VALUING TEACHERS' FLEXIBILITY, RESOURCEFULNESS AND PROACTIVITY IN PROCESSES OF EDUCATIONAL CHANGE: INVESTIGATING TEACHERS' USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN ENGLISH LANGUAGE TEACHING IN SECONDARY SCHOOLS IN BEN TRE PROVINCE, VIETNAM

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ABSTRACT

This research investigates teachers' perceptions of Information Communication Technology (ICT) use in English Language Teaching (ELT) in secondary schools in Ben Tre Province, Vietnam, to explore how they have used ICT in ELT and examine what obstacles they believe impede its effective integration in the classroom. The relationship between the obstacles identified is investigated in detail to understand how ICT use in ELT may be enhanced.

The research was conducted as a qualitative research in which data was collected through semi-structured interviews and observations of sixteen English teachers at four research sites. Fullan's (2015) Educational Change Theory (ECT) and Rogers' (2003) Diffusion of Innovation Theory (DoIT) were combined into a unique theoretical framework that was used to guide the data collection and analysis. Through this analysis, factors that facilitated and obstructed the integration of ICT in ELT were explored across three themes identified during the development of the theoretical framework. These themes are: policy, technology, and people (including administrators, teachers, and students). In addition, a further underlying theme was suggested by the data that influenced the first three. This theme was labelled 'local characteristics' and it covered culture, demography, economy, and infrastructure.

The outcomes of this research study revealed that factors within the theme of "people" were crucial to the successful integration of ICT in ELT. It was found that English teachers who were flexible, resourceful and proactive were most successful at using ICT effectively in ELT. However, the administrative skills of administrators combined with local characteristics created several obstacles during policymaking and technological implementation. As a result, this research study makes a series of recommendations that support teachers in being flexible, resourceful and proactive. These include: the use of open-source software and apps to replicate expensive devices such as the interactive whiteboard; and the establishment of local data centres with dedicated staff and devices instead of poorly equipped labs in schools. It is hoped that the results and recommendations of this study will drive change within Ben Tre Province and contribute to future research within similar contexts.

AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original, except where indicated by specific reference in the text. No part of this thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University

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LIST OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
CALL	Computer Assisted Language Learning
CEFR	Common European Framework of Reference for Languages
CPD	Continuing Professional Development
DoIT	Diffusion of Innovation Theory
ECT	Educational Change Theory
ELT	English Language Teaching
ESL	English as a Second Language
ICT	Information and Communication Technology
IT	Information Technology
MALL	Mobile Assisted Language Learning
MOET	Ministry of Education and Training in Vietnam
PLNs	Personal Learning Networks
RALL	Robot-Assisted Language Learning
TELL	Technology-enhanced Language Learning
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Chapter 1

INTRODUCTION

English is considered as the *de facto* language in global business (Clark, 2012). It is the official language for aeronautical and maritime communications which have been standardised by the International Civil Aviation Organisation (Kara, 2014) and the International Maritime Organisation (Kelly, 2012). English is also one of the official languages of the United Nations (UN, n.d.) and many other international organisations, including the International Olympic Committee (Jimson, 2015). It is one of the two official languages spoken by astronauts on the International Space Station (Howell, 2018). The story of how English became a universal language is inextricably linked with that of the British Empire in the nineteenth century and of American influence in the twentieth century.

Colonisation and war facilitated the spread of English via the expansion of the British Empire as the foremost global power (Ferguson, 2004) and the joint participation of both the United Kingdom (UK) and the United States of America (USA) in the Second World War (Ambrose, 1993). The European Recovery Program, or Marshall Plan, proposed by the USA to provide economic aid to Western European nations and help them rebuild their devastated economies after the Second World War (Carew, 1987) further strengthened the use of English in non-English speaking countries. In Vietnam English was taught throughout South Vietnam as described later in *"A Brief History of Foreign Language Teaching in Vietnam"* in Section 1.5.2 during the Vietnam War (Kolko, 1985).

Power inequalities and war laid the foundations for English to become a universal language; however, warfare alone is not the sole reason why English is used widely in professional fields across the globe; such as in business, science, culture, diplomacy, and communication (Xue and Zuo, 2013). Instead, the development of digital technology with leading technology firms located in the Silicon Valley in the USA (Malone, 2002) has also been responsible for embedding English as a part of other languages to create a radically new mode of interacting. For example, Google Translate cannot provide the Vietnamese equivalent for the word "email". Furthermore, many English-originated terms have been used widely in different languages. For instance, words such as web, blog, Wi-Fi, and modem are used in French due to the lack of equivalent terms (Karfis, 2020).

Digital technologies, moreover, provide many benefits for communication as they have created a world in which information can be accessed almost everywhere within a

matter of minutes, if not seconds. Compared to the old-fashioned way of sending a letter which could take weeks to reach the final destination, Emails allow messages to reach intended recipients after a mouse click. To a greater extent, digital technologies have laid the backbone in many sectors; including trade, commerce, logistics, and management. Mastering digital technologies requires the ability to use English fluently because most new technical innovations have been led by English speaking countries. Consequently, English has remained the *de facto* language in global business as well as other international organisations (Clark, 2012). For this reason, individuals in non-English speaking countries need to learn this *lingua franca* for global communication despite English not being an official language in most countries (Graddol, 1997).

In the field of education, ICT plays an increasingly crucial role. This is highlighted by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), a division of the UN, which has made the integration of ICT into education one of its main goals, because it believes that ICT can "complement, enrich and transform education for the better" (Dhital, 2018, p. 3215). Alkamel and Chouthaiwale (2018) argue that ICT provides the student with an authentic means of interacting with others all over the world and that teachers increasingly "depend more on these tools to produce, prepare, store and retrieve the materials of learning at ease" (p.33). The advantages highlighted by Alkamel and Chouthaiwale are of particular significance for English language teaching (ELT). Firstly, it provides teachers with a rich source of multimedia materials on which to draw. Secondly, it provides students with direct access to more authentic language learning experiences and resources such as digital dictionaries that can help them improve their vocabulary and pronunciation (Metruk, 2017). Compared to the old-fashioned way of learning pronunciation which is based on the international alphabet system (IPA) of phonetic notation, digital dictionaries can offer the opportunity to learn pronunciation spoken by native speakers with different accents. The benefits of using ICT in ELT will be explored in more detail in sections 2.4 and 2.5 of the Literature Review where it will be argued that using ICT in ELT has the potential of improving English learning and teaching.

The Ministry of Education and Training in Vietnam (MOET) has issued several ministerial policies that aim to integrate the use of ICT in ELT. *Decision No. 1400/QĐ-TTg* on *Approving of the Project "Foreign Language Learning and Teaching in the National*

Education System period 2008 and 2020" (MOET, 2008b) to integrate ICT in ELT is one example of the educational-related policies that seeks to develop a new method of teaching. Existing methods of teaching English have been shown to be largely inefficient as most Vietnamese students cannot communicate fluently in English even though they have learned English at public schools as a mandatory subject since the sixth grade (Anh, 2018). Finding ways to improve English teaching is seen as critical because the ability to communicate effectively in English is crucial for the Vietnamese economy that depends heavily on exports (Vu, 2020).

As a student and then as an English teacher, I have witnessed the various shortfalls of English teaching and learning in Ben Tre Province first hand. As a student, I did not have the opportunity to learn English in school because of the shortage of teachers of English and the Cold War doctrine influenced by the Soviet bloc. English was not taught in most of the secondary schools in Ben Tre Province or many other provinces until the Political Reform in 1986, known as *Doi Moi (Renovation)*. Hence, I only had the chance to learn English from the tenth to twelfth grades. As a result, most students of my generation could only apply English for practical reasons on a very limited scale due to the shortage of time in learning all basic English skills. At the same time, grammar was the only subject taught to most students, the consequence of which was that most students, if not all, struggled to develop other essential skills in English, especially listening and speaking skills. Furthermore, my late start in learning English at High School was a hindrance during my first year in university as an English majored student because I had to start from scratch. Unfortunately, most English teachers of my age encountered similar issues, which explains the limitations of English efficiency among teachers (People's Committee of Ben Tre Province, 2016). Even though some English teachers are from younger generations who started to learn English as early as sixth grade, English teaching since *Doi Moi* has not tended to show positive results (Le, 2018). This is mainly due to the existing teaching methods, which tend to limit students' abilities to develop the necessary skills to use English in practice after graduating from High School (Ha, 2010; Anh, 2018; Huynh, 2018).

The obstacles set out above in relation to English teaching in Ben Tre Province triggered me to find a better way to teach English. As an English teacher at Ben Tre College since 1997, I have participated in a wide range of training programmes and evaluative

exercises related to English teaching methods at secondary schools and helped to seek new methods to replace the current outdated pedagogies. Moreover, I have attempted to compile practical skills for communication purposes in the real world under the strict guidance of the existing policies and pedagogies at Ben Tre College. During these attempts to find better and more effective approaches to teaching English, I was increasingly drawn to using ICT in ELT. I felt ICT could be highly valuable in the effective teaching of English which led me to formulate the research rationale for this piece of research as described in the section below.

1.1 Research Rationale

We are living in a digital age where ICT plays an indispensable role in all aspects of society, including education (Rabah, 2015). English, as described earlier, is the *lingua franca* of the twenty-first century (Graddol, 1997). The use of ICT within teaching had the potential to "complement, enrich and transform education for the better" (Dhital, 2018, p. 3215). For example, the use of audio, pictures, and videos provide pathways for students to express themselves through open discussions about teaching topics (Thomas and Reinders, 2010). In particular, the use of videoclips is very helpful during exercises as students can take on the role of the characters and role play the scenarios in the corresponding videoclips such as a shopper conducting a transaction or a tourist seeking directions. It is therefore possible to create a more interesting learning environment through the use of ICT to yield higher learning outcomes (Williams and Burden, 1999). Lastly, ICT does not only offer an alternative means of communication through the use of various tools, but it also has the potential of improving learners' engagement (Rashid and Asghar, 2016) and transforming students into active co-creators of their learning process rather than passive learners (Pombo *et al.,* 2017). ICT, thus, can support students in learning English creatively alongside the ingredients for economic, political, and cultural development.

It is clear that mastering digital tools to improve English teaching can deliver better results to build political, commercial, cultural, and academic connections between Vietnam and the rest of the world (Xue and Zuo, 2013). The ability to use English fluently permits Vietnamese politicians to strengthen diplomatic relations with other nations whilst entrepreneurs may have greater opportunities to form new partnerships with businesses worldwide. Likewise, students and scholars are able to access invaluable sources of human

intelligence around the world. Integrating ICT in ELT is, hence, the faster and better way to learn and master the universal *lingua franca* of the modern era in terms of economic growth as it may also increase the quality of living for Vietnamese people.

However, the use of ICT by English teachers in classrooms remains limited in Vietnam (Nguyen, 2016). The use of ICT is still limited to audio files in CDs alongside large-sized pictures as posters. The use of advanced tools like the interactive whiteboard has not been widely adopted. According to Le (2015), only four percent of lecturers at a major university in the Mekong Delta, Vietnam, had integrated the interactive whiteboard into teaching in 2015. According to the above studies, the current state of ICT integration in ELT indicates that technology deployed into classrooms worked at a very basic level which made it hard to achieve the numerous benefits that ICT can offer as described earlier. Thus, it was understandable for MOET to prioritise the improvement of English teaching by integrating ICT in ELT at all public schools from Primary School to High School. While the motives which have led MOET to initiate the *Decision 1400/QD-TTg* (MOET, 2008b) and the follow-up of the Education and Training Service in Ben Tre Province through its *Official Correspondences of 1601/SGD&DT-GDTH* (Ben Tre Educational Service, 2016a), known as *ICT Training Policy* hereafter, and *2782/SGD&DT-KTQLCLGD&CNTT* (Ben Tre Educational Service, 2016b), or *ICT Integration Policy* for short, that require teachers to attend training courses and enhance the use of ICT at public schools (Ben Tre Educational Service, 2016a, 2016b) are clear, the process of integrating ICT in ELT is questionable, as teachers have encountered significant difficulties during the implementation of ICT in practice (Dang, 2011). Acknowledging existing difficulties may provide solutions for a better quality of English teaching in the future. This is the purpose of this research study.

The research study focuses on investigating the integration of ICT in ELT at secondary schools in Ben Tre Province for the following reasons; first, English teaching is only mandatory in secondary schools from the sixth grade and English is considered simply as selective study at Primary Schools in Ben Tre Province. As a result, investigating the use of ICT in ELT in secondary schools will provide more comprehensive data for this study. Secondly, selecting Ben Tre Province as the research site enables me to use my position as an insider with more than twenty years of teaching experience as an English lecturer at Ben Tre College to collect rich and reliable data because I have a substantial amount of knowledge

about the educational system in this particular province. Furthermore, many English teachers at public schools throughout the province are my previous students with whom I have established good relationships based on mutual trust and respect. Finally, research into the integration of ICT in ELT throughout the Mekong Delta region where Ben Tre Province is located is extremely limited and there is no comparable study which places the emphasis on secondary schools in Ben Tre Province. Existing research focuses on the integration of ICT in ELT at a university level in the Mekong Delta (Le, 2015; Vo, 2019). For this reason, I have chosen ***"Valuing Teachers' Flexibility, Resourcefulness and Proactivity in Processes of Educational Change: Investigating Teachers' Use of Information and Communication Technology in English Language Teaching in Secondary Schools in Ben Tre Province, Vietnam"*** as the research topic in the hope that my study can add to existing knowledge in the research fields of ELT and educational change. I also hope that it will be used to support the integration of ICT in ELT in other provinces in Vietnam and the process of educational change in other countries similar to Vietnam. In addition, findings from my research study could be used as references for future improvements in teaching and learning experiences beyond ELT. Above all, I consider this research study as a personal contribution to the educational community of which I am a part.

