven; "PEOU mediates the relationship between Att and IU;" twelve, "Att mediates the relationship between PEOU, PU, and PC;" and thirteen, "UB is predicted by PEOU, PU, Att, and IU."* The factor loading value, composite reliability value, Average Variance Extracted (AVE), and model testing value were based on Table 3.7, the table of Goodness-of-fit measures presented in Chapter 3.

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4.7.1 Convergent Validity for Perceived Convenience, Perceived Usefulness, Attitude, Perceived Ease of Use, Intention to Use, and Usage Behaviour

Table 4.33 below summarises the convergent validity table for PC, PU, Att, PEOU, IU, and UB. Convergent validity could display whether the variables should be highly related to each other or, indeed, related. It is solely generated to validate the variable as in the conceptual framework. The convergent validity consists of the factor loading, Cronbach's Alpha, composite reliability, and AVE. According to Hair et al. (2019), convergent validity indicates how well the measurement of multiple items is used. Factor loading indicates the correlation between items, while composite reliability measures the item's internal consistency.

From the table below, the range of factor loading is 0.468 to 0.799, which is above the minimum value (≥ 0.50). The highest value for PC is 0.755, while the lowest is 0.659. Next, the highest value for PU is 0.799, and the lowest is 0.525. For Att, the highest value is 0.660, while the lowest is 0.590. PEOU exhibits the highest value at 0.726, and 0.604 is the lowest. The next variable is the IU, which produces 0.785 as the highest value, and the lowest is 0.543. Last but not least is UB, which demonstrates 0.710 as the highest value and 0.468 as the lowest.

Secondly, Cronbach's Alpha suggests a reading of 0.830 to 0.910. According to the minimum value (≥ 0.7) suggested for Cronbach's Alpha (Barbera et al., 2021), the internal consistency is in the range of fine to excellent. Comp composite reliability is another construct used to measure the item's internal consistency, demonstrating a reading of 0.880 to 0.910. The acceptable value for composite reliability is greater than

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or equal to 0.70. This indicates that all items performed well in measuring what they should measure.

Table 4.28

Convergent validity is defined as perceived convenience, perceived usefulness, attitude, perceived ease of use, intention to use, and usage behaviour

Variables	Items Code	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Perceived Convenience	C7	0.659	0.857	0.903	0.698
	C8	0.755			
	C9	0.712			
	C10	0.680			
Perceived Usefulness	D5	0.525	0.878	0.908	0.624
	D6	0.671			
	D7	0.799			
	D8	0.689			
	D9	0.546			
	D10	0.688			
Attitude	E5	0.604	0.830	0.880	0.595
	E6	0.590			
	E7	0.660			
	E8	0.659			
	E10	0.597			
Perceived Ease of Use	F5	0.604	0.850	0.892	0.623
	F6	0.658			
	F7	0.726			
	F8	0.695			
	F10	0.658			
Intention to Use	G4	0.543	0.910	0.928	0.650
	G5	0.688			
	G6	0.668			
	G7	0.785			
	G8	0.783			
	G9	0.622			
	G10	0.726			
Usage Behaviour	H5	0.468	0.845	0.884	0.561
	H6	0.630			
	H7	0.628			

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Variables	Items Code	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
	H8	0.639			
	H9	0.666			
	H10	0.635			
	H11	0.710			

*Note: Items were deleted due to low loadings
average variance extracted (AVE) = (summation of the square of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the error variances)}
Composite reliability (CR) = (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (square of the summation of the error variances)}

Lastly, the AVE indicates the number of 0.561 as the lowest to 0.698 and confirmed higher than the minimum value (≥ 0.50). AVE is used to validate a construct or, in other words, to determine how many variations in the item can be explained by the construct.

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In conclusion, all the readings indicate that all the indicators are above the minimum value, which implies that the variable used to measure the teacher's acceptance of online education is valid.

4.7.2 Analysis of Construct Discriminant Validity

Examining discriminant validity has come to be regarded as a necessary step prior to examining correlations between latent variables. A simulation study conducted by Henseler, Ringle, and Sarstedt (2015) in Becker et al. (2022) demonstrated that these methods cannot consistently identify the absence of discriminant validity in typical research contexts. To evaluate discriminant validity, these authors provide a distinct strategy based on the multitrait-multimethod matrix: the Heterotrait-Monotrait ratio of

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correlations (HTMT). To simplify it, the HTMT determines how comparable latent variables are. Notably, discriminant validity can be established if the HTMT is substantially less than one.

Table 4.25 summarises the HTMT for Att, IU, PEOU, PU, PC, and UB. HTMT values should not be close to 1, suggesting a lack of discriminant validity (Ab Hamid et al., 2017). For the construct below, the value of HTMT is in the range of 0.188 to 0.561. The results indicate that a good relationship is established between the two constructs. Finally, it is safe to conclude that the discriminant validity for the construct was significant.

Table 4.29

Heterotrait-Monotrait Ratio of Correlations (HTMT)

CONSTRUCT	Att	IU	PEOU	PU	PC
Attitude (Att)					
Intention to Use (IU)	0.264				
Perceived Ease of Use (PEOU)	0.308	0.234			
Perceived Usefulness (PU)	0.377	0.307	0.417		
Perceived convenience (PC)	0.188	0.370	0.311	0.339	
Usage Behaviour (UB)	0.267	0.332	0.334	0.329	0.561

Once the HTMT has been established, the research further confirms the discriminant validity among the research variables. The HTMT confidence intervals bias correction has been performed to infer the indirect effect in mediation analysis, even in a small-scale sample. Table 4.26 provides the HTMT confidence interval bias results corrected at 2.5% and 97.5%. The value listed is below 0.90, suggesting that the discriminant validity is already established for the model.

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Table 4.30

HTMT Confidence Intervals Bias Corrected

Hypotheses	Original Sample (O)	Sample Mean (M)	Bias	2.5%	97.5%
Attitude -> Intention to Use	0.100	0.101	0.001	0.060	0.143
Attitude -> Perceived Ease of Use	0.234	0.233	-0.001	0.139	0.325
Attitude -> Perceived Usefulness	0.282	0.281	-0.001	0.173	0.361
Attitude -> Usage Behaviour	0.031	0.032	0.001	0.015	0.053
Intention to Use -> Usage Behaviour	0.307	0.313	0.006	0.208	0.389
Perceived Ease of Use -> Intention to Use	0.196	0.197	0.001	0.086	0.304
Perceived Ease of Use -> Perceived Usefulness	0.261	0.265	0.004	0.153	0.356
Perceived Ease of Use -> Usage Behaviour	0.060	0.063	0.003	0.022	0.110
Perceived Usefulness -> Intention to Use	0.245	0.251	0.006	0.124	0.333
Perceived Usefulness -> Usage Behaviour	0.075	0.079	0.003	0.036	0.113
Perceived convenience -> Intention to Use	0.096	0.100	0.005	0.045	0.153
Perceived convenience -> Perceived Ease of Use	0.229	0.232	0.003	0.119	0.315
Perceived convenience -> Perceived Usefulness	0.267	0.272	0.006	0.152	0.372
Perceived convenience -> Usage Behaviour	0.029	0.032	0.003	0.011	0.058

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4.7.3 Overall Model FIT

After determining the validity and reliability of the model, the study will continue examining the overall model fit. The overall model fit is conducted to compute the whole model's goodness. To assess if the model is suitable for testing, R^2, $Q^{2,}$ and Standardised Root Mean Square Residual (SRMR) were measured. Falk and Miller (1992) and Adamu Muhammad et al., 2022, recommended the R^2 value to be ≥ 0.10. The variance explained could be considered acceptable with the reading equal to or greater than 0.10. According to Table 4.27 below, the R^2 for this study is between 0.094 and 0.234.

Next, we measure the predictive relevance of the model by examining the Q^2. In measuring it, a blindfolding analysis was conducted, considering that the value of Q^2 of more than 0 (> 0) indicates that the model is good. The results of Q^2 for IU (0.058), PEOU (0.073), PU (0.038), and UB (0.048) are apparently above the minimum value.

Table 4.31

The Overall Model Fit

Model	R^2	Q^2	SRMR
Attitude			
Intention to Use	0.102	0.058	
Perceived Ease of Use	0.125	0.073	0.068
Perceived Usefulness	0.234	0.138	
Perceived Convenience			
Usage Behaviour	0.094	0.048	

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Finally, the SRMR is supposed to be less than 0.10 (< 0.10). From Table 4.27, the SRMR reading is 0.068. Hence, based on the result, it is confirmed that the research model for this study is fit and acceptable (Memon et al., 2021).

4.7.4 Model Path Analysis

After obtaining the results for the research model, a model path analysis is carried out to investigate the connections between PC, PU, Att, PEOU, IU, and UB. It is also conducted to fulfil research objectives 4 to 7 and accept the hypotheses.

Model path analysis is a method of discerning and assessing the effects of a set of variables acting on a specific outcome using multiple causal pathways. In this table, we should observe whether there is a positive relationship between variables and whether they answer all the objectives listed. Below are the objectives listed earlier in the study and the data that proves whether it is accepted or rejected.

Figure 2.1 and Table 4.37 below will present the findings of the mediating role of PU in the relationship between PC and Att to IU and UB. The result from the model path analysis answers research objectives and accepts hypotheses.

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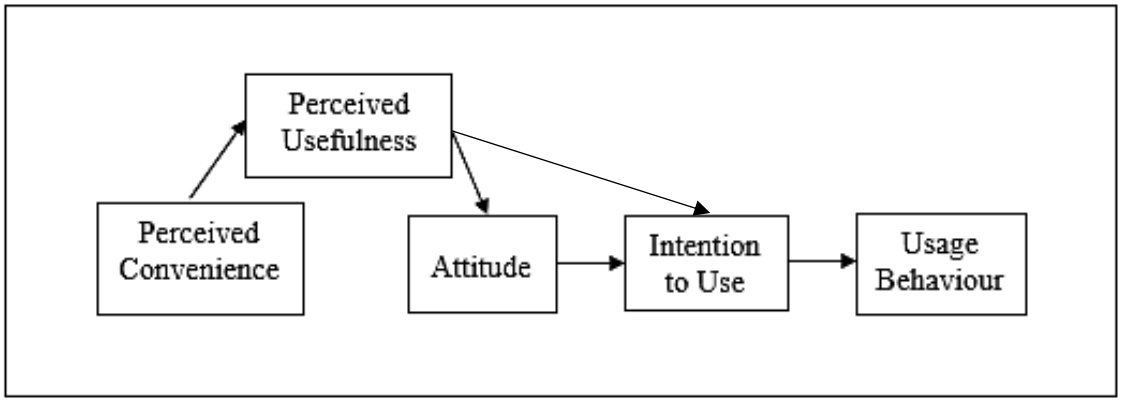


Figure 4.1. Mediating Role of Perceived Usefulness in The Relationship Between Perceived Convenience and Attitude to Intention to Use and Usage Behaviour

Table 4.32

The Mediating Role of Perceived Usefulness in The Relationship Between Perceived Convenience and Attitude to Intention to Use and Usage Behaviour

Model	Beta (β)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Usefulness -> Intention to Use	0.245	0.054	4.560	0.000
Perceived Usefulness -> Attitude	0.221	0.049	4.511	0.000
Perceived convenience -> Perceived Usefulness	0.207	0.053	3.914	0.000

The table above summarises the model path analysis for the mediating role of PU. It suggests that PU affects Att, IU, and PC. The P values are supposed to be lower or equal to 0.05, and this table of model analysis produces a value less than stated. Therefore, it is safe to suggest that this model analysis is similar to Figure 2.1 and answers the research objectives and hypothesis listed below.