1.2 Research Objectives and Research Questions

The purpose of this research study is to identify factors related to Secondary English teachers' use of ICT in the classroom in Ben Tre Province. It will examine in detail how ICT has been used effectively to teach English as a foreign language, and the relationship between factors affecting its effective use. The study will explore and evaluate current practices in terms of strengths and weaknesses to propose a more efficient approach to integrating ICT in ELT.

The purpose of this research study determines the research objectives for this PhD thesis that are three-fold:

(1) To identify how ICT has been used effectively in ELT

(2) To identify the factors impeding teachers' use of ICT in classrooms and the relationships between these factors

(3) To build a model that can be shared with teachers, teacher trainers, educational administrators, policymakers, and curriculum developers, which analyses and evaluates the factors affecting the use of ICT by Secondary School English teachers in Ben Tre Province.

The research objectives can be fully achieved by answering the following research questions:

(1) How has ICT been used effectively in ELT at secondary schools in Ben Tre Province?

(2) What obstacles impede the effective use of ICT in ELT at secondary schools in Ben Tre Province?

(3) What is the relationship between the factors affecting the use of ICT at secondary schools in Ben Tre Province?

The first research question is constructed to analyse strengths while the second question helps identify obstacles to the successful use of ICT in ELT at secondary schools in Ben Tre Province. The third research question aims at the relationship between obstacles in order to identify what stands in the way of successfully integrating ICT in ELT. The research questions are developed to achieve the research objectives which will fulfil the purpose of this research study in identifying positive and negative factors affecting the integration of ICT in ELT. The resulting model will be shared with educational administrators and teachers to support the better use of ICT in ELT.

1.3 Research Context

The following subsections provide a brief introduction to the history of foreign language teaching in Vietnam, the introduction of ICT into ELT in Vietnam, and, most importantly, to the unique local characteristics of Ben Tre Province.

1.3.1 A Brief History of Foreign Language Teaching in Vietnam

Vietnam has had to remain competitive in global trade to boost its domestic economic growth. Therefore, English is one of the most important subjects in schools because it is the

de facto lingua franca for global trade as mentioned earlier in the introduction. Learning English is also important for technological development because most technology-related terminologies are English-originated words such as blogging, chat, email, selfie, web, Wi-Fi, and the like. For this reason, English became crucial to education in Vietnam, which led the Vietnamese government to initiate its political reform known as "*Doi Moi*" that initiated trade outside the Soviet-bloc in 1986 (Beresford, 1988) and led English to compete with Russian as the primary foreign language in Vietnam (Hoang, 2010). In the mid-1990s it became more essential to learn English due to the USA and Vietnam reestablishing their diplomatic channels and trade (Kang, 2017). The requirement to learn a new foreign language on a national scale could sound challenging; however, Vietnamese learners have shown evidence of success in foreign language learning throughout a long and rich history of education and learning for over two millennia.

The earliest records show that Vietnamese students received formal, classic education soon after the Chinese invasion in 111 B.C during the reign of Emperor Wu of the Han dynasty in which Vietnam became the Province of Giao Chi, (later known as Giao Chau during the Tang dynasty) (Ngo, 1993). Throughout a millennium of Chinese domination from 111 B.C to 938 A.D, Vietnamese students received formal Confucius learning to help them assist the Chinese officials who governed Vietnam. During this period, Vietnamese students, in the form of Confucius disciples, were allowed to participate in the national examinations held at the capital city of Changan, nowadays Xian, every three years (Jin, 1990). These national examinations were the only way in which Vietnamese people could be recognised as citizens and have their half-slave status eliminated (Tran, 1971). For this reason, Vietnamese students needed to master ancient Chinese literature, including Chinese pictographs, or "*Chu Han*" (Nguyen, 2009). Vietnamese scholars during this era even developed a new way of pronouncing Chinese symbols which later became the unique phonology, known as "*Han Viet*" (Marr, 1984). At this point, Vietnamese students and scholars did not only master the Chinese language, but they also created a new version of the foreign language in which pronunciations were modified to suit the Vietnamese native tongue.

After declaring independence from China in 938 A.D, Chinese letters, "Chu Han", alongside the language of "Han-Viet", (the Sino-Vietnamese phonology), was adopted as the

official language by Vietnamese kingdoms (Phan, 2001). However, Vietnamese scholars and students faced a challenge writing Vietnamese literature, which had been on the verge of extinction. For generations, Vietnamese literature had been carried only by word-of-mouth because the Vietnamese had never established a writing system of their own. Under such huge pressure to develop a writing system for the Vietnamese language, Vietnamese scholars came up with the simple solution of modifying Chinese letters, or "*Chu Han*" to write Vietnamese words. The newly developed Vietnamese writing system was known as "*Chu Nom*", which meant 'southern writing' (Nguyen, 2009). While "*Chu Han*" was used for official applications until 1919 when all pictographic writing systems were replaced by the Roman alphabet (Tran, 2009), "*Chu Nom*" marked its presence in any non-official writing until the twentieth century; from daily journals to poems, from simple books to significant literature, and all other non-official applications.

In the sixteenth century, Vietnamese people experienced a completely different type of language and writing which was brought to Vietnam by Jesuit Missionaries from Portugal and, later, France (Jacques, 2002). Many of these Missionaries acknowledged Vietnamese assistants in their diaries. For example, in the foreword of Alexandre de Rhodes' Cathechismus in Octo Dies Diuisus (Catholicism in Eight Days), published in 1653, he referred to a little Vietnamese boy who taught him all the different phonetical tones of Vietnamese within three weeks (Luong, 2018). This implies that some Vietnamese people could communicate with the Missionaries in Portuguese, French, and, perhaps, Latin. Concurrently, these Missionaries started to record Vietnamese pronunciations by using the Roman alphabet (Haudricourt, 2010). Starting with Portuguese Missionaries such as Francesco Buzomi, Gaspar do Amaral, Antonio Barbosa, and Francisco de Pina (Jacques, 2002), the Vietnamese writing system using the Roman alphabet slowly developed to a near-perfect stage as presented in the Dictionarium Annamiticum Lusitanum et Latinum, or the Vietnamese-Portuguese-Latin Dictionary, which was written by the French Missionary, Alexandre de Rhodes (Kiernan, 2017). In 1838, Jean-Louis Taberd, who was another French Jesuit, introduced another work, known as Dictionarium Anamitico-Latinum (the Vietnamese-Latin Dictionary) after revising previous work undertaken by Pigneau de Behaine regarding the development of the Vietnamese writing system (Luong, 2018). This new writing system is still used in Vietnam today (Gunn, 2003).

Because the writing system using the Roman alphabet was developed by Jesuit Missionaries, its usage was initially limited to the realm of Catholic churches. The new writing, therefore, remained in the shadows for over two hundred years until Vietnam was invaded once again in 1858 by the French (Tran, 1971). Soon after establishing their dominance in the southern part of Vietnam, French colonisers recognised the importance of Catholic churches in gaining public support as Vietnamese Catholics who had fought against the Vietnamese government to lift the ban against Christianity in Vietnam (Devillers, 2006). The cooperation among the Catholic churches and the French government made way for the use of the Roman alphabet when the colonial government decided to use this writing as a replacement for unfamiliar Chinese symbols. For example, Commodore Marie Gustav Ohier of the French Navy promulgated the replacement of the Roman alphabet over the Chinese writings for all official documents in 1869 (Hoang, 2007). Starting in the southern region of Vietnam, the new writing, or "*Chu Quoc Ngu*", was officially used throughout the French Protectorate in Vietnam as of 1910 (Tran, 1971). In 1919, Emperor Khai Dinh of Vietnam announced an imperial decree which recognised "*Chu Quoc Ngu*" as the only official writing used by the government (Anderson, 1991). At the same time, Vietnamese people started to learn French at public school where it was taught as the primary language (Tran, 2009).

Shortly after the French retreated from Vietnam after their defeat in the battle of Dien Bien Phu in 1954, Vietnam was divided into two sovereign states at the seventeenth parallel as a result of the Geneva Conference (Logevall, 2012). North of the seventeenth parallel was controlled by the Democratic Republic of Vietnam, (or North Vietnam), while the Republic of Vietnam, (or South Vietnam), controlled the South (Young, 1991). At this point, Russian was the primary foreign language in the North and English was the primary foreign language in the South. After the collapse of the Republic of Vietnam in 1975 Russian became the primary foreign language throughout Vietnam until the initiation of political reform in 1986 known as "*Doi Moi*" (Hoang, 2010).

The political reform, known as "*Doi Moi*", or Renovation, in 1986 marked the period in which Vietnam started to trade outside the Soviet-Bloc. English, therefore, became an important foreign language to study (Do, 1999). The importance of learning English grew further after Vietnam joined the Association of Southeast Asian Nations (ASEAN) in 1995

(Nguyen, 2007). That same year, Vietnam and the USA re-established the "formal normalisation" of diplomatic relations and the USA opened its Embassy in Hanoi in 1997 (Hiebert, Nguyen, and Poling, 2014). Since then, Vietnam has become a member of the World Trade Organisation in 2007 (Vo and Nguyen, 2009). English is now an essential language to learn in Vietnam. Educational reforms since the 2000s have introduced English teaching into Primary Schools and MOET have implemented several policies to assure the effectiveness of English teaching in public schools.

1.3.2 A Brief History of ICT Use in Vietnam

The early introduction of ICT in Vietnam was led by the Russians and other Eastern European countries during the Vietnam War in the 1970s to advance communication tools used to fight against the USA Air Force in Operation Linebacker 2 in 1972 (Le, 2016). After the War, the ICT equipment and software implemented by Russia remained in Vietnam through an assisted program called COMECON (Council for Mutual Economic Assistance), which was created by the Soviet Union in the same way as the Marshall Plan was created by the USA (Brine, 1992). ICT development in Vietnam was supported by COMECON until the collapse of the Soviet Union in 1991 (Ajay, 2016). It used the Cyrillic alphabet and all technical language was derived from Russian.

Western ICT equipment and software was first imported after the political reform in 1986 when Vietnam started to trade outside of the Soviet-Bloc. Initially ICT was used at a very limited scale because computers were very expensive in the 1980s and 1990s. For example, the IBM 5150 cost $1,565 in 1981 and the Compaq Portable II cost $3,499 in 1986 (Evan, 2018). Compared to the Vietnamese GDP per capita of $422 in 1986 (World Bank, n.d.), this was equivalent to ten years of income for an average Vietnamese worker. Besides Vietnamese consumers could not purchase computers made in the USA because of the trade embargo which was applied from 1975 to 1994 (Castelli, 1995).

In 1997, when the USA and Vietnamese governments agreed to normalise diplomatic channels and trades (Hiebert, Nguyen, and Poling, 2014), consumer goods, including computers, became less expensive because they could be purchased directly from the USA eliminating overheads from third parties. As a result, schools could afford to integrate computers into teaching. Students eventually had the chance to experience different computer

programs in the computer lab instead of learning mainly through lectures and textbooks. The normalisation of relations between the USA and Vietnam boosted bilateral trade between the two countries alongside the establishment of US-based corporations in Vietnam (Albert, 2019). The presence of leading technology firms such as IBM, Intel, and Microsoft has provided opportunities for people in Vietnam to more easily access the latest innovations. This is the main reason why advanced ICT is no longer limited to colleges and universities but is now accessible in every town throughout the country. The late 1990s and early 2000s witnessed a growing number of Internet Cafes owned and operated by the private sector in Vietnam (Baker, 2007). These computer centres allowed people to pay an hourly rate to use a computer and offered computer courses in basic computing, programming, graphic design, and web development. ICT use has progressed significantly in Vietnam during the turn of the millennium. If the early 2000s are considered the "dot-com" boom in the USA (Weber, 2004), they are the "tech-boom" in Vietnam, as the Internet was finally available at an affordable cost which led to the number of subscribers increasing at an average annual rate of 30% from 200,000 users in 2000 to almost 16 million users in 2007 (Jeffrey, 2008). According to Reuters in an interview with Nguyen Duc Tai - CEO of the fast-growing chain Mobile World, Vietnamese merchants did not fear foreign competition in e-commerce (Jeffrey, 2008).

The adoption of ICT began to take shape in Vietnam. Government offices started to use computers for their administrative tasks after *Resolution 49/CP* (Vietnamese Government, 1993). Analytic and accounting software began to be used in most corporations. And POS (point-of-sale) systems no longer belonged only to television commercials, they were also found on the streets. In education, schools started to expand ICT courses from the eleventh and twelfth grades to all grades. *Resolution No. 40/2000/QH10* (Vietnam National Assembly, 2000) mandated that ICT should be taught at all grades in the public school system. New courses were also added to most public schools and in this way, students could learn more exciting topics such as how to use graphic design applications. Positive results received in ICT courses allowed administrators to expand to Primary Schools confidently. At this point, however, ICT was still a standalone teaching subject in schools. The integration of ICT into other subjects was not yet practical because many teachers were still unable to use a computer effectively until MOET started to implement ICT as an integrated tool to improve teaching quality (MOET, 2008b).