RO4: To investigate the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.

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H10: PU mediates the relationship between Att and IU.

The next model path analysis attempts to fulfil Figure 2.2 below. The figure illustrates that PEOU mediates the relationship between PC, Att, and IU. Generally, the p-value should be below or equal to 0.05.

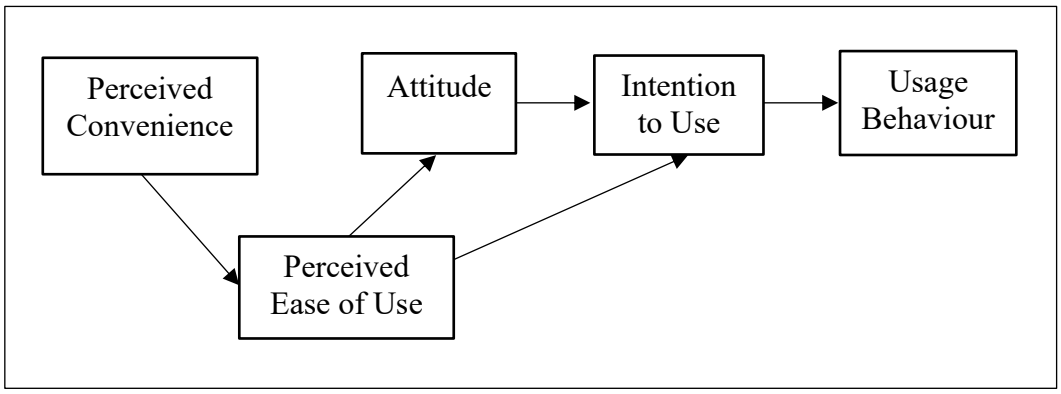


Figure 4.2. Mediating Role of Perceived Ease of Use in The Relationship Between Perceived Convenience and Attitude to Intention to Use and Usage Behaviour

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Table 4.33

Mediating Role of Perceived Ease of Use in The Relationship Between Perceived Convenience and Attitude to Intention to Use and Usage Behaviour

Model	Beta (β)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Ease of Use -> Attitude	0.234	0.048	4.900	0.000
Perceived convenience -> Perceived Ease of Use	0.229	0.050	4.544	0.000
Perceived Ease of Use -> Intention to Use	0.133	0.060	2.218	0.027

Results from the table reveal that all of the models had a p-value that is acceptable according to the table of goodness fit (Table 3.7) in Chapter 3. In conclusion, the research question and hypothesis are below.

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RO5: To determine the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.

H11: PEOU mediates the relationship between Att and IU.

The following figure is constructed to demonstrate the role of each variable, followed by a table with all the data to prove and answer the research objectives and hypothesis.

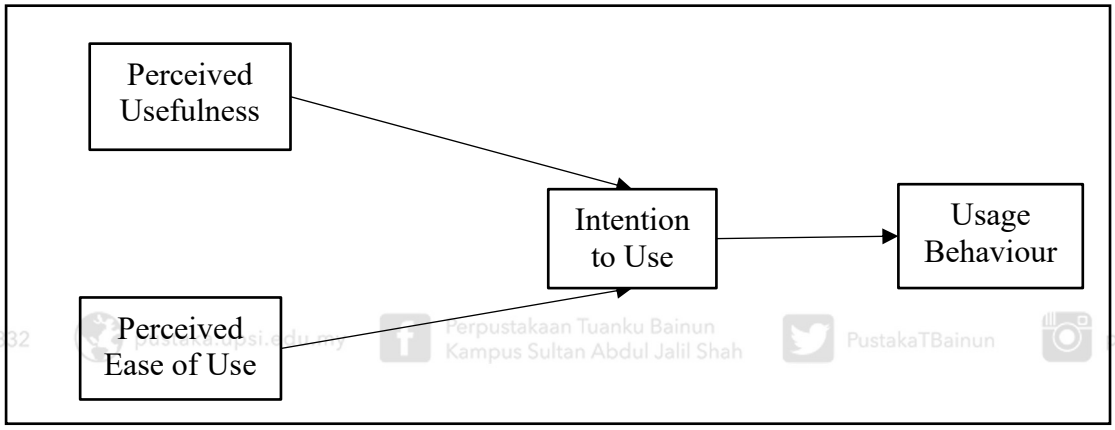


Figure 4.3. Mediating Role of Intention to Use in The Relationship Between Perceived Convenience, Perceived Ease of Use, Perceived Usefulness, and Attitude to Usage Behaviour

Table 4.34

Mediating Role of Intention to Use in The Relationship Between Perceived Convenience, Perceived Ease of Use, Perceived Usefulness, and Attitude to Usage Behaviour

Model	Beta (β)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Intention to Use -> Usage Behaviour	0.307	0.046	6.696	0.000
Perceived Ease of Use -> Intention to Use	0.133	0.060	2.218	0.027
Perceived Usefulness -> Intention to Use	0.245	0.054	4.560	0.000

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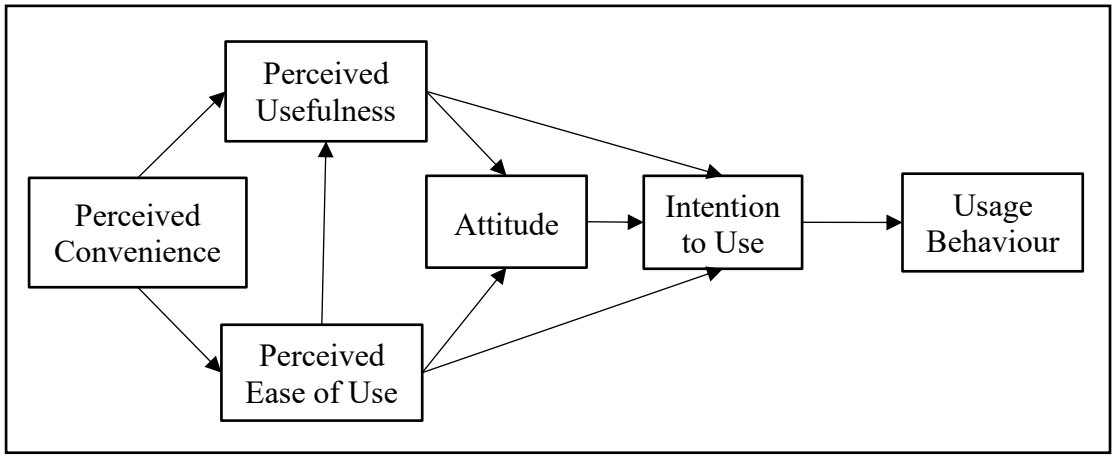


Figure 4.4. Mediating Role of Attitude in The Relationship Between Perceived Ease of Use, Perceived Convenience, And Perceived Usefulness to Intention to Use and Usage Behaviour

Table 4.35

Mediating Role of Attitude in The Relationship Between Perceived Ease of Use, Perceived Convenience, And Perceived Usefulness to Intention to Use and Usage Behaviour

Model	Beta (β)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Ease of Use -> Attitude	0.234	0.048	4.900	0.000
Perceived Usefulness -> Attitude	0.221	0.049	4.511	0.000
Intention to Use -> Usage Behaviour	0.307	0.046	6.696	0.000
Perceived Ease of Use -> Intention to Use	0.133	0.060	2.218	0.027
Perceived Ease of Use -> Perceived Usefulness	0.261	0.052	4.993	0.000
Perceived Usefulness -> Intention to Use	0.245	0.054	4.560	0.000
Perceived convenience -> Perceived Ease of Use	0.229	0.050	4.544	0.000
Perceived convenience -> Perceived Usefulness	0.207	0.053	3.914	0.000

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The first model between Att and PEOU exhibits a positive relationship with a t-value of 4.900 and a p-value of 0.000. Next, Att positively correlated with PU (t-value = 4.511; p = 0.000). IU has demonstrated the highest significant relationship with UB (t-value = 6.696; p = 0.000), and PEOU also demonstrates a positive relationship with IU (t-value = 2.218; p = 0.027). PEOU has a positive relationship with PU (t-value = 4.993; p = 0.000); thus, PU demonstrates a positive relationship with IU (t-value = 4.560; p = 0.000). Finally, results reveal that PC had a positive relationship with PEOU (t-value = 4.544; p = 0.000) and PU (t-value = 3.914; p = 0.000).

Table 4.36

The mediating role of attitude in the relationship between perceived ease of use, perceived convenience, and perceived usefulness to intention to use and usage behaviour

Model	Beta (β)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Intention to Use -> Usage Behaviour	0.307	0.046	6.696	0.000
Perceived Ease of Use -> Perceived Usefulness	0.261	0.052	4.993	0.000
Perceived Ease of Use -> Attitude	0.234	0.048	4.900	0.000
Perceived Usefulness -> Intention to Use	0.245	0.054	4.560	0.000
Perceived convenience -> Perceived Ease of Use	0.229	0.050	4.544	0.000
Perceived Usefulness -> Attitude	0.221	0.049	4.511	0.000
Perceived convenience -> Perceived Usefulness	0.207	0.053	3.914	0.000
Perceived Ease of Use -> Intention to Use	0.133	0.060	2.218	0.027

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All the data presented above apparently have answered the research objectives below.

RO6: To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers.

RO7: To determine the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers.

However, hypotheses 12 and 13 can only be partially accepted as the variables do not mediate between all other variables but only some.

H12: Att mediates the relationship between PEOU, PU, and PC.

H13: UB is predicted by PEOU, PU, Att, and IU.

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In conclusion, model path analysis can be summarised in the figure below.

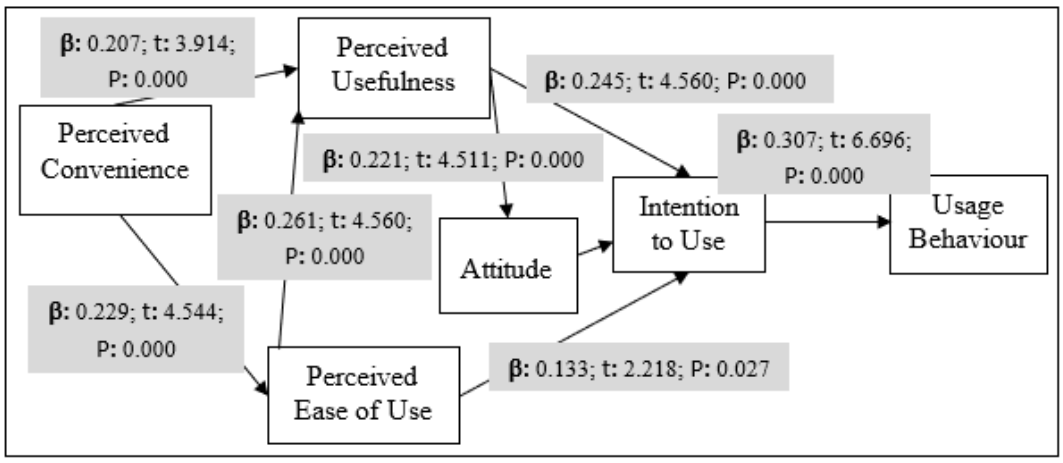


Figure 4.5. Summary of model path analysis

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4.8 Summary of Analysis

Table 4.29 below summarises the analysis results used to answer all research questions, objectives, and whether hypotheses were accepted.