In particular, *Decision 1400/QD-TTg* (MOET, 2008b) initiated the integration of ICT in ELT. This was done first because existing teaching materials for ELT were plentiful online. Also, improving English skills among students was deemed critical in to securing a higher chance for future economic and political successes on the international stage. *Decision 1400/QD-TTg* (MOET, 2008b) provides the foundation for the transition towards more forward-thinking teaching methods that include the integration of ICT in English teaching. Specifically, *Decision 1400/QD-TTg* (MOET, 2008b) provides general guidelines for educational agencies at provincial levels, known as the 'Educational and Training Service', to use as references to create policies at the District levels. These policies are influenced heavily by the local characteristics of each particular province. For instance, ICT training for English teachers in Province A may be different from Province B because Province B has insufficient funding. Since its initiation, all provinces throughout Vietnam have drafted their own policies to enable the integration of ICT in ELT. This includes policies related to ICT training for English teachers, the construction of ICT facilities, the establishment of ICT support teams, and the regulation of the use of ICT in classrooms.

In Ben Tre Province, where this research study takes place, the integration of ICT in ELT is still underway. For example, not all English teachers have participated in the ICT training courses hosted by the Education and Training Service because the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) which offers ICT training is not intended to provide training for all teachers at once. This means some teachers have not been officially trained to use ICT in English teaching. Yet, all teachers have been dictated to use ICT in their teaching since 2016 as enforced by the *ICT Training Policy* (Ben Tre Educational Service, 2016a). In addition, there are no central databases on which to share teaching materials and lesson plans. Instead, teachers are required to develop their own ICT content to use in class. For these reasons, it is impossible to guarantee consistent results across the District because teachers have different ICT approaches. It is also very difficult to evaluate the application of ICT in ELT because teaching quality relies heavily on teacher preferences.

From MOET's perspective, *Decision 1400/QD-TTg* (MOET, 2008b) serves two purposes. First, it is designed to immediately improve the teaching quality in foreign language teaching and learning, especially in English teaching and learning. Secondly, it will

collect data concerning the integration of ICT in foreign language teaching and learning throughout the country to make proper adjustments for the implementation of *Project 2020* that aims to integrate ICT into subjects across the curriculum by the year 2020. My research study can support MOET's work by examining the relationship between factors affecting the successful integration of ICT in ELT as described in Chapter Six. Recommendations, as described in Chapter Seven, may be used as references to enhance the use of ICT in ELT while preventing several obstacles during the integration process.

1.3.3 National and Regional ICT Policy Context

Since the start of the Vietnam War, teaching and learning of English in Vietnam (Do, 2006) revolved largely around textbooks, blackboards, and handwriting. Hoang (2010) argues that these 'traditional' teaching methods did not result in students becoming competent English users. Hoang's conclusions are supported by Huynh (2018) and Anh (2019) who point out that most Vietnamese students who were taught in this way cannot communicate in English after graduating from high school. Such inefficiency is believed to be caused by several subjective and objective reasons, such as the quality of English teachers, teaching materials and strategies, curriculum, assessment, and evaluation methods (Ha, 2010).

Firstly, most English teachers do not possess a level of English in line with the *Common European Framework of Reference for Languages*, or CEFR, which was adopted by the Ministry of Education (MOET). CEFR comprises six levels of English efficiency beginning with A1 as the elementary level up to C2 as the uppermost advanced level (Byram and Parmenter, 2012). Under the guidance of MOET, the upper intermediate level, or B2-level, has been set as the requirement for English teachers at Primary and Secondary Schools while C1-level is required for High School teachers (MOET, 2012). However, a nationwide test on English proficiency revealed that two-thirds of English teachers are below the requirements (Le and Renandya, 2017). More specifically, a report made by MOET on the Vietnam National Foreign Language 2020 Project showed that, after testing 10,161 English teachers, over 90% of English teachers from Primary School to High School did not meet MOET's expectations (Nguyen and Phung, 2015). This arguably makes it extremely difficult

for English to be taught at schools as desired because only 10% of English teachers have qualified MOET's prerequisites.

Secondly, it has been suggested that the English teaching curriculum for all educational levels does not value communicative goals and that it also lacks official direction as well as a teaching strategy suitable for the practical applications in English teaching (Nguyen, 2012). An example of this is that content in teaching is focused heavily on grammatical structures, whilst listening and speaking skills are introduced in a very limited way. The focus on grammatical competence, known as the Grammar-Translation Method, is a traditional teaching method (Xiaotong, 2014) that ignores the development of the learner's oral proficiency (Chhabra, 2012). Traditional English teaching in Vietnam is a very teacher-centred approach and neglects the role students play in building oral proficiency. It has been suggested that this makes it hard to develop the authentic use of English language (Ibrahim, 2010). A new teaching strategy would need newer teaching materials and tools. Teaching materials and technical devices to support foreign language teaching and learning are inadequate and outdated and it has been suggested that essential teaching tools for the new approach which places students at the centre are very limited, even at private institutions in major cities (Ha, 2010). Current research shows that a lack of necessary equipment, such as ICT tools, to support more progressive teaching approaches (Ghavifekr and Rosdy, 2015) has forced English teachers to continue with more traditional teaching methods of teaching, making it difficult to apply communicative and enquiring approaches to teaching (Ha, 2010). Recognising the current situation and issues in foreign language teaching, especially ELT, the Vietnamese government and MOET have issued policies that aim to improve the curriculum, teaching methods, assessment, and evaluation in ELT. They have also highlighted the need to integrate ICT into foreign language teaching to improve the quality of teaching in line with integrating ICT in teaching across the curriculum.

The move to integrate ICT teaching across the curriculum was first initiated in 2002 by *The National Strategy for Information and Technology for Vietnam* (Quach, 2004) that aimed to foster ICT integration in education (Quah, 2007). It was then followed by the *Law on Information Technology Application* in 2006, (Dinh, 2015) that stressed the importance of applying ICT in education. Later, in 2008, MOET issued the *Directive 55/2008/CT-BGDDT* on *Enhancing Teaching, Training, and Implementing ICT in Teaching 2008-2012*.

The academic year 2008-2009 was selected as the first year to integrate ICT in education. The *Directive 55/2008/CT-BGDDT* is significant because it is considered as the official initiative or innovation in education which enforces the integration of ICT into classrooms as a national policy (MOET, 2008a). The *Directive 55/2008/CT-BGDDT*, in particular, dictates the use of ICT in ELT in all public schools. It also lays the foundation for the creation of specialised taskforces in education to ensure ICT is integrated accordingly (MOET, 2008a). Finally, in 2008, the Vietnamese government and MOET launched a policy to promote the teaching and learning of English, known as *Decision No. 1400/QĐ-TTg on Approving of the Project "Foreign Language Learning and Teaching in the National Education System period 2008 and 2020* (MOET, 2008b). This policy further emphasised the application of ICT in foreign language teaching. A lot of tasks and accompanied actions were listed in the project plan such as "to intensify the application of information technology to foreign language training" (MOET, 2008b, p.3) and "to implement intensive foreign language teaching and learning programs at training institutions with priority given to such disciplines as information technology" (MOET, 2008b, p.7).

The written contents in the *Decision No. 1400/QĐ-TTg* act as a reference for Education and Training Services within provinces to consult when drafting their provincial-level ICT policies. The creation of *Decision No. 1400/QĐ-TTg* thus signifies an innovative change, transitioning from traditional teaching methods to a more digitally attuned and student-centred form of pedagogy. In other words, integrating technology into teaching is no longer an option, but it is now mandated for all public schools throughout Vietnam since 2008. According to Dudeney (2010), ICT policies can provide the scope, directions, and the desired objectives when ICT is integrated into teaching and learning. Arguably, these policies also benefit teachers, students, parents, as well as the general public. This means that national policies provide objectives and approaches on how ICT can be integrated into teaching and it has been suggested that having a national policy is beneficial because proactive policies at a much greater scale encourage education institutions to greatly improve the use of ICT (Peeraer and Van Petegem, 2011). Under MOET's guidance, policies on ICT integration in ELT have been developed throughout all provinces in Vietnam. In particular, Ben Tre Province, where this research study takes place, has begun implementing the *Decision No. 1400/QĐ-TTg* through the initiation of the *ICT Training Policy* (Ben Tre Educational Service, 2016a) and *the ICT Integration Policy* (Ben Tre Educational Service, 2016b). The

first official correspondence offers official ICT training courses in which a few teachers per school in the province are drafted rotationally every year. The second official correspondence furthermore reinforces the use of ICT in schools (Ben Tre Educational and Training Service, 2016a, 2016b). Thus, schools have started to purchase the necessary equipment and arrange for maintenance and technical support teams to ensure ICT can be applied in teaching.

Arguably, these policies have both positive and negative aspects. From one perspective, they have created positive changes in the ELT curriculum and teaching methods where teachers have greater capacity to use ICT and students can be the active co-creators within their learning processes rather than being passive learners (Pombo *et al.,* 2017). In this way it can be seen that ICT enables an environment to leverage learning and teaching experiences. These policies also potentially stimulate modernisation and the improvement of teaching quality in all educational institutions. For example, it has been suggested that they help to trigger a transition from traditional English teaching methods such as the Grammar-Translation Method, Audio-Lingual Method, and Direct Method which focus mainly on language forms such as grammar and vocabulary (Ibrahim, 2010) to a more suitable way of teaching in the modern world which focuses more on language use. According to Nunan, the Communicative Language Teaching Methodology (1991, p. 78), contains five principles which are: (1) an emphasis on learning to communicate through interactions in the target language, (2) the introduction of authentic texts into the learning situation, (3) the provision of opportunities for learners to focus not only on language, but also the learning process itself, (4) an enhancement of the learner's own personal experience as an important contributing element to classroom learning, and (5) an attempt to link classroom language learning with language activities outside the classroom (Nunan, 1991, p. 78).

Combined with ICT, the new teaching method arguably allows a change in teaching style from a teacher-centred model to a student-centred approach which it has been suggested provides a more active role for students in learning (Hidayati, 2016). ICT policies can also provide opportunities for teachers and students to develop new skill sets in using technology because the new teaching method requires a substantial amount of knowledge in ICT. For example, the *ICT Training Policy* (Ben Tre Educational Service, 2016a) was created to provide essential ICT training skills for teaching. This official correspondence also advises teachers to self-explore teaching-related ICT tools. Students are also provided with more

opportunities to learn about different ICT tools such as presentations, animations, audio and video clips, and online dictionaries during ELT. Lastly, *Directive 55/2008/CT-BGDDT* and *Decision No. 1400/QĐ-TTg* help synchronise the preparation processes throughout the country. Therefore, provisional agencies know precisely what deadlines they are working towards. Through its provision, *Directive 55/2008/CT-BGDDT* makes suggestions regarding which equipment should be purchased, which computer programs are to be installed, and so forth. Thus, provincial agencies are able to make necessary preparations, especially when it comes to budget planning.

However, there are some negative aspects to the policies which also need to be highlighted. First and foremost, it has been noted that the deadline as set for ICT integration in ELT may cause difficulties for some provinces (Hoang, 2013). This is because the Internet is not currently available in some regions, especially in remote areas. Secondly, it has been suggested that adopting new technology in teaching is a risky manoeuvre, as the transition from traditional teaching to the digital-based method is a "concept of change" in which there would be no such guarantee for the integration of ICT to be a success, even with a well-planned execution (Pham, 2009). In other words, the integration of ICT in teaching could be considered as a trial-and-error approach because the Education and Training Service in Ben Tre Province has never had any experience of adopting technology in teaching. In the event of failure, alternative approaches should need to be carried out, including the possibility of converting back to traditional, non-digital, teaching methods (Luong and Quan, 2020). However, MOET has not issued any policy or detailed guidance to instruct on what to do in the case of failure. It is also noteworthy that Vietnamese educational administrators and policymakers have not conducted sufficient research on the effectiveness of integrating ICT into ELT and, to date, most research studies conducted in Vietnam have been undertaken only by individuals (Dang, Nicholas and Lewis, 2013; Vo and Le, 2014; Dinh, 2015; Ngo, 2016). Publications issued by official authorities, on the other hand, are much scarcer. For this reason, the integration of ICT in ELT is still proceeding in a trial-and-error mode.

1.3.4 An Introduction to Local Characteristics of Ben Tre Province

Regarding this particular research study, the quintessential characteristics of Ben Tre Province contribute significantly to the process of ICT integration. This is due to the unique

culture of the province which is a product of its physical features, demography, economy, and infrastructure. For this reason, it is important to set out some of the local characteristics of Ben Tre Province. The earliest records show that the area (which would be nowadays Ben Tre Province) was covered by a deep forest and was described as "dense forests stretched for miles from the seashore" by Le Quy Don, a Vietnamese Confucian scholar, in his "Miscellaneous Chronicles of the Pacified Frontier" (Dao, 2007). Peasants from central Vietnam started to establish villages in the modern-day Ben Tre Province throughout the seventeenth century. The independent province of Ben Tre was established on 1 January, 1900 under the administration reform issued by Governor-General of Indochina, Paul Doumer (Thach and Doan, 2001).

Unlike its neighbouring province of Tien Giang which is known as the "rice depot" of the Mekong Delta, Ben Tre Province is only famous for its title of "the coconut country". The complex system of rivers and canals that run through it (shown below in Figure 1.1) has contributed to the quintessential isolation of Ben Tre Province. This unique geographical feature, as shown on the map above, impacts culture, demography, economy, and infrastructures significantly.

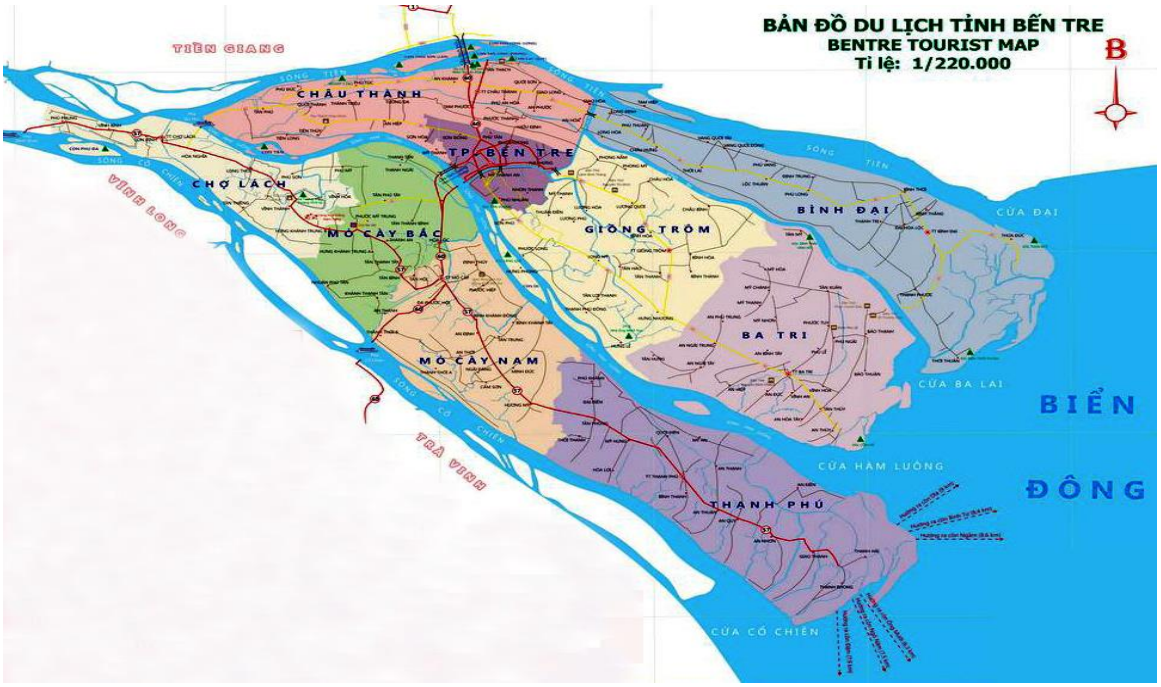

Figure 1.1 The Isolation of Ben Tre Province *(source Wikipedia)*

In terms of culture, Ben Tre Province has kept much of its earliest culture since the wave of first settlers due to the complex waterway system which makes cultural exchanges more difficult. Therefore, culture in Ben Tre Province, in general, still reflects the traditional lifestyle of the farmers and fishermen who originally settled there. Evidence of the traditional lifestyle may be found in cultural activities which are held annually at temples throughout the province. For instance, standard norms in Ben Tre Province include the worship of the farming god for a golden harvesting season whilst fishermen worship the Vietnamese "Poseidon" to whom they pray for a safe maritime journey. In other words, traditional culture still has a strong impact on typical lifestyles in the province, especially in the countryside, where farming and fishing remain the dominant industries. The Indochina War (1945) and the Vietnam War (1954 - 1975) stalled the process of modernisation in the province because Ben Tre Province was recognised as "the start of the Vietnam War" (Pringle, 2004). This left Ben Tre not only geographically isolated, but also economically disconnected as warfare was the only activity in the province. Thus, modernisation has only taken place in Ben Tre Province since the political reform in 1986. Furthermore, war made access to education difficult and Ben Tre Province did not have a Secondary School[1] before 1945 which meant that students had to commute to neighbouring provinces (Thach and Doan, 2001). For students who remained in the province, education took place through private tutoring which was taught by elders who received education from Confucian standards. As a result, it is common that older generations appear to be more traditional while younger generations, such as those born in the 1980s onward, tend to be more liberal.

The dominant culture within Ben Tre also exerts an influence on contemporary lifestyles that have evolved from those of the original settlers in the seventeenth century. One of the significant aspects of this culture is the way people observe numerous celebrations including holiday celebrations, harvesting celebrations, death anniversary celebrations, and many more. Vietnamese farmers consider celebrations to be important enough to postpone all other activities. For example, typically people in Ben Tre Province spend roughly one week celebrating the Lunar New Year, known as Tet. In the countryside, the Tet celebration

[1] Secondary School is the second level of the public education in Vietnam, serving students from 6th grade to 9th grade at eleven to fifteen years old, while Primary School providing lessons for students from 1st grade to 5th grade at six to eleven years old and High School offering classes for 10th to 12th grades for students from fifteen to eighteen years old.

may take up to three weeks or even longer. Farmers also celebrate a good harvest several times a year alongside the more generally celebrated anniversaries for the deceased. As nuclear families are still popular, several anniversaries for the deaths in the family tend to be held annually (Tran, 1996). Even though the traditional lifestyle can be found throughout the country, celebrations have been simplified in many parts of Vietnam due to the process of modernisation and industrialisation. On the other hand, in Ben Tre Province, celebrations still take place in a very formal fashion as local people still value highly the importance of celebrations. As a result, a tremendous amount of time and effort is poured into these celebrations, meaning that people do not have much time left for other activities. Living according to the traditional lifestyle may explain why productivity and achievements are extremely low in Ben Tre Province.

According to the General Statistic Office of Vietnam, Ben Tre Province has a population of 1,288,463 in which 9.8% live in the urban areas as of April 2019. This means 90.2% of the population, or 1,162,016 people, reside in the countryside which contains many rural villages.

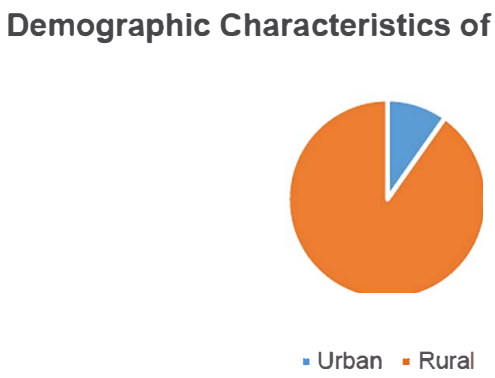

Figure 1.2 Demographic Characteristics of Ben Tre Province

Data provided by the Provincial Statistical Offices show that 63% of the total population in Ben Tre Province, or 811,732 people, is in the labour force of which 36,000 people are skilled labourers that accounts for 4.43% of the total labour forces. Consequently, there are 775,732 unskilled workers which dominate 60% of the total population (Ben Tre Statistical Office, 2018).

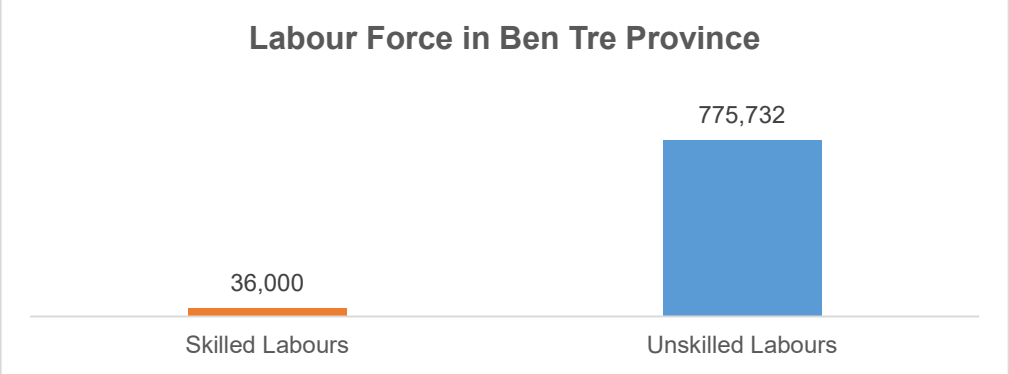

Figure 1.3 Labour Force in Ben Tre Province

The above statistical data shows that the workforce in Ben Tre Province is overwhelmingly composed of unskilled laborers, which explains why Ben Tre Province is still considered a poor province. Compared to the provincial Gross Domestic Product, also known as Gross Regional Domestic Product or GRDP, Ben Tre is the poorest province in the Mekong Delta as summarised in the table below:

Province	**Population (2018)**	**National GRDP Rankings**
Can Tho	1,282,300	11
Long An	1,503,100	13
Kien Giang	1,810,500	31
Tien Giang	1,762,300	32
Vinh Long	1,051,800	35
Tra Vinh	1,049,800	36
Ca Mau	1,229,600	38
Bac Lieu	897,000	39
Dong Thap	1,693,300	43
Hau Giang	776,700	48
Soc Trang	1,315,900	51
An Giang	1,908,352	56
Ben Tre	**1,262,200**	**58**

Table 1.1 Gross Regional Domestic Product of Provinces in Mekong Delta

Nationally, Ben Tre Province was ranked 22 out of 63 provinces in terms of poverty with 44,575 families living under the poverty line (MOLISA, 2016). There are 16,297 households

on the cusp of poverty and the monthly average income per capita in Ben Tre Province was only about $126 in 2018 (Ben Tre Statistical Office, 2018).

The ratio of teachers-to-students is another aspect that is worth investigating. With a total of 10,770 teachers and 200,351 students in the academic year 2018-2019 in the province, one teacher needs to provide lectures to an average of seventeen students (Ben Tre Statistical Office, 2018). The ratio of one teacher per seventeen students seems ideal for a quality teaching plan. This statistic is slightly misleading because not all qualified teachers taught in class. However, it is the lack of classrooms per school has led to overcrowded classrooms. As a result, most classrooms in Ben Tre Province have an average of forty students per class as recognised during the data collection for this research study.

It is clear to see that the isolation of the province plays an important role which impacts the demographic characteristics in terms of skilled labour and incomes. Such cultural factors do not only impact the demography but also affect the economy. In Ben Tre Province, fishing and agriculture are the two major economic activities due to its geographical characteristics (Ben Tre Statistical Office, 2018). The province is cut off from surrounding provinces by a complex system of rivers whilst the South China Sea, also known as East Sea in Vietnam, stretches approximately 65 kilometres, or 40 miles, to the east (Kiernan, 2017). The complex system of waterways along with the seashore in the east provides great opportunity for the development and growth in fishery including freshwater and seawater fishing. In addition, areas along riverbanks have benefited from the vast amount of alluvia which is crucial for agricultural development. The province has started to export fish and produce to Germany, the Netherlands, and many other countries around the world. Furthermore, ranching is a new sector which contributes a significant amount to the whole revenue for Ben Tre Province; as a result, cattle and pork ranches have reached 98.4% as planned. The province has also witnessed the growth of industrialisation to complement the fisheries, farms, and ranches. Newly developed industrial zones such as Giao Long and An Hiep permit the transition of traditional agricultural work from manual tasks to industrial processes. The industrialisation also helps investments, especially foreign direct investment, or FDI, to the province (People's Committee of Ben Tre Province, 2018).

The total provincial domestic gross product as of 2018 is $695,286,480 in which $155,340,219 has been contributed to the National Treasury while the provincial Office of Budget has a total deposit of $368,636,724 to fund local expenses such as education, healthcare, infrastructures, and so on (People's Committee of Ben Tre province, 2018). Per capita income as of 2018 is $128 per month or $1,536 per year (Ben Tre Statistical Office, 2018). Compared to the per capita income of $63 in 2010, per capita income accounts for a growth of 100%, or 12.5% per year on average. In other words, living conditions in Ben Tre Province have improved two-fold over the past seven years. However, compared to a national per capita income of $2,567 in 2018 (World Bank, n.d.), provincial per capita income is at 60% of the national average. As a result, the purchasing power parity is quite low, which explains the low indicators of retail and trade in the province.

Moreover, geographical features and a comparatively low per-capita income have affected the development of infrastructures within the province. Transportation routes are mainly along waterways. However, Ben Tre Province has attempted to supplement these traditional transportation routes by building new bridges and roads in recent years. As of 2009, the bridge *Rach Mieu* which connects Ben Tre Province to the neighbouring, yet richer, province of Tien Giang was completed. The construction of other bridges is expected in the near future which will make transporting goods and people to major cities throughout southern Vietnam easier and boost trade. However, even though new roads and bridges have been developed, waterway transportation continues to play a major role within the province as recent constructions are only planned to connect Ben Tre Province to other provinces. Being a native, I have experienced the problem of frequent blackouts first-hand, especially during monsoon seasons. In fact, the development of power grids to suburban and remote areas is still underway, leaving many areas without Internet connectivity (Hoang, 2019).

From the above reasons, it is clear to see that local characteristics may have a deep impact on the integration of ICT in teaching including ELT. Being aware of the effect local characteristics may have on ICT integration is critical to the data analysis process as will be seen in Chapters Five and Chapter Six.

1.4 Structure of the Research

This research study is seven-chapters long. The first four chapters set out the field, theoretical framework, and methodological approach whilst the remaining three chapters focus on the delivery of the outcomes for this research study.

Chapter Two is the *Literature Review*. This chapter starts to explore different definitions of ICT and previous studies are examined to ascertain what the best practices of ICT integration in ELT are and the use of ICT in ELT in classrooms, including ICT tools, pedagogical approaches and ICT in teaching skills. Then, previous studies are also used to understand different perspectives about factors affecting the use of ICT in ELT. Lastly, a research gap is established as previous studies have neglected to explore how the interdependency of teachers, learners, and policy under the principles of the Educational Change Theory (ECT) and the Diffusion of Innovation Theory (DoIT), affect teachers' use of technology.

Chapter Three presents the *Theoretical Framework* for this research study in which principles of ECT and DoIT are brought together to create a new framework that explores not only the facts but also the underlying factors that might affect educational change.