Table 4.37

Summary of research objectives, research questions, and hypotheses

ITEM	DESCRIPTION	RESULTS
Research Objective 1	To measure the level of PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers.	Achieve
Research Objective 2	To measure the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers.	Achieve
Research Objective 3	To measure the best predictor for IU the technology among secondary school teachers.	Achieve
Research Objective 4	To investigate the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.	Achieve
Research Objective 5	To determine the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers.	Achieve
Research Objective 6	To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers.	Achieve
Research Objective 7	To determine the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers.	Achieve
Research Question 1	What is the level of PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?	Answered
Research Question 2	What is the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?	Answered
Research Question 3	What is the best predictor for the IU technology among secondary school teachers?	Answered

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ITEM	DESCRIPTION	RESULTS
Research Question 4	What is the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?	Answered
Research Question 5	What is the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?	Answered
Research Question 6	What is the mediating role of intention in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers?	Answered
Research Question 7	What is the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?	Answered
Hypothesis 1	PC is positively correlated with PU	Accepted
Hypothesis 2	PC is positively correlated with PEOU	Accepted
Hypothesis 3	PEOU is positively correlated with PU	Accepted
Hypothesis 4	PEOU is positively correlated with Att	Accepted
Hypothesis 5	PU is positively correlated with Att	Accepted
Hypothesis 6	Att is positively correlated with IU	Accepted
Hypothesis 7	IU is positively correlated with UB	Accepted
Hypothesis 8	PU is positively correlated with IU	Accepted
Hypothesis 9	PEOU is positively correlated with IU	Accepted
Hypothesis 10	PU mediates the relationship between Att and IU	Accepted
Hypothesis 11	PEOU mediates the relationship between Att and IU	Accepted
Hypothesis 12	Att mediates the relationship between PEOU, PU, and PC.	Partially
Hypothesis 13	UB is predicted by PEOU, PU, Att, and IU	Rejected

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4.9 Summary

In conclusion, this chapter thoroughly reported the findings using the specified research tools. However, there are only 400 respondents, consisting of teachers from various schools in the district of Kinta. It has not been generalised to all states even though cluster sampling has been used in each institution where data was collected. However, based on the sample collected, researchers can finally fulfil the objectives and hypotheses listed earlier in the research.

All the objectives have been met, and research questions have also been answered. Hypotheses have also been answered with the exception of hypotheses 12 and 13. This suggests that:

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i. Att is not a mediator for the PC relationship between PEOU and PU.
ii. UB is only predicted by IU.

In the next chapter, we will summarise the findings, discussion, and recommendations on future research that could be included in contributing to the body of research or improving the research.

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CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

Regarding the previous chapters, this chapter will discuss the teacher's acceptance of online education using the Technology Acceptance Model (TAM). It will also discuss the findings of teachers' acceptance of using technology and the implications to the schools, students, and community. Accordingly, it is hoped that this research could be a guide and a kickstart for future research.

There are seven objectives listed: (1) To measure the level of perceived convenience (PC), attitude (Att), perceived usefulness (PU), perceived ease of use (PEOU), intention to use (IU) and usage behaviour (UB) of online teaching among secondary school teachers; (2) To measure the relationship between PC, Att, PU, PEOU, IU and UB of online teaching among secondary school teachers; (3) To measure best predictor for IU of the technology among secondary school teachers; (4) To investigate the mediating role of PU in the relationship between PC and Att to IU and

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UB in online teaching among secondary school teachers; (5) To determine the mediating role of PEOU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers; (6) To investigate the mediating role of IU in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers; (7) To determine the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers.

Apart from that, there are 13 hypotheses listed, which include:

H1: PC is positively correlated with PU.

H2: PC is positively correlated with PEOU.

H3: PEOU is positively correlated with PU.

H4: PEOU is positively correlated with Att.

H5: PU is positively correlated with Att.

H6: Att is positively correlated with IU.

H7: IU is positively correlated with UB.

H8: PU is positively correlated with IU.

H9: PEOU is positively correlated with IU.

H10: PU mediates the relationship between Att and IU.

H11: PEOU mediates the relationship between Att and IU.

H12: Att mediates the relationship between PEOU, PU, and PC.

H13: UB is predicted by PEOU, PU, Att, and IU.

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5.2 Discussions

This section will emphasise the six variables from the TAM listed earlier in the study: PC usefulness, Att ease of use, IU, and UB. In the original questionnaire, there are ten items for each of the variables listed. Several items have been deleted due to low-loading data (Domingues et al., 2019; Karakaya-Ozyer et al., 2020; Lin et al., 2020). Items remaining in sections C, D, E, F, G, and H are the items that best fit and are reliable in portraying the variable measured.

5.2.1 Demographic

From the study conducted, it is clearly demonstrated that from the 400 respondents collected, females are the highest gender involved. However, this does not temper the reliability of the data. A study has proven that from the students' perspective, competencies demonstrated by the teachers are essential. They need teachers who are good at teaching and keeping orders yet are also friendly and more relaxed, not emulating all models of men and women (Lahelma, 2023).

Notably, female teachers tend to exert greater effort in developing their abilities to facilitate learning. Female teachers and teachers with more professional development and effective instructors have reported greater work satisfaction (Toropova et al., 2021). Moreover, Sims (2018) reported cross-national evidence that teachers' ages were marginally connected with work satisfaction; however, gender had no influence. Therefore, female instructors were more involved with pupils than male teachers and replacement teachers (Topchyan & Woehler, 2021).

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Gender differences in education have long been researched, and results are differentiated depending on the places and groups selected. Even within identical national contexts, research on teacher gender and work satisfaction is marked by a high degree of variability. Nevertheless, one research study on English teachers' work satisfaction indicated no significant gender differences (Crossman & Harris, 2006). Meanwhile, another study discovered that women were more content with their teaching jobs (Poppleton & Riseborough, 1990).

Similarly, findings from several studies in the United States (US) and Canada on the relationship between job satisfaction and teacher gender are inconsistent, indicating higher levels of job satisfaction for either women (Liu & Ramsey, 2008; Ma & MacMillan, 1999) or men (Klassen & Chiu, 2010; Mertler, 2002).

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For example, Online Teaching and Learning (OTL) readiness research is interested in the relationships between teacher background variables such as gender, age, and experience and instructors' readiness levels (Scherer et al., 2021). This is critical since understanding the extent to which such qualities may explain whether or why not instructors believe themselves ready for OTL may help identify potential support requirements (Christensen & Knezek, 2017; Cutri et al., 2020; Scherer et al., 2023).

Examining the age gap, teachers in their thirties are the major contributors to the study, while the lowest number of respondents comprises 30 years and below. This is attributed to the fact that the researcher had set a limitation of teachers exposed to or using online teaching for more than six months. According to the Teaching and

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Learning International Survey (TALIS), beginner instructors have lower confidence levels than experienced teachers with five or more years of experience (Scherer et al., 2019), leaving the veteran teacher as the second least likely to answer the questionnaire.

However, according to a US study on teacher turnover, young teachers leave schools at a higher rate than their middle-aged colleagues, and women are more likely to quit school (Borman & Dowling, 2008; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2001; Kukla-Acevedo, 2009). These findings may be attributable mostly to younger female instructors quitting school for family reasons; nevertheless, these teachers are more likely to return to teaching later (Allen, 2005). Data on teaching experience indicated that many respondents have been teaching for over ten years. This means most had the skills to delegate and use Information, Communication, and Technology (ICT). Furthermore, many teachers' computer literacy has increased to the point where even inexperienced teachers can quickly use their computers to evaluate various software packages and filter, import, and export information to suit their curriculum purposes better (Mumtaz, 2000). Notably, the computer operating basics are crucial in conducting classes during this pandemic session.

Downing and Dyment (2013), Hung (2016), Martin, Budhrani, and Wang (2019), and Scherer et al. (2021), according to this prevalent linearity assumption, more experienced instructors believe they are better (or worse) equipped for OTL than less experienced teachers. However, most respondents in this study have degrees and master's degrees. Consequently, an assumption can lead to overemphasis on help for novice teachers while also putting experienced teachers at risk by offering insufficient support (Scherer et al., 2023).

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In terms of subjects taught by the respondents, researchers have already categorised the subjects and number of teachers needed to achieve equality in interpreting data. It is highlighted in Chapter 4 that the teachers were diverse in the subjects they taught, which offers the data more reliability in terms of scattered subjects. More than half of the respondents live in urban residency areas with an income level of RM 3,000 and above, making them capable of owning and using the Internet. In addition, each respondent owns at least one smartphone, while others may possess more than one device. Thus, devices were not the main issue from the teachers' point of view.

5.2.2 Psychographic

Psychographic items focus on the respondent's readiness to adopt the technology, their knowledge of online applications, and the challenges faced throughout their OTL sessions. In conducting classes, one should at least be in a proper environment. This study suggests that almost 70% of the respondents have a secluded place or working space. Moreover, many have declared that they have good internet speed and have subscribed to one.

Challenges faced during the execution of online classes are as predicted in the earlier chapter. The highest goes to a lack of skills in operating and using the technology. Even though most respondents can be considered young, their computer literacy rate is only good. Apart from that, respondents claimed to recognise various online applications but have only used the basic ones such as WhatsApp, Google Meet, and Telegram. Despite all the challenges, more than half of the respondents are happy

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to conduct lessons online. Therefore, the groups unable to conduct lessons remotely must possess problems unrelated to technology.

5.3 Malaysian Teachers and Online Learning Platforms

A study conducted previously stated that 70% of teachers did not utilise any digital devices in conducting an online lesson (König et al., 2020). This is attributed to these devices negatively affecting the teachers' IU and behaviour in continuing to use a system (Halili & Sulaiman, 2019). Furthermore, educators are believed to be unprepared or unequipped with the proper knowledge of the technology (Nugroho et al., 2021). A recent study has proven that educators face difficulty conducting lessons online (Farah et al., 2021). Put differently, teachers are still attached to and comfortable using traditional teaching (Idrus et al., 2021).

Experience does not make an individual more reliable. The more experience a teacher has, the less technologically competent they are, and vice versa (Rashid et al., 2021). They are also not allocated ample time to learn and adjust to the technology (Ghavifekr & Rosdy, 2015). Even with training, the ability to apply technology in their lessons is mostly moderate (Allam et al., 2020). Apart from that, some educators still do not encourage the students to use it due to the schools' limited access to technological devices such as computers and networks (Allam et al., 2020).

Even though there have been reports about the limitations in internet access in rural areas (Hassan, 2020), most Malaysian teachers have already been equipped with at least the basic skills of computer literacy. Therefore, they have no problems accessing

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and using applications such as Microsoft Office, internet browsers, and social networking sites (AlSaqqaf & Ke, 2021; Rashid et al., 2021).

5.3.1 The Relationship Between Attitude with Perceived Usefulness and Perceived Ease of Use

From the previous chapter's literature, this study achieved research objective 2 and successfully answered the hypotheses listed below.

RO2: To measure the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers.

H4: PEOU is positively correlated with Att.

H5: PU is positively correlated with Att.

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Studies have proven that both users were satisfied with OTL but faced problems, such as difficulties adapting to the new teaching method and unfamiliar with the software or network platform, making it harder to use (Zheng, 2020). In addition, a congested network and unstable signal, a phenomenon of jamming in the middle of teaching, would have an opposing effect in making communication among the teachers and students smoother and clearer (Wendong, 2020).

However, respondents have suggested that the ease of use and usefulness of the online learning platform have offered them a positive vibe for continuing to use the technology. All problems related to and faced while encountering technology for the first time, such as unstable signal, new online learning platform, and jamming in the

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middle of the class, are then considered minor issues compared to the significant differences it could cause to the whole learning environment.

In online self-learning, the main concerns are interference in home learning and lack of learning monitoring. However, with timely online training, ample online resources, accessible live broadcast tools, and a stable teaching platform, the systematic progress of online teaching is ensured (Ang & Zhang, 2021). While easing conditions and technological complexity are out of the list, perceived ease of use (PEOU) is significantly influenced by computer self-efficacy, perceived enjoyment (PE), and students' perception of external control (Huang et al., 2020). Each time the respondents successfully conduct classes, their confidence rises. With each obstacle encountered and solved, their attitude (Att) toward delegating the technology afterwards has become more and more positive. Plus, interactive classes are more exciting and fulfilling in catching the students' attention. Accordingly, the more benefits they gain in each class, the more prone they are to continue using the technology.

When educators' confidence and competence improved, they believed their understanding of IT had increased *'substantially,'* educators adjusted their working methods, and their excitement for their profession grew. The greatest advantage to students came from instructors' more skilled use of tools for developing high-quality instructional materials and increased access to resources (Mumtaz, 2000).

When instructors receive Motivational Support (MV), they are more likely to find Augmented Reality (AR) and Virtual Reality (VR) useful for reference. The high level of PEOU influences instructors' Att toward using AR and VR in the classroom.

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This suggests that educators familiar with AR/VR-based training are extremely aware of its utility and simplicity of use in teaching and learning (Jang et al., 2021). Additionally, the individual's ability to use e-learning resources and multimedia technology to progress and improve learning quality can also be referred to as e-learning readiness (Yilmaz, 2017). At the same time, self-efficacy in computers or the internet, online communication, self-directed learning, student control, and motivation towards e-learning were the gist of e-learning readiness (Borotis & Poulymenakou, 2004; Demir & Yurdugül, 2015).

Respondents who consider that the technology is helping them in terms of their work performance, the simplicity in conducting classes, and the less hassle in terms of preparation for starting a class may opt to continue using the system. Eventually, they perceive that online learning is easy to use and very useful. Individuals motivated to apply electronic courseware usually perceive a system's usefulness and ease of use (Baki et al., 2018; Joo et al., 2018). Davis (1989) stated PEOU as the level at which the users expect the target system to be as easy and effortless as possible. It is proven that Att directly affects PEOU (Hansen et al., 2018; N. Park et al., 2007). Teachers with knowledge of technology know its usefulness and ease in applying it in teaching and learning sessions (Jang et al., 2021).

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5.3.2 The Relationship Between Perceived Convenience with Perceived Usefulness and Perceived Ease of Use

In research on students' satisfaction, positive opinions, and self-efficiency, the e-portfolio was often the go-to tool for managing their learning and evaluation. However, the expected effect on their learning was not very significant. Nevertheless, the students highlighted that the e-portfolio was valuable as a progressive personal learning tool (Razali et al., 2021; Olatz & Luis, 2009). This study eventually proved the listed hypotheses.

H1: PC is positively correlated with PU.

H2: PC is positively correlated with PEOU.

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Teachers could independently organise a well-structured online class with the correct devices and setups. This, in return, offers teachers a sense of fulfilment when using OTL platforms. A study by Wendong (2020) mentioned that unstable signals and the congested network caused jamming in the middle of the teaching session adversely affected the session to become smoother and clearer, especially in bridging communication between teacher and their students.

Furthermore, Zheng (2020) also acknowledged that teachers and students face difficulties adapting to the new method due to the software or network platform, leading to struggles in using the online platform. However, respondents have stated that with the proper guidance in using the technology, they are willing to continue using it in the future. Note that PEOU is significantly influenced by computer self-efficacy, PE, and

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perception of external control, while easing conditions and technological complexity are out of the list (Huang et al., 2020). However, Table 4.14 in Chapter 4 suggests that only 5.3% have proclaimed that internet coverage or technological difficulties are a challenge in online teaching at home.

5.3.3 The Relationship Between Perceived Ease of Use and Perceived Usefulness

PEOU increases student interest in utilising Google Classroom (Yolandari et al., 2020). Almost 77.5% of science professors had difficulty managing an online learning session. Technology, students, and teachers are among the factors that have contributed to the difficulties. Internet connectivity was a significant technological hurdle in online learning (42.4%). Moreover, students add to the difficulties through poor motivation, a lack of time management skills, and communication gadgets such as cell phones. However, teachers are also to blame for challenges encountered while using online learning tools and explaining topics (Wisanti et al., 2021).

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As such, this study has proven the listed hypothesis.

H3: PEOU is positively correlated with PU.

The lack of time management skills and difficulties handling online learning apps were common problems faced by educators adapting technology (Wisanti et al., 2021). Apart from that, it is feared that this teaching style would increase the teacher's workload and affect time management (Giovannella et al., 2020). There is also a study mentioning that online teaching is time-consuming and that there are limitations to

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using e-learning platforms (Biasutti et al., 2021). However, there is a link between time management and learning outcomes. Furthermore, it was noted that students' time management during online sessions was more impacted by the variable of adhering to the previously established timetable. Thus, the study advises students to practise time management autonomously while participating in online learning with the assistance of instructors and schools (Sari et al., 2021).

Teachers were very content with the technology when the students were fully satisfied and, at the same time, released some of their workload. Regarding students' time management, classes were always organised according to the timetable provided. Hence, it is the student's responsibility, and with the help of parents, to ensure classes are attended and to lessen the hassle. Good cooperation from teachers and students could only offer educators the necessary work satisfaction. Evans' (1997) definition of work satisfaction is *"a state of mind determined by the extent to which the individual perceives her/his job-related needs to be met"* (p. 328). Furthermore, two major components of teacher work satisfaction are job comfort and fulfilment. The former relates to an individual's pleasure with employment conditions and circumstances. In contrast, the latter refers to satisfaction with personal accomplishments within relevant job elements (Toropova et al., 2021).

5.3.4 The Relationship between Perceived Usefulness and Intention to Use

It is very encouraging that the respondents find that online learning platform is lowering their workload (65.6%). Apart from that, the platform could provide educators with a

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track record of an overview of what has been taught and their teaching progress (64.0%). The listed hypothesis is proven in this study.

H8: PU is positively correlated with IU.

The teachers express their preferences in adopting blended learning for future activities (Giovannella et al., 2020). PU has also been proven to directly affect IU (Mohammad AlHamad, 2020; Wahab et al., 2020). A study has proven that the teacher's IU technology in their daily teaching is relatively high and boosts confidence in developing digital skills as they begin to notice the importance of technology to the education system (Rahayu & Wirza, 2020). It is clearly demonstrated in the data collected in the study that educators feel that online learning platforms are useful in their jobs (66.2%) and improve their productivity (64.4%) and job performance (64.2%).

Teachers were only marginally satisfied with teaching remotely, indicating that technology is not a sufficient substitute for in-person instruction (Murdaugh et al., 2020). The Technological Pedagogical Content Knowledge (TPACK) of preservice teachers significantly affects their self-efficacy and PEOU in dealing with technology. It also has a beneficial impact on their PEOU and PU when using technology in the classroom. Furthermore, it influences teachers' IU technology (Joo, Park, & Lim, 2018). Thus, higher education professionals must become role models for students in promoting the value of technology by developing and implementing innovative ways of technology-enhanced learning (Fokides, 2020).

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The findings of a Structural Equation Modelling (SEM) demonstrated that PU, Att towards technology use, organisational culture, and teachers' assessment of the relevance of school regulations on technology use substantially influenced BI regarding technology utilisation (Huang & Teo, 2020). A total of 84 surveys of student teachers conducted in Sweden revealed that student teachers' PU had a direct and substantial effect on IU (Mohammad AlHamad, 2020; Ma et al., 2005). The following hypotheses can be concluded from all the literature. This study also reveals that a lack of technological expertise and experience can induce anxiety, uncertainty, and confidence, leading to the rejection of online instruction (Tsegay et al., 2022).

5.3.5 The Relationship Between Perceived Ease of Use and Intention to Use

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Studies conducted in the district of Kinta Utara have suggested that educators are prone to use digital platforms in communicating with students during the pandemic (65.0%) and, at the same time, help educators manage their classes conveniently (62.0%). Apart from that, it also makes classroom management easier and more accessible (63.8%). Overall, the arguments have positively proven the hypothesis.

H9: PEOU is positively correlated with IU.

The most challenging aspect of working online is obtaining online help. Furthermore, the support employees were working from home, and it appears that any emerging problems and difficulties must be resolved online or by phone call. Aside from that, one's coworker was the best source of assistance, which had to be done online or via phone, owing to the lack of regular contact (Ruoslahti, 2020).

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Respondents additionally highlighted a lack of time and resources to compensate for the extra time spent converting hard-copy documents to online, which is an administrative issue (Ruoslahti, 2020). Online learning offers an advantage over traditional learning in terms of time and place to conduct and be in class. Nonetheless, variations in the availability of appropriate supervision in study places, activities, and companions may result in low initiative and efficiency (Chen et al., 2021).

In Sweden, research was conducted to examine student teachers' perceptions of technology usage and computer technology use in connection to their desire to use. It demonstrates that the subjective norm of student teachers, which has the least influence from external expectations, has no significant effect on their desire to utilise computer technology, either directly or indirectly. On the other hand, PEOU had an indirect substantial influence on the intention of student teachers to utilise it (Teo et al., 2019; Ma et al., 2005).

It is proven that PEOU indirectly affects the teacher's IU (Teo et al., 2019; Wahab et al., 2020). During the COVID-19 pandemic in India, significant issues reported in conveying lessons online include a lack of basic facilities, external distractions, and family members' interruptions throughout the learning and assessment session (Joshi et al., 2020). Teachers face difficulties using ICT, especially in creating online learning materials, explaining, assessing, and getting feedback. This causes them to believe that online learning platforms are either worse than traditional teaching and learning or convenient to practise (Rahayu & Wirza, 2020).

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According to recent research by Asharaf et al. (2021), efforts to implement blended learning in Chinese schools would be complex owing to instructors' Att, pedagogical skills, and the exam-oriented character of the Chinese education system. This indicates that the Chinese education system's transition to online learning might be challenging and intriguing (Tsegay et al., 2022).

The study's findings suggest that teachers' technology-related personal characteristics (such as computer expertise, computer self-efficacy, and personal innovativeness), personality traits (such as extraversion, conscientiousness, and openness to experience), and demographic characteristics (such as age), significantly predict teachers' intention to adopt VR technology in management education (Gupta & Bhaskar, 2023).