Chapter Four describes the methodological approach and begins with a consideration of the research philosophy that provides a foundation for a qualitative approach. This chapter then describes the research design and procedures in which semi-structured interviews are combined with observations to triangulate the data collection. The issue of ethical considerations is addressed fully as an important element of the research process and the chapter concludes by explaining why thematic coding analysis is chosen to analyse the collected data.

Chapter Five describes the *Findings* that resulted from the thematic coding analysis. All descriptive and underlying factors are categorised into four main themes, namely *Policy*, *Technology*, *People*, and *Local Characteristics*.

Chapter Six brings the thematic findings together under the theoretical framework of ECT and DoIT and discusses them in relation to the research literature explored in Chapter Two and the research questions proposed in Chapter One.

Chapter Seven is devoted to conclusions and recommendations. Firstly, it sets out succinct responses to the research questions which lead to the creation of a model that can be shared with teachers, teacher trainers, educational administrators, policymakers, and curriculum developers. The model sets out how factors affecting the use of ICT by Secondary School English teachers in Ben Tre Province are related. Secondly, this chapter proposes recommendations for improving the integration of ICT in ELT in Ben Tre Province. To a broader extent, the proposed recommendations are not only limited to ELT but may also be applied to the integration of ICT in other curriculum subjects. Similarly, the proposed recommendations can be applied to other regions of the country or world. This chapter finishes with reflections on the research process including limitations and the significance of its results.

All main points in each chapter of this research study are summarised in the diagram as follows:

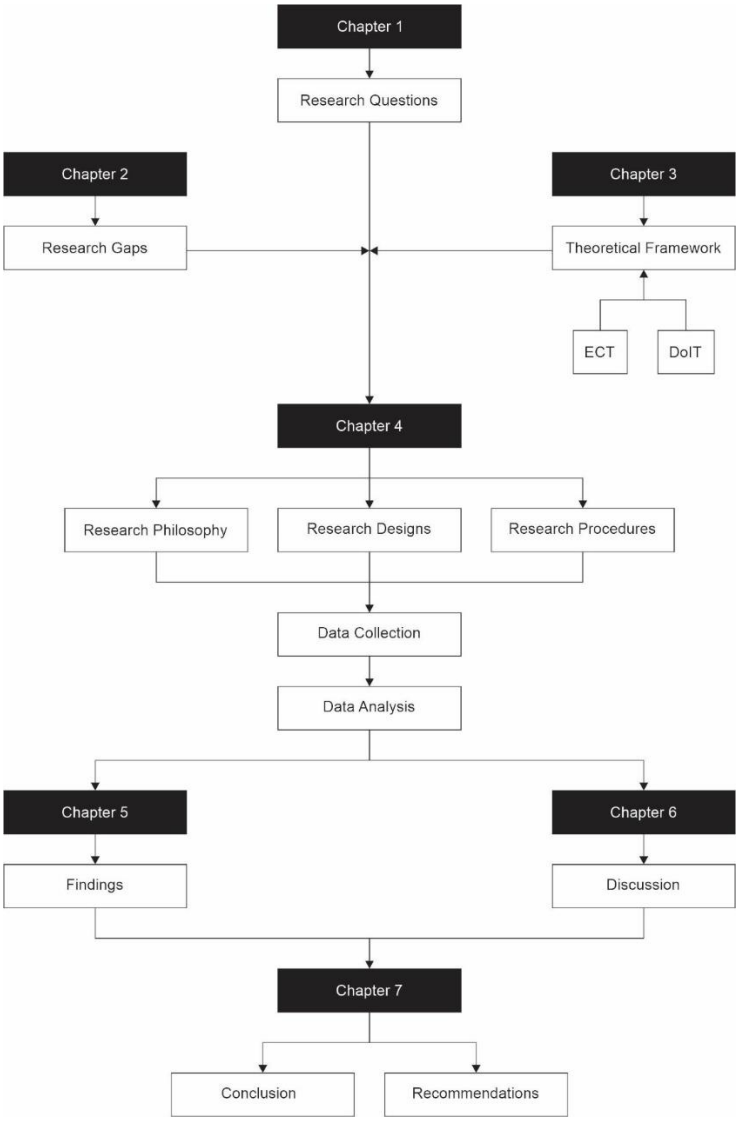

Figure 1.4 Chapters Outline

This chapter has established the need to investigate the integration of ICT in ELT at secondary schools in Ben Tre Province and set out the research questions and objectives. It has also covered the history of foreign language teaching and ICT use in Vietnam as well as the local characteristics of Ben Tre Province. Finally, the structure of the thesis is outlined. The next chapter will focus on reviewing existing research studies to understand how the integration of ICT in ELT has been studied. This will help identify a research gap for this particular research study to fulfil.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the use of Information and Communication Technology (ICT) in English Language Teaching (ELT) in the classroom. The chapter begins with by defining ICT before moving onto an exploration of best practice in the use of ICT and the benefits this might bring to ELT. Then it looks more closely at the use of ICT in the ELT classroom by focusing on ICT tools, pedagogical approaches and how ICT can be integrated into teaching. The chapter finishes by analysing the internal and external factors affecting ICT use in ELT. Reviewing other studies is important because examining relevant literature helps reveal research gaps which then prevents duplication (Fink, 1998; Ridley, 2012; Hart, 2018).

2.2 Definitions of ICT

Information and Communications Technology, or ICT, is a subsidiary of Information Technology (IT). The term was first used in *The Stevenson Report* to the United Kingdom (UK) Government in 1997. In this report, ICT was used to refer to the integration of telecommunications with computer software, storage, and audio-video systems which enabled users to access, store, transmit, and manipulate information (FOLDOC, 2008). However, over time definitions have changed and they still vary across sectors so that there is current no clear definition of the term (Zuppo, 2012). For example, ICT can be defined as a collection of tools which allow for information to be processed and managed in digital form (Blurton, 1999). ICT can also be understood as a gateway through which teachers may gain access to technology that enables them to create, communicate, and administer information (Yunus *et al.*, 2013). More generally, ICT is seen as "an umbrella term that includes computer hardware and software; digital broadcast and telecommunications technologies as well as electronic information repositories such as the World Wide Web or those found on CD-ROMs" (Selwyn, 2004, p. 346). Furthermore, ICT is defined as the combination of equipment and tools with infrastructure and services in a required environment to create, store, process, and transmit information in all forms such as text, voice, pictures, and video (Asabere and Enguah, 2012). Put more simply, ICT is any technology-related aspect of using digital tools which evolves daily, (Zuppo, 2012) or all methods used for communicating and processing data (Voogt and Knezek, 2008).

In the field of education, ICT is defined as "technologies specific to the school environment like interactive whiteboards or applications used across formal or informal boundaries such as educational games, and networked technologies" (Livingstone, 2012, p.13). The term also refers to some tools such as computer applications, the Internet, videos, software and hardware, and other devices which are used for communicating, and sending and gathering information. Despite different definitions, ICT, as derived from the field of IT, uses Information Technology to deliver "messages" for communication reasons. In other words, ICT is, at its core, very similar to IT. Both refer to ways in which information, or data, is manipulated in a logical and meaningful way to deliver an outcome through audio, video, amination or still image for three distinctive communication purposes in education that include: instructional preparation, instructional delivery, and learning tools (Inan and Lowther, 2010). In ELT, tools which are used for these three distinctive purposes in language teaching including ELT, then, are categorised as Computer Assisted Language Learning (CALL), Mobile Assisted Language Learning (MALL), and Cloud Computing. Definitions and usages of CALL, MALL, and Cloud Computing will be explained in detail in the next section in this chapter.

In this particular research study, ICT refers to all forms of computer-based and internet-based tools used for English teaching and learning (Davies and Hewer, 2009). These ICT tools and their functionalities are summarised in the table below:

ICT Tools	**Types**	**Purposes**
PC/Laptop Computers	CALL	Instructional Preparation Instructional Delivery
Hardware/Software	CALL	Instructional Delivery Learning Tools
Tablet/Mobile Devices	MALL	Instructional Preparation Instructional Delivery Learning Tools
Television/Other Displays	CALL	Instructional Delivery
The Internet	Cloud-computing	Instructional Preparation Instructional Delivery Learning Tools

Table 2.1 ICT Tools and Their Usages

2.3 ICT's Best Practices in ELT and Their Benefits

The integration of ICT in ELT in Vietnam marks the transition from traditional textbook-based teaching to a newer, ICT-based approach along the lines of Communicative Language Teaching (CLT) as described in Section 1.3.3. Boosting CLT through the integration of ICT in Vietnam is crucial because research into current teaching methods has shown limited benefits; many students cannot apply English into practice after graduating from High School (Ha, 2010; Anh, 2018; Huynh, 2018). Researchers have found that ICT can play a truly beneficial role in education (Ibrahim, 2010; Apawu, 2011; Davies and Hewer, 2009) because it supports both teachers and students in teaching and learning (Ghavifekr and Rosdy, 2015). Specifically, ICT provides innovative, interactive, and flexible learning environments (Qin and Shuo, 2011) which improve learners' engagement (Rashid and Asghar, 2016). For instance, "ICTs such as videos, television and multimedia computer software that combine text, sound, and colourful, moving images can be used to provide challenging and authentic content that will engage the student in the learning process" (Yeboah-Fofie, 2015, p. 200). Similarly, ICT may trigger students' interest in learning, which then widens students' knowledge and depth of understanding, and improves interactions between students and teachers (Shyamlee and Phill, 2012). According to a study conducted by a teacher, technology provided him with a unique opportunity to change his approach to teaching:

> "In my experience, technology has broadened the spectrum of interactions while empowering the students' learning process by providing better opportunities for language usage. It provides possibilities for engagement otherwise not possible. Most importantly, the synchronous chat helped me shift the way I perceived my students. By expanding the opportunities for interaction, I observed their communicative potential moving from learners to communicators who actively conversed for meaningful purposes" (Cetto, 2010, p.121).

Cetto's experience shows ICT has the ability to support the implementation of CLT by providing opportunities for engagements that are "otherwise not possible" during the learning process. As a result, ICT has the potential to transform teaching and enable students to become active co-creators in their own learning process rather than passive learners (Pombo *et al.,* 2017).

Specifically, ICT tools like CALL, which will later be described in Section 2.4.1, allow students to take ownership of their learning and knowledge development (Ellis *et al.,* 2005), and work to produce authentic learning materials (Larsen-Freeman and Anderson, 2011). Benefits brought by ICT in both teaching and learning are summarised by Alkamel and Chouthaiwale as follows:

> "ICT provides positive vibrations on students' attitude towards learning a language. Students can have an excellent chance to pick out the elements through which they can meet their learning strategies, which were failed to satisfy by the conventional methods. The availability of sources like images, animations, audio and video clips is very simulating because they support the learners in presenting and practicing a language in a different way. Not only for the students but also the teachers depend more on these tools to produce, prepare, store and retrieve the materials of learning at ease. ICT provides authenticity by which the learner could interact with others all over the world" (2018, p.33).

Conventional methods, according to Alkamel and Chouthaiwale, do not benefit much from the integration of ICT into teaching. *Directive 55/2008/CT-BGDDT*, issued by MOET in 2008, appears to be grounded on a similar understanding that integrating ICT in ELT needs a new teaching strategy in order to engage active learners. *Directive 55/2008/CT-BGDDT*, in particular, advocates a student-centred approach through the use of ICT as a means of providing students with opportunities to pick the most suitable learning strategies for them and to access information that their teachers are not able to provide (Gilakjani, 2017). In other words, the integration of ICT in ELT proposed by MOET features a co-constructive (active/child-centred) approach to learning which emphasises the interaction between learners in peer-to-peer communication (Nuttall, 2003) as well as collaboration to co-construct knowledge between learners and teachers (Jacoby and Ochs, 1995).

Furthermore, the use of technology creates a largely paperless learning environment through which the modernisation and enhancement of educational processes may be delivered. Dynamic content, such as multimedia tools and hypertext, provide learners with rapid information and appropriate materials (İlter, 2015; Shishkovskaya, Sokolova, and Chernaya, 2015) to enhance learning experiences. For example, multimedia tools like audio-enhanced texts and videos can improve pronunciation skills as students can learn from native speakers whilst hypertext allows access to rich banks of resources and information (Zare-Ee and Shekarey, 2010). Digital content can be stored on websites to

support distance learning which gives learners and teachers more opportunities for personalised learning (Zare-Ee and Shekarey, 2010). These resources support and encourage a student-centred approach that fits with a CLT approach to teaching English. Bransford, Brown, and Cocking (2000, as cited in Zare-Ee and Shekarey, 2010) argue that the use of technology enables teachers to fulfil five important pedagogical principles critical to a CLT approach. These are: bringing the real-world experience into the classroom, increasing opportunities to receive sophisticated and individualised feedback, building communities of interaction between teachers, students, parents and other interested groups, and increasing opportunities for teacher development.

This section has explored research into how a CLT approach to language learning may be suited to the integration of ICT in ELT. It has also highlighted the pedagogical principles required to promote and adopt a CLT approach effectively through the use of ICT. The following two sections will consider how the use of ICT can enhance a CLT approach and what factors linked to the use of ICT might adversely affect the adoption of a CLT approach.

2.4 The Use of ICT in ELT in Classrooms

The use of ICT in ELT to achieve CLT has grown exponentially, including the widespread use of technology in Secondary schools as Stanley (2013) reports. This section will map existing research regarding ICT tools and then go on to explore how ICT tools have brought about the development of new pedagogical approaches. Lastly, this section will focus on the emergence of ICT tools and new pedagogies in ELT.

Research shows that teachers are accessing free online tools and joining networks and online communities to enhance their practice and technical skills in the classroom (Stanley, 2013). The communities are referred to as personal learning networks (PLNs) (Couros, 2008; Stanley, 2013). These PLNs allow teachers to pool information and explore new ways of capitalising on the opportunities social networking on Web 2.0 platforms offers within the language classroom. Blogs, wikis, podcasting and e-portfolios have been shown to lend themselves well to ELT (Jimoyiannis, 2013; Burns and Kurtoglu-Hooton, 2016) and to be highly valuable in the language classroom because they enable the easy creation of content

and communication opportunities. Stanley (2013) demonstrates that the use of blogs, wiki pages and podcasts is highly valuable for secondary school teachers to draw on when preparing lessons and for students to interact with their peers and with the teachers to practice different English skills

Alongside the use of social networking tools supported by Web 2.0, Stanley (2013) notes that more traditional ICT tools play a continued role in the ELT classroom. For instance, Jewell reported that applications such as PowerPoint are valuable to students in secondary schools because they enable them to improve their "language skills through research and by sharing their findings in oral presentations' which also 'provide real-world contexts and technological skills and enable students to develop confidence in their language abilities" (2006 p.176). Motteram (2013) further develops ideas around the traditional use of ICT in relation to the word processor. He argues that writing using the word processor has changed the very way that writing happens as well as the nature of the work that is produced as it can be stored, edited and revisited. Motteram proposes that this facilitates the development of significant language skills and profoundly changes the nature of language teaching.

2.4.1 ICT Tools Used in ELT

CALL programs (Computer-Assisted Language Learning) (Levy 1997) are no different from traditional computer software; however, they are developed with a specific target: language teaching. CALL applications may benefit language learners by increasing interaction and communication (Roschelle et al., 2000; Kim, 2008; Iacob, 2009; Jafarian and Kafipour, 2012; Al-Awidi and Ismail, 2014), providing immediate feedback (Adams, 2005), improving learner autonomy (Voogt and McKenney, 2008), and controlling access to information (Hockly and Dudeney, 2018). CALL can simulate real-life situations (Cox and Marshall, 2007) which may boost students' motivation to learn by encouraging positive attitudes towards learning, and lowering stress levels. There are three phases of CALL: behavioural, communicative, and interactive (Warschauer and Healey,1998; Motteram, 2013) that offer learners "the exposure" to the culture of the target language (Kovács, 2017) which makes it useful for supporting communicative teaching (Barani, 2014). As a result,

ELT learners are able to learn the language alongside learning about the cultures of people who speak that language.

Students who use CALL might also benefit from an increased sense of autonomy because they are able to access large sources of genuine materials and information available for practicing such as pictures, audio and video clips, and animations (Jayanthi and Koumar, 2016). For instance, students may be able to select videos and articles that are of interest to them instead of relying on what the teacher provides. The variety of options and solutions embedded in these education-oriented computer applications encourages non-English speakers to be more proactive in their learning, which, it has been suggested, will in turn improve their language competence (Akpabio and Ogiriki, 2017). As a result, English teachers can use CALL to engage and stimulate students and to support them in taking responsibility for their own learning.

CALL applications can benefit both learners and teachers in the contemporary classroom; as Gee and Hayes' (2011) research shows "multimodality is more pervasive, diverse, and important today than ever before" (Gee and Hayes, 2011, p. 5). Motteram (2013) highlights the fact that meaningful collaboration in real-world simulated exercises enables learners to improve their second language competence with practical experiences which enhances their reading and listening skills. According to Bransford, Brown, and Cocking (2000), technology can simulate real-world experiences within the classroom, individualise activities, facilitate interactions between teachers, students, and their parents, and, lastly, enhance teaching development. The growth of smartphones and other technological devices has created other branches of CALL, known as MALL (Mobile-Assisted Language Learning), TELL (Technology-Enhanced Language Learning) and RALL (Robot-Assisted Language Learning).

Kukulska-Hulme (2013, p. 3701) defines MALL as the use of "mobile technologies in language learning, especially in situations where device portability offers specific advantages". Even though there are definitions in which CALL and MALL are two independent entities, MALL, in fact, is the cloud-based version or the mobile version of CALL. MALL, therefore, can be supported by any mobile devices such as smartphones, tablets, e-book readers, MP3/MPEG4 players (Stockwell and Hubbard, 2013) and, recently,

virtual reality glasses. Alongside MALL, the increasing reliability of Internet connectivity has provided an efficient way for language acquisition, known as TELL (Technology-Enhanced Language Learning) which arguably helps learners improve their English communication through the use of different social platforms (Kranthi, 2017).

On the other hand, RALL (Robot-Assisted Language Learning) has the ability to promote the attention, motivation, and confidence of students by drawing on advances in the field of artificial intelligence to improve their learning ability in a slightly different way (Hong et al., 2016; Motteram, 2017; Tafazoli and Gómez Parra, 2017). For instance, the autonomous function embedded in voice recognition software can act as a native speaker that is able to interact with language learners (Han, 2012). This opens up opportunities for students in remote locations to practice their spoken language with a 'native speaker' who is readily available at a minimum cost. Other functionalities powered by RALL are screen readers and image recognition via cameras. These robot-assisted functions have also been adapted into teaching with positive results (Lee et al., 2011). For example, screen readers have been used to translate Braille texts into standardised texts to display on screen supporting teachers who are visually impaired to teach mainstream classes. Another even more contemporary development is the use of virtual reality. Ribeiro (2016) reports that virtual reality has been used in learning. For instance, the use of Google Cardboard to tour around the world has been adopted by EFL teachers. The use of virtual reality, furthermore, is expected to be used widely as "although these technologies are currently rather primitive, they are developing at a pace which suggests they will become useful and usable soon" (Hockly and Dudeney, 2018, p. 173).

CALL, MALL, TELL and RALL do not only offer a collection of modern tools for teachers, but they also pave the foundation for other ICT-based teaching pedagogies as described below.

2.4.2 Pedagogical Approaches

Education-dedicated computer applications that draw on the interactive features found in Web 2.0 have prompted an evolution in teaching pedagogies. However, new

pedagogical approaches inevitably bring with them advantages and disadvantages unique to each approach and these are explored below.

2.4.2.1 Blended Learning

Blended learning, also known as Hybrid Learning, Technology-Mediated Instruction, or Mix-Mode Instruction, is an approach to the use computer application to aid learning (Martyn, 2013). This approach combines online and offline learning. Students spend time in computer labs learning independently via adaptive learning software which could be either PC-based, online-based, or a combination of both (Friesen, 2012) and time in the classroom being taught by the teacher. Most teachers do not teach in computer labs; instead, schools hire non-experts who are high school graduates, known as "paraprofessionals", to instruct and manage lab activities as a way to reduce costs while teachers focus on more important skills (Hockly and Dudeney, 2018). Blended learning, or the hybrid-mode, can reap the benefits of both online and offline classrooms. Osguthorpe and Graham (2013) note:

> "Those who use blended approaches base their pedagogy on the assumption that there are inherent benefits in face-to-face interaction (both among learners and between learner and instructor) as well as the understanding that there are some inherent advantages to using online methods in their teaching. Thus the aim of those using Blended Learning approaches is to find a harmonious balance between online access to knowledge and face-to-face human interaction" (p. 228).

Aborisade (2013) suggests that blended learning is well-suited to overcrowded classrooms because teachers no longer need to spend time on explaining basic concepts; instead, the focus is shifted onto practicing and more advanced topics. The use of paraprofessionals, moreover, allows institutions to reduce payroll costs as well as tuition costs which has led to the dramatic growth of Blended Learning despite the initial investment required to upgrade software and hardware in order for the hybrid mode to be adopted (Horn and Staker, 2012).

Lafer (2014) reports that Blended Learning can help students in achieving high scores in the short-term, but that overall achievement can significantly drop. Cultural considerations must also be taken into account when considering the effectiveness of Blended Learning because it has been shown that some students are unable to engage successfully due to being

scared of making mistakes when writing on public forums (Zhu et al., 2009). Despite the fact that the overall results are mixed, Blended Learning is likely to expand in the future (Hockly and Dudeney, 2018).

2.4.2.2 Mobile Learning

Mobile Learning has developed alongside Blended Learning as an approach that places mobile technologies at its core. Lehner and Nosekabel (2002) define Mobile Learning as the use of any digital tool for the acquisition of knowledge from any location at any time. Digital tools range from basic devices like MP3 players or sophisticated laptops loaded with education-dedicated software as well as smartphones (Hockly and Dudeney, 2017). Hockly and Dudeney (2018) attribute the growth of Mobile Learning to mobile devices that, more than any other ICT tools, are available in the hands of learners around the world. Smartphones have become less expensive while data connection has become more affordable. Performance is yet another feature for which mobile devices have become the preferred choice because most smartphones can be used as a computer. Their mobility provides a significant advantage especially for outdoor use where other devices may become vulnerable (Tayebinik and Puteh, 2012). According to Kuimova, Burleigh, Uzunboylu, and Bazhenov (2018),

> "Mobile phones are not just for fun, communication and entertainment purposes; they can also be used as a tool for learning. They especially complement creative activities in foreign language classes. In general, students have a positive attitude towards mobile learning and they favour participation in conversations with their peers and teachers for academic purposes. In addition, students noted that they liked interaction and collaboration in performing the tasks, exchange of opinions, and practice in English while doing tasks on WhatsApp" (p. 839).

The popularity and feature-rich design of smartphones have yielded many advantages in English teaching and learning including the use of specific apps to improve speaking skills alongside the ability to practice international tests like IELTS and TOEF (Muhammed, 2014). In addition,

> "Mobile phones applications have the potential of providing learners with a supplementary source that could enhance their language and knowledge as well as

their skills for the sake of improving students' achievement and success" (Ababneh, 2017, p.128).

Mobile games also offer equivalent benefits as learning apps but in an interactive yet exciting way. Kuimova et al., (2018) suggest that mobile games should be integrated in the teaching of vocabulary, pronunciation, grammar, listening comprehension, reading comprehension and spelling.

Benefits brought by mobile devices do not only offer promising opportunities but they have also been confirmed in several studies undertaken by scholars. Hayes (2010) points out that video files are highly practical in the teaching of speaking as learners can watch different tongue positions to deliver the correct sound. As a result, Hayes (2010) suggests teachers should have video files readily available on smartphones for teaching. Al-Jarf (2012) shows that MP3 devices are helpful for the teaching of listening and speaking not only in the traditional classroom but also for self-learners in increasing the chance of language learning outside the classroom. Furthermore, research conducted by Cruz (2012) states that mobile devices have provided unique ways for learners to practice in any place at any time, while Muhammed (2014) shows that most students prefer to use smartphones as the primary tool among a wide range of different devices. As educational apps and websites are on the rise, mobile devices have become the alternative source for learners to bypass the limitation of English teaching at school such as course designs, teaching methods, and restrictions set by policies which teachers may have encountered (Alshareef, 2018).

Finally, institutions worldwide may take the advantage of mobile devices to cut investments for hardware through the adoption of Bring Your Own Device (BYOD) initiatives. Meaning that schools can invest in other activities without the need to raise money to purchase hardware (Hockly and Dudeney, 2018). However, Hockly and Dudeney (2018) believe that additional training for teachers should take place and mobile-friendly policies should also be initiated in order to bring the benefits of mobile technology into classrooms.

2.4.3 ICT Used in Teaching Skills

The previous sections have explored issues relating to CALL and MALL as well as how they can be used to develop newer teaching pedagogies. These pedagogies, in turn, have

been used in ELT for the development of different skills, including listening, speaking, reading, and writing. Walker (2014), for example, argues that listening is the most difficult skill to teach. The effectiveness of teaching listening skills is a great concern amongst most language teachers and the teaching of it is only considered successful once students can listen and understand in real-world situations (Hwang, 2005). Hence, teachers need to provide authentic situations for students to practice listening in (Berardo, 2006). In two independent research studies, Kim (2015) and Sherman (2003) both suggest that videos can enhance the learning process. Existing ESL-dedicated videos can be found on the web in places such as the *BBC World Service Learning English* (Amir and Kang, 2018). Heffernan (2005) suggests that videos offer an engaging stimulus and attract students' attention to listening activities more than listening to audiotapes or CDs. The ability to integrate in real-world situations, then, opens an opportunity for the development of pragmatic competency (Halenko and Flores-Salgado, 2020). A study conducted by Kinginger (2013) also reveals that pragmatic development is highly beneficial for non-English speakers.

Teaching speaking skills using ICT often requires the language lab which is "a classroom or other area containing electronic and mechanical equipment designed and arranged to make foreign-language learning more effective than is usually possible without it" (Hayes, 1963, p.1). Equipment required in a language lab is helpful for students to practice individually, in pairs, or in groups (Harmer, 2008). However, there may not be a language lab in every school due to the expensive costs required for development and maintenance. As a result, Mayaratri (2015) suggests the use of existing tools which are freely and readily available as alternatives to practice both inside and outside classrooms. Among these free tools, Skype is a potential candidate, especially for independent social interaction (Correa, 2015) while Chhabra (2012) suggests watching and discussing YouTube videos supports students listening and speaking skills. Practicing listening skills through watching videos also has additional benefits as learners learn not only lip shape, facial expressions, and gestures, but also the sociological and cultural aspects of the language (Benmoussat and Zekkal, 2016). In one research study, Gromik (2012) proposes the use of short video clips created by students using their smartphones because this approach can aid creativity through practice as well as providing real and authentic settings.