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5.3.6 The Relationship between Attitude, Intention to Use, and Usage Behaviour

IU facilitates the usefulness of e-learning services (Alzaza, 2013). Furthermore, its practicality would lead to acceptance (Al-Adwan et al., 2018). The above has proven the listed hypotheses and eventually answered the research questions.

H6: Att is positively correlated with IU.

H7: IU is positively correlated with UB.

RQ1: What is the level of PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

RQ2: What is the relationship between PC, Att, PU, PEOU, IU, and UB of online teaching among secondary school teachers?

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Despite the difficulties in delivering an online session, 77.4% of teachers attempted to use the internet platform by offering material online and creating slide presentations. Others participated in online group discussions on occasion. Meanwhile, a smaller proportion of instructors utilised online classrooms for task assignments and assessing learning outcomes. However, scientific instructors' efforts must be recognised since science cannot be learned just by reading and conversation but also through hands-on practice. They could handle online learning without maximising the diverse learning experiences of their pupils (Wisanti et al., 2021).

Except for self-monitoring, a survey answer indicated that all factors substantially influenced use behaviour, with behavioural intention mediating between PU, PEOU, and UB (Vinnikova et al., 2020). The utility of mobile learning (m-learning) services appears to be adopted and supported. Thus, the more practicality it provides leads to greater acceptability among higher-education students (Al-Adwan et al., 2018; Alzaza, 2013).

A survey question used to collect data from college professors and students reveals that system functions, interface features, and individual differences are critical to use behaviour and behavioural intent to use mobile library applications. Furthermore, these elements may be regarded as the external drivers of users' behavioural intention, whereas the individual difference is the internal driver (Ming et al., 2021). The following hypotheses and research questions are formed based on the reasoning.

Different approaches can be used to provide institutional assistance. For example, institutional support through developing a common vision for OTL might

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drive instructors to adopt innovative technology-enhanced teaching practices (Tondeur et al., 2019). Furthermore, institutional support for teacher cooperation can boost teachers' innovativeness and enhance their teaching practises (Blomeke, Nilsen, & Scherer, 2021; Scherer et al., 2023).

5.3.7 The Mediating Role of Perceived Usefulness in Mediating Attitude and Intention to Use

The study, however, implies that teachers using online learning platforms are ecstatic that it improves job performance (64.2%) and allows them to accomplish other than increasing their productivity (64.4%). It also suggests that they rely very much on the platform in conducting classes (65.6%). This could answer the listed hypotheses and research questions.

H10: PU mediates the relationship between Att and IU.

RQ3: What is the best predictor for IU technology among secondary school teachers?

RQ4: What is the mediating role of PU in the relationship between PC and Att to IU and UB in online teaching among secondary school teachers?

College students believe that e-learning benefits the learning process rather than just assisting with study preparation. Students might access learning materials outside of class while using blended learning. The instructions and learning outlines were previously distributed to the students to enable individual study. The fact that the students are already equipped with the necessary learning materials would make it easier for the lecturers to conduct courses (Syaifuddin, 2017). According to Davis

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(1989), PU is the extent to which a person thinks employing a given system would improve or elevate their work performance. In their study, Diksani et al. (2014) discovered that people will utilise a system if they believe it will be useful to them and will disregard it if they believe it will not. The most startling results revealed that PU was 50% more vital than usability in determining utilisation, highlighting the significance of including functionally suitable features in new systems (Davis, 1991).

The main point is that the system must be easier to use, entertaining, and pleasing; only then is it more likely to be used (Dakduk et al., 2018). Furthermore, some educators think combining teaching and learning tools with technology in an online platform can promote active learning (Alt & Naamati-Schneider, 2021). Educators favour online learning platforms due to their feelings of self-connection to both parties, the atmosphere of listening, and the directness of the platform despite the lack of physical existence in the same room (Wasserman & Migdal, 2019). In addition, the teacher demonstrates a positive acceptance of the online system even though more than half of the respondents did not agree with the effectiveness of the online learning platform (Rahayu & Wirza, 2020).

5.3.8 The Mediating Role of Perceived Ease of Use in Mediating Attitude and Intention to Use

PEOU is the degree to which a person believes using a certain system would be effortless (Davis, 1989). Accessibility is a level of comfort for a person in achieving

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goals related to the behaviour of communication (Syafuddin, 2017). Data collected from this study has led to answering listed hypotheses and research objectives.

H11: PEOU mediates the relationship between ATT and IU.

RQ5: What is the mediating role of PEOU in the relationship between PC and ATT to IU and UB in online teaching among secondary school teachers?

The type and quality of the learning experience are significantly impacted by the workplace, particularly in terms of money, time management, technology, and other sources. Additionally, learning affects the workplace since pedagogical change agents who utilise student-centred strategies in the classroom adapt their understanding of these techniques to their daily jobs (Jagers et al., 2019; Crossman, 2005). Bascia and Rottmann (2011), in their study of the school-working environment, emphasised the relevance of working circumstances in schools not only for teacher motivation, effectiveness, and job satisfaction but also for student learning possibilities. Additionally, previous studies have identified some of the most critical aspects that assure the quality of teachers' work: enough resources, manageable workloads, collegial collaboration, professional development opportunities, leadership support, and decision-making chances (Toropova et al., 2021).

It has been established that user-specific characteristics did not directly affect satisfaction, with platform accessibility having the greatest impact (Chen et al., 2020). The use of online education could lead to a few issues, such as late video information transmission, sluggish platform access, and late responses to class questions. This includes students' expectations for regular supervision after class and timely comments

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from the teacher to enhance the learning effect (Chen et al., 2020). However, there are still findings that remote teaching is a burden regarding the timeliness of conducting assessments and providing feedback (Ulla & Perales, 2021). This study, however, exhibits rather different results, where 69% of the respondents permit online assessment applications to be easy for them to use. In comparison, 67% also think online learning platforms are very convenient. Thus, it offers educators freedom of time, place, and how they conduct their lessons.

An online learning platform must be supervised consistently to improve learning effects. Apart from that, most learning platforms demonstrate an untimely transmission of video information and much slower access (Chen, Cong, et al., 2020). In addition, respondents have declared that online video teaching saves time and cost efficiency compared to the traditional focus group method (Almujlli et al., 2022).

5.3.9 The Factors Affecting Usage Behaviour

This study has proven that educators are more than willing to contribute and fully commit to realising and adapting technology in their daily teaching. It can be observed in the psychographic data collected that 64.5% of the respondents mentioned they have their own working space or room for conducting lessons. This serious commitment proves that respondents are willing to make the whole experience more pleasing to them. Even though they faced challenges while adapting to the technology, 68.8% of the respondents still stated they had no problems conducting lessons remotely.

This will eventually answer the listed research questions.

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RQ6: What is the mediating role of intention in the relationship between PC, PEOU, PU, and Att to UB in online teaching among secondary school teachers?

RQ7: What is the mediating role of Att in the relationship between PEOU, PC, and PU to IU and UB in online teaching among secondary school teachers?

Many factors contribute to UB when adapting the online teaching method. Improper facilities, poor internet access, complicated implementation, lack of preparation, and the willingness to learn were the major factors (Fauzi & Sastra Khusuma, 2020). Studies have also listed unequal facilities and improper information in technology use as reasons for adopting it (Junan, 2021; Vicky Dwi Wicaksono, 2019).

However, some studies state that qualifications and experience are not a priority in using technology (Verma et al., 2021). Additionally, self-efficacy, PEOU, and platform practicality are proven to impact respondents' satisfaction with online learning platforms (Chen, Peng, et al., 2020).

A study conducted in Pakistan and Malaysia has proven that assurance and the quality of education do not significantly influence the teacher's acceptance of online education in Pakistan. In the Malaysian context, however, information quality and instructors' responsiveness are not issues (Guoyan et al., 2021). It is confirmed that an instructor's commitment should be strengthened by having a well-established learning management system in an institution (San-Martín et al., 2020).

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Despite their inexperience and lack of preparation for online teaching, instructors were prepared to use various digital technologies and make online learning work for them and their students (Guðmundsdóttir & Hathaway, 2020). According to Borman and Dowling (2008), schools with administrative assistance, mentorship programmes in the early stages of their careers, and possibilities for networking and collaboration had lower attrition rates than schools without these elements (Toropova et al., 2021).

5.4 Contributions of the Study

The National Education Policy introduced in 1961 aims to produce balanced and harmonious individuals supported by updated plans and strategies relevant to current educational developments. The Ministry of Education (MoE) has strived to provide high-quality education in line with the nation's aspirations since independence. The MoE has proactively developed the Digital Education Policy (DEP) in accordance with the development of various national agendas such as building a MADANI nation, the

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implementation of the National Fourth Industrial Revolution Policy (4IR), and the Malaysia Digital Economy Blueprint (MyDIGITAL), as well as the difficulties associated with OTL. All parties involved will use this policy as a guide as they adjust to the digital era. By encouraging moral behaviour, ethics, and integrity, incorporating Karamah Insaniah (human dignity) will promote harmony and stop unethical behaviour among educators. Accordingly, these features will allow students to improve their proficiency with digital education.

In light of recent advancements, the National Education Policy's implementation is continually going through a rigorous process of study and thorough review to enhance and satisfy current needs. In keeping with recent advancements, ICT has significantly evolved and grown in importance within the educational system in both teaching and learning. The MoE's goals for tackling the 4IR challenge are concisely and clearly explained in the DEP, which also lists four key goals for the organisation: improving infrastructure and infostructure, empowering educators and education managers, achieving student outcomes, and actively involving strategic partners. These goals are consistent with the advancement of digital education, which considers the Malaysian MADANI philosophy, built upon respect, trust, compassion, sustainability, prosperity, and innovation.

The four goals of digital education, which are backed by six thrusts, eighteen strategies, and forty-one initiatives, are thoroughly described in the DEP. More significantly, this policy can be employed to the best advantage by educators, students, leaders in education, and other stakeholders in order to close the digital divide and make successful implementation of digital education possible. By implementing this policy,

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the MoE wants to fulfil its commitment to providing high-quality educational services. Notably, the COVID-19 pandemic has caused a change in educational approaches, favouring home-based instruction over in-person instruction in classrooms. Thus, it is imperative that educators and students acquire proficiency in digital abilities. The adoption of this educational approach brings with it a number of difficulties; however, it also accelerates the age of digital education and offers opportunities.

The COVID-19 pandemic hastened this nation's shift toward digital schooling. There is a digital divide in the nation's educational system, as evidenced by the Trends in International Mathematics and Science Study (TIMSS) 2019 Benchmarking Study and the Programme for International Student Assessment (PISA) 2018. In order to maintain the nation's educational system, MoE is dedicated to changing digital education in a more comprehensive way.

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The use of OTL platforms is now becoming one of the requirements in implementing 21st-century teaching and learning (PAK21), which is now being actively highlighted as one of the efforts to get attention from the present generation. Students have been increasingly exposed to technology and gadgets since birth, and it has become one of the essentials in their daily lives. Indirectly, the education system must adjust to always be relevant in educating this new generation. Remarkably, students spend almost half their time daily playing with gadgets and learning things without limitations. Therefore, schools must evolve in sync with the development of technology as one of the efforts to educate students in today's era of globalisation. Thus, the use of technology in education not only facilitates the day-to-day tasks of teachers but can reduce the workload indirectly if used optimally.