The teaching of reading is perhaps one of the most overlooked topic in ELT research. When it comes to using ICT tools, electronic dictionaries have become a preferred choice not only by teachers but also students (Issa and Jamil, 2012). It has been shown that students are enthusiastic about how electronic dictionaries help reduce the time spent decoding a text to complete a reading comprehension test (Koyama and Takeuchi, 2007). However, little research has been done that explores how teachers support language learners in comprehending the texts theyr read (Hu, 2007). This might be because, as Liu (2008) argues, teachers often teach reading without a focus on understanding the text. On the other hand, Abraham (2008) suggests that reading authentic texts on the Internet is beneficial in developing learners' language literacy skills and intercultural understanding because authentic texts are "written by members of a language and culture group for members of the same language and culture group" (Galloway, 1998, p. 133, as cited in Glisan, 2015). Chhabra's (2012) research demonstrates that interactive whiteboards make accessible the diversity of authentic texts available on the Internet alongside multimodal content and interactivity. It might be that they are best to capitalise on the enthusiasm for electronic dictionaries and combine this with a real appreciation of how authentic promote comprehension by developing the students' literacy skills alongside their cultural sensitivity.

Motteram (2017) highlights the role of the word processor in relation to the teaching of writing as outlined in Section 2.4.1.1 above; the word processor can support potential difficulties second language learners may encounter in using correct grammar and vocabulary (Hinkel, 2003). In particular, the word processor's "central function [is] to facilitate the flexible manipulation of text [which] enables drafting and redrafting to occur easily, and the eventual product may be presented to a professional standard" (Levy, 2009, p. 772). The track changes function of the word processor is an effective way of providing immediate feedback to learners (Levy, 2009). On a similar note, Murray (2008), states that using the track changes function to provide peer feedback could improve students' writing ability. In addition, blogging could a useful platform to practice writing skills. According to Lenhart *et al*. (2008), students who have personal blogs appear to be more proficient writers in school. Similarly, "one of the popular tools commonly adapted in the teaching of writing skills is the use of blogs" (Yunus *et al*., 2013, p. 2). Podcasts, moreover, provide another platform for improving writing skills; even though podcasts are more listening-oriented, in-depth analyses and critical reviews offer the opportunity for creative thinking which, in turn,

boosts students' writing confidence (Vandenberg, 2018). Studies also suggest that writing skills can be improved by the use of apps (such as Airstory to organise ideas and Hemmingway to create short, simple yet concise sentences) (Moore, 2015; McNulty, 2019).

Stanley (2013) has summarised the use of ICT via CALL along with other branches like MALL, TELL and RALL as follows:

> "CALL helps secondary learners with listening and writing with some suggestion that speaking can also be improved. However, the research on whether CALL improves reading, and on the acquisition of grammar and vocabulary were inconclusive" (p. 54 - 55).

It is, therefore, up to the teachers to find creative ways of supporting learners throughout the quest of language learning (Shulman, 1986). However, it is important to recognise the involvement of the Internet and mobile technologies that have changed the role of teachers as Hockley and Dudeney (2018) note,

> "In our profession, the teacher is no longer the single source of (English-language) knowledge. It is becoming increasingly easy for learners to bypass traditional bricks and mortar language schools and courses; in this scenario, the role of the teacher becomes that of guide, facilitator and consultant to help students effectively navigate the wealth of online resources and education technology software and apps in order to reach his or her language goals" (p. 175)

The effect of ICT on teaching, as described above, is obvious; however, there are affecting factors which may influence the adoption of ICT in ELT in the first place. Such affecting factors will be examined in the next section.

2.5 Factors Affecting the Use of ICT in ELT

The teaching of English language around the world has been associated with traditional teaching methods such as the Grammar-Translation Method, Audio-Lingual Method, and Direct Method. However, studying formal English through these traditional teaching methods cannot help students communicate effectively in authentic situations (Ibrahim, 2010). The reason being that these methods focus on a teacher-centred approaches

which require students to memorise material and neglect the authentic use of the language for communication. In contrast, teaching English with the help of ICT has the possibility of creating more opportunities for students to communicate in English in and out of the classroom (Ibrahim, 2010). The integration of ICT in ELT has the potential of prompting a change in teaching approach from one that is teacher-centred to one that focuses on interaction and collaboration between teachers and students. This is because using ICT enables teachers to more easily bring real-world experiences into the classroom, provide sophisticated and individualised feedback, and build communities of learning (Bransford, Brown, and Cocking, 2000, as cited in Zare-Ee and Shekarey, 2010).

However, the use of ICT in ELT is not as straightforward as it may seem because it requires human resources, budgets, equipment, training, maintenance, technical support, and so on. A number of studies that have looked at the integration of ICT in ELT have indicated various issues with the implementation of ICT into classrooms. Some focus on internal factors like the teachers themselves, and their ages, (Li and Walsh, 2011) even though ageing issues may not always be obvious (Mahdi and Al-Dera, 2013; Muslem, Yusuf, and Juliana, 2018). However, according to a research study conducted by Mahdi and Al-Dera (2013), the ageing issue alone does not make any significant difference in the integration of ICT in teaching. Another research study indicates that older adults, in general, have positive attitudes toward computer use (González, Ramirez, and Viadel, 2015).

Bordbar (2010) found that the successful implementation of ICT in teaching can be predicted by gauging the teachers' competence in using ICT. His results are reflected in those of other researchers (Bingimlas, 2009; Pelgrum, 2001; Stone and Henry, 2003; Sipilä, 2014) who also found that competency is one of the major factors which helps to develop teachers' confidence. A report conducted by the British Council (2015) also suggests that teachers need to develop their ICT skills and digital literacy because "keeping up with the pace of this evolution can be difficult for teachers who lack basic digital literacy or Information and Communications Technology (ICT) skills" (British Council, 2015. p.4). In another report, Burns and Kurtoglu-Hooton (2016) show that "they [teachers] were able to learn more about the technology tools they were using in a deeper and more systematic way" (p. 19). Taimalu and Luik (2019) believe that ICT knowledge contributes directly to the successful integration

of ICT in ELT, whilst teaching methods contribute an overall result to the whole integration process. ICT knowledge helps develop confidence for which,

> "Some teachers also referred to the way their own motivation for the project had increased their ability to motivate their students, while others reported they were more confident in trying out new approaches in their classrooms" (Burns and Kurtoglu-Hooton, 2016, p. 19).

Teachers' resistance to technological change (Lawrence and Tar, 2018; Chou e*t al.,* 2019) and negative attitude (Basak and Govender, 2015) have also been found to have a direct effect on the successful integration of ICT. Hockly and Dudeney (2018) further explain:

> "Attitude may affect the use of technology in learning. Even when teachers have access to digital technologies and infrastructure, not all teachers are willing to use those technologies to support their classes, and this resistance can create another division" (p. 166).

It has been argued that successfully implementing ICT within the curriculum requires teachers to be forward thinking and have a positive attitude towards technology (Shin, 2015) because "if teachers' attitudes are positive toward the use of educational technology, then they can easily provide useful insight about the adoption and integration of ICT into teaching and learning processes" (Yeboah-Fofie, 2015, p.200). By the same token, Cohen (1987) highlights teachers' perspectives on the curriculum and pedagogical practices as crucial factors that determine how technology is used. However, there is evidence which shows that having positive attitudes alone may not be sufficient. According to Burns and Kurtoglu-Hooton (2016),

> "One aspect was a lack of interest from other colleagues or, as one teacher put it, the feeling of 'swimming against a tide of teachers' negativity towards learning technology" (p. 20).

On the positive side, existing studies have also indicated the importance of Continuing Professional Development (CPD) for the teacher community. CPD, specifically,

"is very personal..." and is 'an excellent barometer of the level of passion' a teacher has for their chosen career (Perkins, 2002, p. 97). This peer-to-peer network of teachers is armed with mobile phones and social media platforms for which teachers can learn and share experiences with one another in which it appears that teachers are positive about CPD and the benefits of this peer-to-peer network have been brought into classrooms (British Council, 2015). Furthermore, CPD can be improved if it offers the right kind of support; the British Council suggests that:

> "Whole system support is needed from the government level down to ensure that quality professional development opportunities are prioritised, through digital or other means" (2015, p. 39).

On the other hand, external factors have also been identified in many previous studies as having a direct effect on the successful integration of ICT. The support of leadership (Li and Walsh, 2011) and policies related to ICT use (Groves and Zemel, 2000) have been found to be critical. Leadership attitudes towards ICT can directly influence teachers' adoption of ICT in teaching (Lawrence and Tar, 2018; Shin, 2015). It has been proposed that leadership determines how ICT is adopted and used by the whole school community (Arokiasamy, Abdullah, and Ismail, 2015). The role of leadership, in relation to permission, concerning the use of ICT is reported as "many of the teachers in our study reported that there are often problems with maintenance or permission to use computer labs, for example" (British Council, 2015, p. 39). After all, "without the leadership support, the educational potential of information and communication technology may not be realised" (Schiller, 2003, p. 171). Wikan and Molster (2011) argue that the role of teachers in the ICT integration process is negligible because successful integration rests upon the role of leadership within the school community. For example, supportive leadership makes the introduction of ICT much smoother and easier (Tubin, 2007) because essential preparations are given time and funding to ensure that ICT can be integrated as effectively as possible. Supportive leadership may provide teachers with the latest ICT tools alongside technical support and training as training to use computers to support learning plays a major role in determining whether or not technology has a major impact on achievement" (Samuel and Zitun, 2007, p. 10). However, the role of leadership tends to be overlooked in most research studies despite school leaders being directly involved in promoting and enacting this process of change (Schiller, 2003).

Infrastructure is also recognised as among the most important external factors which have a direct impact on the use of ICT in education. As described earlier, MALL and TELL are two effective technologies in ELT; however, these technologies may be useless if the Internet is not available or if it is unreliable. According to Ghavifekr and Rosdy (2015, p.176), "lack of adequate ICT equipment and Internet access is one of the key problems that schools specifically in rural areas are facing now". For this reason, Internet connectivity is a major obstacle to integrating ICT in teaching and learning (Mereku *et al.*, 2009). On top of this, the availability of technical support (Basak and Govender, 2015) plays a crucial role in the successful integration of ICT because without receiving proper technical support, teachers may become frustrated and unwilling to use ICT (Tong and Trinidad, 2005). Findings by Mirzajani *et al.* (2016) indicate that teachers are discouraged from using ICT in teaching if technical support is unavailable. Lastly, training is the last determinant (Chen, 2010) which secures a successful integration (Buabeng-Andoh, 2019) because professional training programs can build a strong foundation in ICT competence that gives teachers the confidence to enhance students' learning (Ghavifekr and Rosdy, 2015). Al-Mulhim (2013) found that a lack of training results in a reluctance to use ICT in teaching. This lack of training often leads to a lack of confidence and competence as teachers do not know how to use ICT to improve and support their students in learning (Wikan and Molster, 2011; Aslan and Zhu, 2018).

Studies conducted on the use of ICT in education in Vietnam tend to focus on external factors such as the infrastructure or the availability of technological devices (Dinh, 2009; Dang, 2011; Peeraer and Van Petegem, 2011). It seems that these are the main barriers to the adoption of ICT in teaching due to the lack of budget available. A similar research study in Ghana, which is also a developing country, confirms the equivalent result in which the high price of computers and lack of infrastructure for ICT integration are the fundamental problems in Ghanaian secondary schools (Malcolm and Godwyl, 2008).

However, providing enough equipment does not mean ICT is used effectively in the classroom (Mulkeen, 2003). For example, computers are available and fully equipped in most schools in the Netherlands, but they tend to be used for administrative tasks rather than for teaching and learning (Drent and Meelissen, 2008). This shows that having sufficient equipment alongside a solid infrastructure may not necessarily lead to the effective

integration of ICT in teaching and learning because human-related factors are also critical. Many studies show that teachers play a significant role in the effectiveness of ICT use in teaching and learning (Voogt, 2004; Law, 2008). Besides the human-factor, the national and regional policies aimed at integrating ICT into teaching and learning play an important role in developing the effectiveness of ICT use. Peeraer and Van Petegem (2011) argue that proactive policies at a national level encourage educational institutions and greatly improve the use of ICT.

There are both internal and external factors affecting the use of ICT in teaching. Known as the digital divide, there are issues relating to socio-economic status, gender, area contexts, level of education, and the way digital media are used indoors, as well as buying power and access to hardware (Warschauer and Matuchniak, 2010). According to Thorne and Black (2007), the issue of the digital divide, in turn, influences the whole process of ICT normalisation and this can be played out in schools and colleges and is another factor that teachers must grapple with.

2.6 Summary

This chapter has explored existing literature which is related to the topic of this research study. At the beginning, publications are used to provide a general definition of ICT as well as a more specific understanding of ICT in the educational field to shed light on the best ICT practices in ELT to promote CLT. Moreover, the use of ICT in classroom in terms of ICT tools, pedagogical approaches and ICT in teaching skills were explored.

Research studies referred to in this chapter have explored how individual factors influence teachers' use of technology. However, these studies have not focused on the relationship between factors and how the combination of teacher-, learner-, and policy-related factors affect teachers' use of technology. In this research study I have addressed this gap in the research through the development of a new theoretical framework that enables me to bring together the separate factors identified within my data collection to create a model that can be shared with stakeholders and researchers. In the next chapter, the discussion will shift to explore how Educational Change Theory (ECT) and Diffusion of Innovation Theory (DoIT) can be brought together to form the theoretical framework that guides this research study.