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Incorporating information technology and education can indirectly help a country remain relevant in today's increasingly challenging world. The included elements in using technology, such as animation, videography, and music, are expected to give colours in class, attract students to be more focused, and make it easier for them to learn the content delivered. Technology indirectly helps teachers relate to variations in student learning methods, such as auditory and kinesthetics, amongst others. Other than PAK21, the education system no longer focuses on exams but rather on student achievement; hence, there are no more streaming classes. All students with different achievements are placed in the same class yet assessed according to their level. Differentiated learning is increasingly highlighted in educating students to learn according to their abilities and pace and be evaluated based on current achievements.

Additionally, all government bodies in the education sector, as well as academicians, should take the opportunity to conduct a more in-depth study, research, classes, and even support system to tackle this matter. They should also ensure that teachers are well equipped with the proper knowledge of technology to prepare this younger generation, who is going to be the pillars of our country one day. In conclusion, the DEP has outlined ten guiding principles to guarantee an education and training system suitable for the digital post-pandemic period. To maintain the nation's competitiveness, the only area of concern should be our human resources, which are highly skilled people in digital technology. This study has already demonstrated that teachers are open to using online platforms; however, their knowledge and proficiency in the field are still insufficient.

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5.5 Implications of the Study

While most research on online teaching has focused on the challenges faced by the teacher or from the student's point of view, this study has suggested that, despite all the challenges faced throughout the period, teachers are still very motivated to continue using technology in the future. These findings indicate that teachers' feelings towards the benefits online classes offer to their students and work performance are among the criteria for contemplating using them. When technology is perceived as useful, it modifies users' Att to use or abandon it.

Furthermore, the respondent's IU can also be manipulated by the convenience of conducting classes in terms of time, place, and implementation. With the vast knowledge and development in technology nowadays, most of the information can be accessed in the blink of an eye. The data collected indicates that despite various challenges, the teacher still successfully conducts a full-functioning class. However, it would still be beneficial if the administration could organise a course or workshop to ensure the teachers are always top-notch in handling an online classroom.

Conclusively, UB is influenced by the IU. The model clearly indicates that IU is the reason teachers adopt online teaching. However, we cannot deny that other factors may influence the teacher's judgment, such as financial issues, the location of the school, and many others. Online learning has plenty of benefits, such as saving time and energy and sometimes being more effective. In addition, online learning is also more interactive due to the many applications and resources that can improve one's mood to learn.

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Examining the top of the ladder, this study could be valuable to MoE in general and schools in providing for the needs of fellow educators at the secondary level and primary and higher education levels. The ministry should always be more proactive in promoting online education. Therefore, a proper and vast study should be conducted to guarantee suitable limitations and measures are taken to understand students' demands and needs nowadays.

5.6 Recommendations for Future Studies

A few recommendations could be suggested for improving this study in the future. Firstly, researching niche categories such as age, subjects, or community would be advantageous as technology progresses since different categories possess different problems and constraints. Apart from that, technology-related research would be of added value and very helpful in determining which kind of teaching platform could cater to and serve as a significant contributor to help at least the core subjects of the schools.

Researchers could also focus on elective subjects such as physical education, arts, and moral education, to name a few. These subjects have certain requirements for determining students' achievement using *Pentaksiran Bilik Darjah* (PBD). In addition, researchers could help determine the teacher's constraints in delegating tasks using the online learning platform. How could the teachers use the platform to conduct practical lessons for physical education and arts?

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As for practitioners in education, it is very much recommended that curriculum developers use this information to improve, evaluate, revise, and explore the curricula of the programmes developed. Moreover, the school's administration board could also use the information in developing a list of in-service training courses. Other than assisting teachers in coping with the vast development of technology, teachers could also gain new information that is beneficial for their profession in the long run.

Furthermore, education practitioners could develop research solely focusing on implementing PAK21 and differentiated learning in the world of technology. Educators are sometimes confused with the requirements for implementing PAK21 and differentiated learning in one session. Hence, it is understandable that PAK21 and differentiated learning simultaneously occurred throughout the teaching and learning session.

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Finally, in terms of improving the recent study, future researchers could widen the research scope to represent the whole state. Although it is costly and time-consuming, it would be beneficial if researchers could select the respondents by contacting or obtaining information from the school first. This will produce a more solid result as respondents will be equal in age, gender, subjects taught, and school location, amongst others.

5.7 Conclusion of the Study

Overall, the study's main purpose is to investigate the teachers' acceptance of using online education. What impact will these findings have on the field of education? As

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we all know, technology is now at its peak. All living beings, young or old, are increasingly dependent on technology. Most urban and suburban schools are now equipped with broadband internet to facilitate access to digital platforms such as Human Resource Management Information Systems (HRMIS), Identity Management Systems (idMe), and Google Classroom, to name a few.

On the other hand, teachers are relatively literate in using basic applications such as Google Meet and Microsoft Teams. The main problem teachers face throughout OTL implementation is unstable internet access and a suitable place, time, and devices to cater to some applications. Apart from that, they are well tolerated and capable of adopting online learning but still need guidance occasionally. Technology is rapidly developing daily; thus, teachers should constantly be provided with the latest information to utilise technology productively.

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According to Veen (1993), teacher considerations vastly exceeded institutional or school influences. Despite the school's essential technical support and the principal's positive Att toward IT, teacher factors such as beliefs about how the subject should be taught, skills associated with competence in managing classroom activities, and computer-handling technical skills were the most influential in teachers' use of computers (Mumtaz, 2000). Likewise, the technology is more approachable if it requires minimal effort. Put differently, the easier it is to use the technology, the more pleased the users are. Teachers are sometimes burdened with other tasks apart from teaching, such as writing reports, marking papers, preparing worksheets, managing household chores, and, not to forget, their kids. Therefore, an effortless platform is required to fulfil their daily task in conducting classes. Meanwhile, IU is also a

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significant indicator that could predict teachers' willingness to continue using online teaching platforms and apply them in their daily lives. It describes the tendency of teachers to decide whether they would want to or desirably consider continuing to use it in conducting classes in the future. In other words, however convenient, easy to use, and useful the technology is, it still depends on individuals' preference to make it a habit or a platform to opt to in conducting classes.

At some point, researchers had to identify the factors relevant to the use of technology and information systems. Davis (Davis, 1985) created the TAM, which is based on the Theory of Reasoned Action (TRA), to solve the shortcomings associated with the absence of a theoretical model and scales to quantify technology acceptance. The fundamental reasoning of the approach was that, in the case of technology use, particular Att about technology use, rather than a general Att toward behavioural intention, affected behavioural intention. The purpose of TAM was to serve as a framework for analysing various technological user behaviours while adhering to a modest lifestyle. TAM provides an invaluable foundation for comprehending user acceptance and adoption of technology. Notably, the design, creativity, and commercial success are enhanced by its constituent parts, theoretical foundations, and applications. At the organisational and individual levels, information technology adoption and use can have a number of immediate and lasting advantages, including enhanced productivity, cost and time savings, and convenience.

In conclusion, the outcomes of this study could offer useful insights into the possible benefits of an online teaching platform in terms of lowering teachers' burden in conducting lessons. One problem is the small sample size, which may restrict the

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findings' generalisability. Therefore, we might expand on these findings by employing a bigger sample size and more objective measurements such as the emotional value, the places, and more. Overall, this study contributes to growing knowledge on adopting online teaching platforms in the education sector.

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APPENDICES

APPENDIX A

QUESTIONNAIRE (ENGLISH)

Date: **Code: 001**

QUESTIONNAIRE ON TECHNOLOGY ACCEPTANCE MODEL (TAM): A TEACHER'S INTENTION TO ACCEPT ONLINE EDUCATION

This questionnaire is a part of research done by a student of Master in Arts (Communication) from Faculty of Language and Communication in Sultan Idris Education University (UPSI). This study focuses on knowing the teacher's intention in accepting online education.
This questionnaire consists of 8 section that is A, B, C, D, E, F, G and H. Please read and answer all the question and statements given.
All details and answer provided is private and confidential. The result of this study will only be used for this study purposes only. Your cooperation is highly appreciated. Thank you.
For further enquiries, please contact:
Nor Azlina binti Azuddin – 0196920540 / azlinazuddin@gmail.com

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*** Required**

I hereby agree to participate in study. * **Yes** ☐ **No** ☐

SECTION A: DEMOGRAPHY

1. Gender*
   Male ☐ Female ☐

2. Age*

23-30 years old	☐	41-50 years old	☐
31-40 years old	☐	51-60 years old	☐

3. Teaching Experience*

6-11 months	☐	21-30 years	☐
1-10 years	☐	31 – 35 years	☐
11-20 years	☐	36 years and above	☐

4. Level of Education *

Diploma (Education)	☐	Master	☐
Bachelor Degree	☐	PhD	☐

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5. Subjects taught*

Bahasa Melayu		History	
English		Geography	
Mathematics		Moral Education	
Science		Islamic Education	
Reka Bentuk Teknologi		Physical Education	

Others; (Specify) _____

6. Income Level (basic pay) *

RM 3000 and below		RM 7001 – RM 9 000	
RM 3001 – RM 5000		RM 9001 – RM 11000	
RM 5001 – RM 7000		RM 11001 and above	

7. Residency Area*

Urban (Ex: Ipoh, Bercham, Tambun)		Rural (Ex: village area)	
Sub urban (Ex: Ulu Kinta, Tg. Rambutan)			

8. How long have you been using the internet? *

< 1 year		16 – 20 years	
1 - 5 years		21 – 25 years	
6 – 10 years		26 – 30 years	
11 – 15 years		31 years and above	

9. Do you own an electronic device? (Check all that apply) *

Smart phone (owned 1-3 years)		Smart phone (owned 4 years and above)	
Tablet (owned 1-3 years)		Tablet (owned 4 years and above)	
Laptop (owned 1-3 years)		Laptop (owned 4 years and above)	

SECTION B: PSYCHOGRAPHIC

10. Do you have your own working space or room? *

Yes ☐ No ☐

11. Internet speed used. *

Smartphone internet (3G)	
Smartphone internet (4G)	
Smartphone internet (5G)	

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Home wireless internet (10 MB and below) ☐
Home fibre (10 MB – 100 MB) ☐

12. I have a good knowledge in using the application below: *(check all that apply)* *

SMS	☐	Google Meet	☐
E-mail	☐	Google Drive	☐
WhatsApp	☐	Zoom Meeting	☐
Telegram	☐	Webex Online Meeting	☐
YouTube	☐	Skype	☐
Google Classroom	☐	Microsoft Office	☐

Others; (Specify) _____

13. I communicate with my students using the application below: *
(Check all that apply)

SMS	☐	Google Meet	☐
E-mail	☐	Google Drive	☐
WhatsApp	☐	Zoom Meeting	☐
Telegram	☐	Webex Online Meeting	☐
YouTube	☐	Skype	☐
Google Classroom	☐	Microsoft Office	☐

Others; (Specify) _____

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14. Listed are the challenges faced in conducting online teaching at home. *
(Check all that apply)

No proper time	☐	Money problem	☐
Less skill in using the technology	☐	Non-conducive environment	☐
Busy with household chores	☐	Loud noises	☐
Personal problems	☐	Uncontrolled kids	☐
Poor health condition	☐	Too much responsibility	☐

Others; (Specify) _____

15. How can you rate your knowledge in using the computer in term of conducting lesson remotely? *

Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor ☐

16. How can you rate your knowledge in using the digital devices in term of conducting lesson remotely? *

Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor ☐

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17. Generally, do you have problems conducting lessons remotely? *
Yes ☐ No ☐

The statements below come with 5 choices of answer. Please rate how strongly agree or disagree with each of the statements. Mark only one answer per row.

SECTION C: PERCEIVED CONVENIENCE

	Convenience level of time, place, and execution	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	I always allocate time for my classes.	1	2	3	4	5
2	My class schedule is very convenient.	1	2	3	4	5
3	I made necessary preparation for my classes.	1	2	3	4	5
4	At home, I have an appropriate space to conduct my classes.	1	2	3	4	5
5	Using online learning platform saves me time.	1	2	3	4	5
6	I can conduct my class without interruption. (Ex: kids, chores, etc.)	1	2	3	4	5
7	It is easy for me to incorporate digital technology in my teaching.	1	2	3	4	5
8	I find it easy to use online assessment application.	1	2	3	4	5
9	I like to use digital pedagogy tool in my class (Ex: padlet, mentimeter)	1	2	3	4	5
10	Overall, I find online learning platform very convenience.	1	2	3	4	5

SECTION D: PERCEIVED USEFULNESS

	Respondent's feeling towards the benefit of online learning to the students and work performance	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	Online learning platform is very useful to enhance my student understanding.	1	2	3	4	5

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2	Online learning platform increases academic achievement.	1	2	3	4	5
3	Online learning platform promotes student collaboration.	1	2	3	4	5
4	Using online learning platform is effective because I believe I can implement it successfully.	1	2	3	4	5
5	Online learning platform promotes the development of communication skills (ex: writing and presentation skills).	1	2	3	4	5
6	Using online learning platform improves my job performance.	1	2	3	4	5
7	Using online learning platform allows me to accomplish more work than would otherwise be possible and increases my productivity.	1	2	3	4	5
8	Using online learning platform enable me to accomplish tasks more quickly.	1	2	3	4	5
9	Using online learning platform gives me greater control over my work.	1	2	3	4	5
10	Overall, I find online learning platform useful in my job.	1	2	3	4	5

SECTION E: ATTITUDE

	Respondents attitude in using technology in carrying out online teaching	**Strongly Disagree**	**Disagree**	**Neither**	**Agree**	**Strongly Agree**
	As a teacher,					
1	I feel that I have enough knowledge to conduct classes online.	1	2	3	4	5
2	I think, online teaching is an important skill all teachers should have.	1	2	3	4	5
3	I think that current generation prefers online learning platform.	1	2	3	4	5

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4	I think, online platform is the easiest way for me to conduct my classes.	1	2	3	4	5
5	I think my student prefer digital learning than face to face.	1	2	3	4	5
6	I think, online learning platform makes teachers feel more competent as educators.	1	2	3	4	5
7	I think, online learning platform gives teacher the opportunity to be learning facilitators instead of information providers.	1	2	3	4	5
8	I think, online learning platform does not limit my choices of instructional materials.	1	2	3	4	5
9	Digital learning is a must to be use in current teaching and learning.	1	2	3	4	5
10	Overall, I am very much relying on the technology to conduct my online classes.	1	2	3	4	5

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SECTION F: PERCEIVED EASE OF USE

	Level of difficulty faced by respondent when conducting an online class	**Strongly Disagree**	**Disagree**	**Neither**	**Agree**	**Strongly Agree**
	When using the online learning platform,					
1	The user manual is my number one source of reference.	1	2	3	4	5
2	I did not have difficulty in connecting to the internet.	1	2	3	4	5
3	I did not have difficulty in installing and using the video conferencing app.	1	2	3	4	5
4	My job is easier with an online learning platform.	1	2	3	4	5
5	I feel that it is easy for me to conduct classes and communicate via online.	1	2	3	4	5

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6	With digital platform, I can communicate clearly with my students.	1	2	3	4	5
7	Online learning platform makes it easier for me to manage my classes.	1	2	3	4	5
8	I find it easy to get it to do what I want it to do.	1	2	3	4	5
9	The application often behaves in unexpected way. (Ex: screen pause, unsaved work, loss of audio etc.)	1	2	3	4	5
10	Overall, I find the online learning platform easy to use.	1	2	3	4	5

SECTION G: INTENTION TO USE

	Willingness of the teacher to continue using the online teaching	**Strongly Disagree**	**Disagree**	**Neither**	**Agree**	**Strongly Agree**
	I will use online learning platform if,					
1	I can troubleshoot common computer problems.	1	2	3	4	5
2	I can use a variety of media and formats, including telecommunications, to collaborate, publish, and interact with peers, experts, and other audiences.	1	2	3	4	5
3	I can use technology resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision-making, knowledge construction, and creativity.	1	2	3	4	5
4	Classes were equipped with proper set up of technology.	1	2	3	4	5
5	It is an effective tool for students of all abilities.	1	2	3	4	5
6	It helps me keep track of my own teaching progress.	1	2	3	4	5
7	It does not make classroom management more difficult.	1	2	3	4	5

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8	It eases the pressure on me as a teacher.	1	2	3	4	5
9	It can achieve goals related to my work.	1	2	3	4	5
10	Overall, I find the online learning platform is a great help in lowering my workload.	1	2	3	4	5

SECTION H: USAGE BEHAVIOUR

	Respondent's continuous commitment to adopting online teaching	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
1	I use online meeting application to conduct my class. (ex: Google Classroom/ Zoom/ Webex/ Skype etc.)	1	2	3	4	5
2	I use digital application to conduct the assessment (ex: Quizziz, Kahoot, Form Builder, Google Forms, etc.)	1	2	3	4	5
3	I upload my teaching materials to cloud storage (ex: Google Drive, YouTube, Tik Tok, Instagram, Telegram, etc.)	1	2	3	4	5
4	I communicate with my students using mobile application (ex: WhatsApp, Telegram, Google Classroom, Google Meet, etc.)	1	2	3	4	5
5	I use social networking sites to connect with my students. (ex: Facebook, Instagram, Tik Tok, You Tube, etc.)	1	2	3	4	5
6	I use teaching video on YouTube in my teaching.	1	2	3	4	5
7	I create my own class content using power point presentation.	1	2	3	4	5
8	I collaborate with other teachers in developing contents for the students.	1	2	3	4	5
9	I put all may teaching material online in assisting my online teaching.	1	2	3	4	5

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10	Overall, I am very satisfied with the use of online teaching platform.	1	2	3	4	5
11	I will continue to use it in the future.	1	2	3	4	5

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APPENDIX B

QUESTIONNAIRE (BAHASA MALAYSIA)

Tarikh: **Kod: _____**

SOAL SELIDIK MENGENAI TECHNOLOGY ACCEPTANCE MODEL (TAM): KAJIAN TENTANG PENERIMAAN GURU TERHADAP PENDIDIKAN ATAS TALIAN

Soal selidik ini adalah sebahagian daripada penyelidikan yang dilakukan oleh pelajar Sarjana Sastera (Komunikasi) dari Fakulti Bahasa dan Komunikasi di Universiti Pendidikan Sultan Idris (UPSI). Kajian ini memberi tumpuan kepada mengetahui berkaitan pendapat dan penerimaan guru dalam melaksanakan pengajaran atas talian.
Soal selidik ini terdiri daripada 8 bahagian iaitu A, B, C, D, E, F, G dan H. Sila baca dan jawab semua soalan dan kenyataan yang diberikan.
Semua butiran dan jawapan yang diberikan adalah sulit. Hasil kajian ini hanya akan digunakan untuk tujuan pengajian sahaja. Kerjasama anda amatlah dihargai. Terima kasih.
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*** Wajib**

Saya dengan ini bersetuju untuk mengambil bahagian dalam kajian ini.* **Ya** ☐ **Tidak** ☐

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SEKSYEN A: DEMOGRAFI

1. Jantina*
   Lelaki ☐ Perempuan ☐

2. Umur*
   23-30 tahun ☐ 41-50 tahun ☐
   31-40 tahun ☐ 51-60 tahun ☐

3. Pengalaman Mengajar*
   6-11 bulan ☐ 21-30 tahun ☐
   1-10 tahun ☐ 31 - 35 tahun ☐
   11-20 tahun ☐ 36 tahun dan ke atas ☐

4. Tahap Pendidikan*
   Diploma (Pendidikan) ☐ Sarjana ☐
   Ijazah Sarjana Muda ☐ Phd ☐

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5. Subjek diajar*

Bahasa Melayu		Sejarah	
Inggeris		Geografi	
Matematik		Pendidikan Moral	
Sains		Pendidikan Islam	
Reka Bentuk Teknologi		Pendidikan Jasmani	

Lain-lain; (Nyatakan) _____

6. Tahap Pendapatan (gaji asas) *

RM 3000 dan ke bawah		RM 7001 – RM 9 000	
RM 3001 – RM 5000		RM 9001 – RM 11000	
RM 5001 – RM 7000		RM 11001 dan ke atas	

7. Kawasan Kediaman*

Bandar (Ex: Ipoh, Bercham, Tambun)	Pinggir bandar (Ex: Tg. Rambutan, Ulu Kinta)	Luar Bandar (Ex: perkampungan)

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8. Sudah berapa lamakah anda menggunakan internet? *

< 1 tahun		16 – 20 tahun	
1 - 5 tahun		21 – 25 tahun	
6 – 10 tahun		26 – 30 tahun	
11 – 15 tahun		31 tahun dan ke atas	

9. Adakah anda memiliki peranti elektronik? (*Tandakan semua yang berkenaan*) *

Telefon pintar (berusia 1-3 tahun)		Telefon pintar (berusia 4 tahun dan ke atas)	
Tablet (berusia 1-3 tahun)		Tablet (berusia 4 tahun dan ke atas)	
Komputer riba (berusia 1-3 tahun)		Komputer riba (berusia 4 tahun dan ke atas)	

SEKSYEN B: PSIKOGRAFI

10. Adakah anda mempunyai ruang kerja atau bilik anda sendiri? *

Ya ☐ Tidak ☐

11. Kelajuan Internet yang anda gunakan. *

Internet telefon pintar (3G)	
Internet telefon pintar (4G)	

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Internet telefon pintar (5G)	
Internet tanpa wayar (10 MB dan ke bawah)	
Internet Gentian Fiber (10 MB – 100 MB)	

12. Saya mempunyai pengetahuan yang baik dalam menggunakan aplikasi di bawah: *(Semak semua yang berkenaan)* *

SMS		Google Meet	
E-mel		Google Drive	
WhatsApp		Zoom	
Telegram		Webex	
Youtube		Skype	
Bilik Darjah Google		Microsoft Office	

Lain-lain; (Nyatakan) _____

13. Saya berkomunikasi dengan pelajar saya menggunakan aplikasi di bawah: *(Semak semua yang berkenaan)* *

SMS		Google Meet	
E-mel		Google Drive	
WhatsApp		Zoom	
Telegram		Webex	
Youtube		Skype	
Bilik Darjah Google		Microsoft Office	

Lain-lain; (Nyatakan) _____

14. Disenaraikan adalah cabaran yang dihadapi dalam menjalankan pengajaran atas talian di rumah. *(Semak semua yang berkenaan)* *

Tiada masa yang sesuai		Masalah kewangan	
Kurang kemahiran dalam menggunakan teknologi		Persekitaran rumah yang tidak kondusif	
Sibuk dengan kerja rumah		Bunyi bising	
Masalah peribadi		Anak-anak yang tidak terkawal	
Keadaan kesihatan yang tidak mengizinkan		Terlalu banyak tanggungjawab	

Lain-lain; (Nyatakan) _____

15. Bagaimanakah anda menilai pengetahuan anda dalam menggunakan komputer dari segi menjalankan pelajaran jarak jauh? *

Sangat mahir		Mahir		Sederhana mahir		Kurang mahir		Sangat kurang mahir		Tidak mahir	

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16. Bagaimanakah anda menilai pengetahuan anda dalam menggunakan peranti digital dari segi menjalankan pelajaran jarak jauh? *

Sangat mahir ☐ Mahir ☐ Sederhana mahir ☐ Kurang mahir ☐ Sangat kurang mahir ☐ Tidak mahir ☐

17. Secara amnya, adakah anda mempunyai masalah menjalankan sesi pengajaran secara atas talian? *

Ya ☐ Tidak ☐

Pernyataan di bawah disediakan dengan 5 pilihan jawapan. Sila nilaikan mengikut pendapat anda samada sangat setuju, setuju, neutral, tidak setuju atau sangat tidak setuju dengan setiap kenyataan. Tandakan hanya satu jawapan setiap baris.

SEKSYEN C: PERCEIVED CONVENIENCE

	Tahap kemudahan masa, tempat, dan pelaksanaan	**Sangat Tidak Setuju**	**Tidak Setuju**	**Neutral**	**Setuju**	**Sangat Setuju**
1	Saya sentiasa memperuntukkan masa untuk kelas saya.	1	2	3	4	5
2	Jadual kelas saya sangat mudah.	1	2	3	4	5
3	Saya membuat persiapan yang bersesuaian untuk kelas saya.	1	2	3	4	5
4	Di rumah, saya memiliki ruang yang bersesuaian untuk menjalankan kelas saya.	1	2	3	4	5
5	Penggunaan platform pembelajaran dalam talian menjimatkan masa saya.	1	2	3	4	5
6	Saya boleh menjalankan kelas saya tanpa gangguan. (cth: kanak-kanak, kerja-kerja, dll.)	1	2	3	4	5
7	Sangat mudah bagi saya untuk menggabungkan teknologi digital dalam pengajaran saya.	1	2	3	4	5
8	Saya merasa mudah untuk menggunakan aplikasi penilaian pembelajaran atas talian.	1	2	3	4	5

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9	Saya suka menggunakan aplikasi pedagogi digital dalam kelas saya (cth: padlet, mentimeter)	1	2	3	4	5
10	Secara keseluruhan, saya mendapati platform pembelajaran atas talian sangat mudah.	1	2	3	4	5

SEKSYEN D: PERCEIVED USEFULNESS

	Perasaan responden terhadap manfaat pembelajaran dalam talian kepada pelajar dan prestasi kerja	**Sangat Tidak Setuju**	**Tidak Setuju**	**Neutral**	**Setuju**	**Sangat Setuju**
1	Platform pembelajaran atas talian sangat berguna untuk meningkatkan pemahaman pelajar saya.	1	2	3	4	5
2	Platform pembelajaran atas talian meningkatkan pencapaian akademik.	1	2	3	4	5
3	Platform pembelajaran atas talian menggalakkan kerjasama antara pelajar.	1	2	3	4	5
4	Menggunakan platform pembelajaran atas talian adalah berkesan kerana saya percaya saya boleh melaksanakannya dengan baik.	1	2	3	4	5
5	Platform pembelajaran atas talian menggalakkan perkembangan kemahiran komunikasi (cth: kemahiran menulis dan skil pembentangan).	1	2	3	4	5
6	Menggunakan platform pembelajaran atas talian meningkatkan prestasi kerja saya.	1	2	3	4	5

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7	Menggunakan platform pembelajaran atas talian membolehkan saya menyiapkan lebih banyak kerja dan meningkatkan produktiviti saya.	1	2	3	4	5
8	Menggunakan platform pembelajaran atas talian membolehkan saya menyelesaikan tugas dengan lebih cepat.	1	2	3	4	5
9	Menggunakan platform pembelajaran atas talian memberi saya kawalan sepenuhnya terhadap kerja saya.	1	2	3	4	5
10	Secara keseluruhan, saya mendapati platform pembelajaran dalam talian berguna dalam pekerjaan saya.	1	2	3	4	5

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BAHAGIAN E: ATTITUDE

	Sikap responden dalam menggunakan teknologi dalam menjalankan pengajaran dalam talian	**Sangat Tidak Setuju**	**Tidak Setuju**	**Neutral**	**Setuju**	**Sangat Setuju**
	Sebagai seorang guru,					
1	Saya merasakan bahawa saya mempunyai pengetahuan yang cukup untuk menjalankan kelas dalam talian.	1	2	3	4	5
2	Saya pikir, pengajaran atas talian adalah skil penting yang harus dimiliki semua guru.	1	2	3	4	5
3	Saya fikir generasi sekarang lebih suka platform pembelajaran dalam talian.	1	2	3	4	5
4	Saya rasa, platform dalam talian adalah cara paling mudah bagi saya untuk menjalankan kelas.	1	2	3	4	5

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5	Saya rasa pelajar saya lebih suka pembelajaran digital daripada bersemuka.	1	2	3	4	5
6	Saya rasa, platform pembelajaran dalam talian membuat guru berasa lebih kompeten sebagai pendidik.	1	2	3	4	5
7	Saya rasa, platform pembelajaran dalam talian memberi peluang kepada guru untuk menjadi fasilitator pembelajaran dan bukannya penyedia maklumat.	1	2	3	4	5
8	Pada pendapat saya, platform pembelajaran dalam talian tidak mengehadkan pilihan bahan pengajaran saya.	1	2	3	4	5
9	Pembelajaran digital adalah satu kemestian untuk digunakan dalam pengajaran dan pembelajaran semasa.	1	2	3	4	5
10	Secara keseluruhan, saya sangat bergantung pada teknologi untuk melaksanakan kelas atas talian.	1	2	3	4	5

BAHAGIAN F: PERCEIVED EASE OF USE

	Tahap kesukaran yang dihadapi oleh responden semasa menjalankan kelas dalam talian	**Sangat Tidak Setuju**	**Tidak Setuju**	**Neutral**	**Setuju**	**Sangat Setuju**
Apabila menggunakan platform pembelajaran dalam talian,						
1	Manual pengguna adalah sumber rujukan nombor satu saya.	1	2	3	4	5
2	Saya tidak mengalami kesukaran untuk menyambung ke internet.	1	2	3	4	5
3	Saya tidak mempunyai kesukaran untuk memasang	1	2	3	4	5

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	dan menggunakan aplikasi persidangan video.					
4	Tugas saya lebih mudah dengan platform pembelajaran atas talian.	1	2	3	4	5
5	Saya merasakan bahawa mudah bagi saya untuk menjalankan kelas dan berkomunikasi melalui atas talian.	1	2	3	4	5
6	Dengan platform digital, saya dapat berkomunikasi dengan jelas bersama pelajar saya.	1	2	3	4	5
7	Platform pembelajaran dalam talian memudahkan saya menguruskan kelas saya.	1	2	3	4	5
8	Saya merasa mudah untuk memastikan ianya melakukan apa yang saya ingin lakukan.	1	2	3	4	5
9	Aplikasi ini sering bermasalah dengan cara yang tidak dijangka. (cth: jeda skrin, tidak sempat menyimpan data, kehilangan audio dll.)	1	2	3	4	5
10	Secara keseluruhan, saya dapati platform pembelajaran dalam talian mudah digunakan.	1	2	3	4	5

SEKSYEN G: INTENTION TO USE

	Kesediaan guru untuk terus menggunakan pengajaran atas talian	**Sangat Tidak Setuju**	**Tidak Setuju**	**Neutral**	**Setuju**	**Sangat Setuju**
	Saya akan menggunakan platform pembelajaran dalam talian jika,					
1	Saya boleh menyelesaikan masalah komputer biasa.	1	2	3	4	5
2	Saya boleh menggunakan pelbagai media dan format, termasuk telekomunikasi, untuk bekerjasama, menerbitkan, dan berinteraksi	1	2	3	4	5

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	dengan rakan sebaya, kumpulan pakar, dan khalayak lain.					
3	Saya boleh menggunakan sumber teknologi untuk menjana pemikiran aras tinggi dan kemahiran berfikir yang kompleks, termasuk penyelesaian masalah, pemikiran kritis, membuat keputusan, perkembangan pengetahuan, dan kreativiti.	1	2	3	4	5
4	Kelas dilengkapi dengan kemudahan teknologi yang lengkap.	1	2	3	4	5
5	Ia adalah aplikasi yang berkesan untuk pelajar semua peringkat.	1	2	3	4	5
6	Ia membantu saya merekod kemajuan pengajaran.	1	2	3	4	5
7	Ia tidak menyulitkan lagi pengurusan bilik darjah.	1	2	3	4	5
8	Ianya mengurangkan tekanan pada saya sebagai seorang guru.	1	2	3	4	5
9	Ia boleh mencapai matlamat yang berkaitan dengan kerja saya.	1	2	3	4	5
10	Secara keseluruhan, saya dapati platform pembelajaran atas talian sangat membantu dalam meringankan beban kerja saya.	1	2	3	4	5

SEKSYEN H: USAGE BEHAVIOUR

	Komitmen berterusan responden untuk menerima pakai pengajaran dalam talian	**Tidak pernah**	**Jarang**	**Kadang-kadang**	**Sering**	**Sentiasa**
1	Saya menggunakan aplikasi komunikasi dalam	1	2	3	4	5

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	talian untuk menjalankan kelas saya. (cth: Google Classroom/ Zoom / Webex/ Skype danlain-lain.)					
2	Saya menggunakan aplikasi digital untuk menjalankan penilaian (Cth: Quizziz, Kahoot, Form Builder, Google Form, dll.)	1	2	3	4	5
3	Saya memuat naik bahan pengajaran saya ke Cloud storage (Cth:Google Drive, YouTube, Tik Tok, Instagram, Telegram, dll.)	1	2	3	4	5
4	Saya berkomunikasi dengan pelajar saya menggunakan aplikasi mudah alih (Cth: WhatsApp, Telegram, Google Classroom, Google Meet, dll.)	1	2	3	4	5
5	Saya menggunakan laman sosial untuk berhubung dengan pelajar saya. (Cth: Facebook, Instagram, Tik Tok, You Tube, dll.)	1	2	3	4	5
6	Saya menggunakan video pengajaran di YouTube dalam pengajaran saya.	1	2	3	4	5
7	Saya menghasilkan sendiri bahan pengajaran menggunakan persembahan power point.	1	2	3	4	5
8	Saya bekerjasama dengan guru lain dalam menghasilkan bahan pembelajaran untuk pelajar.	1	2	3	4	5
9	Saya meletakkan semua bahan pengajaran dalam talian untuk membantu	1	2	3	4	5

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	memudahkan pengajaran dalam talian saya.					
10	Secara keseluruhan, saya sangat berpuas hati dengan penggunaan platform pengajaran dalam talian.	1	2	3	4	5
11	Secara keseluruhan, saya akan terus menggunakan platform pengajaran dalam talian pada masa akan datang.	1	2	3	4	5

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