Chapter 3

THEORETICAL FRAMEWORK

3.1 Introduction

A theoretical framework aids conceptual distinctions and organises ideas to support the development of theories (Abend, 2008). In empirical research, a theoretical framework is particularly useful because contexts can be organised in logical and methodological ways according to the theoretical framework that helps direct the process of data collection and analysis in order to meet the research goals. The theoretical framework in this particular research study is shaped by an ideological position that understands the integration of ICT in ELT to be necessary to improving ELT in Vietnam and supporting a CLT approach as described in Section 2.4 of the previous chapter. The Theory of Educational Change (Fullan, 2015) and the Diffusion of Innovation Theory (Rogers, 2003) are adopted as the theoretical framework in this research study and the rationale for this choice is set out below.

Educational Change Theory (ECT), as its name suggests, may be used to investigate the process of educational change in Vietnam, as proposed by *Project 2020* issued by MOET in 2008. According to Shen (2008), the need for change in educational institutions may be driven by technology, politics, or culture. *Project 2020*, in particular, is not only an educational change that aims to integrate technology into teaching throughout public schools by the year 2020, but it is also driven by other projects like *the National Strategy for Information and Technology for Vietnam* (Quach, 2004) and *the Law on Information Technology Application* (Dinh, 2015) that aim to use ICT to boost economic growth and strengthen international relations. For this reason, ECT is an appropriate theory to use as a framework to explore the process of educational change from a traditional teaching method to a new method in which ICT use is key. An educational change requires the development of new policies to guide the process of change, including subsidiary policies, technologies, and new pedagogies for teachers. Therefore, Diffusion of Innovation Theory (DoIT) is useful in exploring the impact such changes have on the classroom environment.

This chapter sets out a description of the two theoretical frameworks used in this research before comparing and contrasting them as a means of considering whether they could work together. Then the discussion moves onto exploring how ECT and DoIT may be

applied to the integration of ICT into classrooms to distinguish critical factors which guide the data analysis. ECT and DoIT, as a result, are the backbones of this research and they shape the methodology, data analysis and discussion.

3.2 Rationale for Theoretical Framework

The rationale for adopting ECT and DoIT as the theoretical framework for this research study is set out below in relation to two other potential frameworks.

First, *Technological Pedagogical Content Knowledge*, also known as TPACK, introduced by Koehler and Mishra (2006) can help examine, as its name suggests, the relationship between technology, pedagogy, and content knowledge (Wetzel and Marshall, 2011). It describes the required knowledge for effective technology-based teaching (Archambault and Crippen, 2009). To a certain extent, TPACK is relevant to this research study regarding the adoption of ICT into teaching. However, this framework cannot provide a complete picture as ECT does because TPACK does not investigate the readiness for technology to be adopted; instead, it focuses exclusively on the Technological Knowledge factor (Koehler and Mishra, 2006) and is unable to guide the process of data analysis concerning existing obstacles nor the influence of policies on the adoption of ICT in ELT. Most importantly, TPACK is a complex model to employ due to its overlapping boundaries between different knowledge groups (Archambault and Crippen, 2009). Other authors like Philips, Koehler, and Rosenberg (2016) argue that TPACK functions as a group of knowledge circles that allow researchers to analyse a situation rather than explore a process of change.

Secondly, the *Technology Acceptance Model* (TAM), developed by Fred Davis 1985 (Davis, 1989; Bagozzi, Davis and Warshaw, 1992), is yet another potential framework that could have been employed in this research study because it can be used to explore how users accept and use technology by examining two contributing factors: Perceived Usefulness (PU) and Perceived Ease-of-Use (PEOU). Perceived Usefulness is associated with the likelihood that the technology adopted can enhance job performance. The rate of adoption, however, is determined by Perceived Ease-of-Use in which the least amount of complexity is likely to result in take-up of the new technology. Davis (1989) also includes external variables to determine the perceived acceptance. For instance, age and gender may differentiate the

degree of technological adoption. In this way, TAM may have been useful for this research study because it provides well-defined lenses through which to explore ICT integration. IN addition, the identification of external variables might have helped explain how different attitudes could have led to different perspectives on the use of technology. However, TAM does have some fundamental drawbacks which have resulted in limited adoption (Legris *et al.*, 2003). One of the missing principles in TAM is the lack of consideration of what factors might contribute to the process of change (Legris, 2003). Instead, TAM focuses on how one particular individual uses a computer under the influence of PU and PEOU while overlooking other issues such as cost, infrastructural readiness, and support from higher authorities (Lunceford, 2009). Chuttur (2009) even questions whether TAM, by itself, is a theory, or whether it is simply a series of technological tasks for implementation in which any adopted technology is what Stewart (1986) coins a "task fit".

Neither TPACK nor TAM are sufficient as theoretical frameworks to guide the data analysis because TPACK's three dimensions are not directly relevant to my study while TAM, in my opinion, lacks an awareness of the complexity of change. Combined with other theories, TPACK and TAM could add another layer to strengthen the theoretical framework; however, they have been rejected from the theoretical framework because principles of ECT and DoIT can yield richer results as described in the following two subsections.

3.3 Educational Change Theory (ECT) (Fullan, 2015)

ECT is the most appropriate theory that may be applied to this research study because the research objectives explore the processes of educational change from a traditional teaching method to one in which ICT is integrated into ELT. This section introduces the theory of ECT by investigating what has been changed in the educational system in Vietnam, using the principles espoused by the model.

The *Decision 1400/QĐ-TTg* (MOET, 2008b) was a breakthrough in national policy because it dictated that the integration of technology into English teaching was no longer optional but mandatory. The policy aims to improve and increase the quality of foreign language teaching, including ELT, by intensifying the application of ICT into foreign language training. It has had the effect of changing how English is taught in Vietnam and associated pedagogy of foreign language teaching. This change in teaching methodology is

a major trend designed to move ELT in Vietnam towards a more communicative approach because traditional teaching has yielded no positive results (Le, 2018) because many students are unable to use English effectively within practical situations (Ha, 2010; Anh, 2018; Huynh, 2018).

According to Fullan (2015), one of the driving forces in educational environments is the need for continuous change. Fullan proposes that there are three stages to all processes of change. These are: (1) "initiation, mobilisation or adoption", (2) "implementation or initial use", and (3) "continuation, incorporation, routinisation or institutionalisation" (p. 54). At each stage, several factors affect the change process. The first stage is the *Initiation* or *Adoption* stage, which includes seven influential factors which are set out in Figure 3.1.

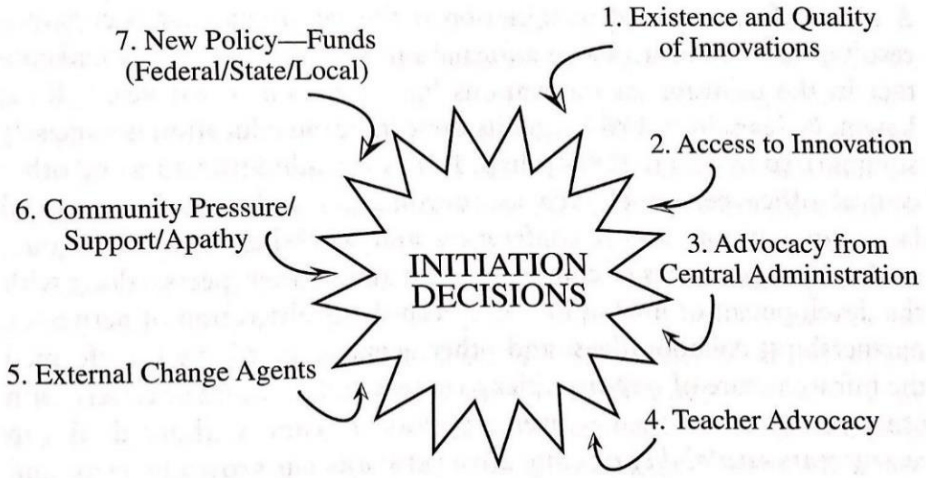

Figure 3.1 Factors Associated with Initiation (*Source: Fullan, 2015*)

Out of all these factors, *New Policy - Funds (Federal/State/Local)* holds a crucial role in many educational reforms in which "state and federal policymakers initiate many new social change programs that otherwise would never be formally adopted" (Fullan, 2015, p.65). Likewise, *the External Change Agents* factor is associated with external facilitators who are responsible for "stimulating and supporting change" (Fullan, 2015, p.63).

The formal adoption of ICT in ELT, then, leads to the examination of other factors as proposed from the first stage of ECT including *Existence and Quality of Innovations, Access to Innovation, Advocacy from Central Administration, Teacher Advocacy, and Community*

Pressure/Support/Apathy. The *Existence and Quality of Innovations*, according to Fullan (2015), is tied up with the local characteristics of the place in which the innovation is enacted. These local characteristics could be existing educational policies and teaching pedagogies as well as other factors such as: infrastructure, public funding, and the like. Next, *Access to Innovation* involves the process of gathering fundamental knowledge for innovations through workshops and conferences held by coordinators and consultants (Fullan, 2015). *Existence and Quality of Innovations* and *Access to Innovation* factors reflect how provincial policies can be generated because these policies are based upon local characteristics and knowledge about the innovation. Then, the first stage explores the role of leadership through *Advocacy from Central Administration* in which Fullan (2015) argues that the chief administrator within the district is one of the most powerful individuals who can determine the outcome. In contrast, teachers, or *Teacher Advocacy*, contribute less to the educational change; they do, however, innovate through several little pieces that teachers engage daily. Not only this, but "there is a strong body of evidence that indicates that teachers are often the preferred source of ideas for other teachers" (Fullan, 2015, p.62). Lastly, *Community Pressure/Support/Apathy*, according to Fullan (2015), reflects how the general public may respond to the change in three different ways, in which the community can either (1) show their concerns to directly pressure district administrators or indirectly via schools and teachers to make changes, (2) voice their support over certain adoptions as well as opposing some others, and (3) take no action (apathy). In my opinion, the way teachers have selected certain pedagogies whilst avoiding others is also a form of *community pressure* as teachers need to take action to respond to students. The last three factors, however, cannot be analysed without supporting data. Therefore, the data collection process as described in the next chapter must obtain information about provincial administrators, and teachers' perspectives of ICT use and how this affects and is affected by students and their parents.

Fullan (2015) also lists factors influencing the second stage, the *Implementation* stage. These factors are assembled into three main groups that are: *Characteristics of Change*, *Local Characteristics*, and *External Factors*. These groups include nine factors which are set out in Figure 3.2 as follows:

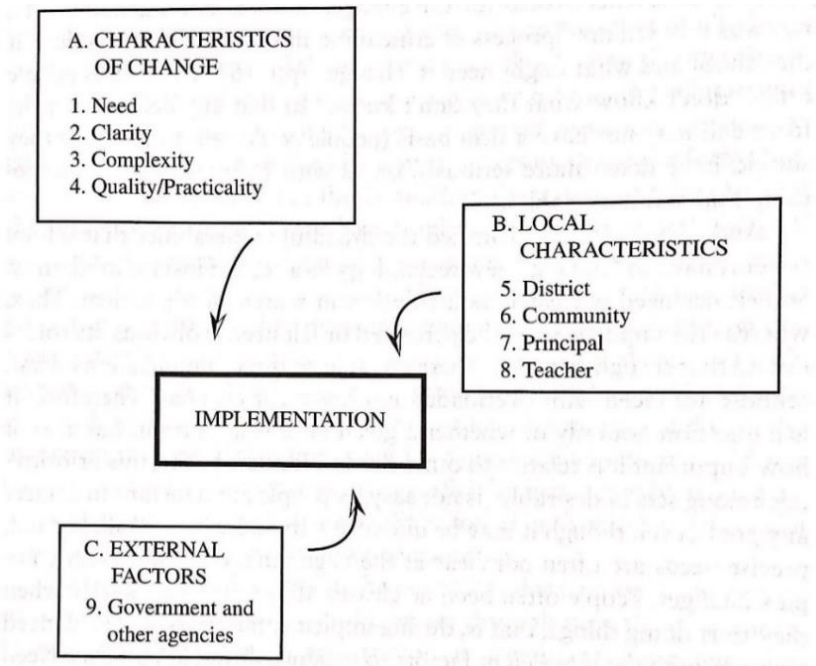

Figure 3.2 Interactive Factors Affecting Implementation (*Source: Fullan, 2015*)

Group A, according to Figure 3.2, is Characteristics of Changes which comprises four factors: *Need, Clarity, Complexity,* and *Quality/Practicality*. *Need* is the necessity for implementation in which the change can either be driven by external factors or carried out voluntarily. Fullan (2015) argues that many implementations have been attempted without careful consideration. In fact, many implementations have been adopted under bad intentions. Such a dilemma in education change, under Fullan's views, is explained as "educational change is technically simple and socially complex" (Fullan, 2015, p. 67). The next factor in *Characteristics of Change* involves the *Clarity* factor of an innovation, in which Fullan (2015) believes that means and purposes need to be clarified; otherwise, it may result in schools and teachers implementing changes that do not align with the original intention. Whilst *Clarity* is essential, it often leads to what Fullan (2015) coins as "false clarity" which "occurs when change is interpreted in an oversimplified way; that is, the proposed change has more to it than people perceive or realise" (Fullan, 2015, p. 70-71). The *Complexity* factor, furthermore, associates the difficulty of adopting new innovation with factors such as skills required, teaching strategies, and teaching materials. In other words, it is harder to implement an innovation if the *Complexity* factor is high. Lastly, the *Quality/Practicality* factor concerns the outcome of change in which it may require further

developments, including: new policies, curriculum, and even school restructuring. According to Fullan (2015), this factor is closely associated with the other three factors in the *Characteristics of Change*. Hence, these principles as stated in *Characteristics of Change*, provide an extremely useful guideline as the theoretical framework to direct the data collection, analysis and discussion as described in Chapter Four, Chapter Five, and Chapter Six respectively.

Group B, according to Figure 3.2, concerns *Local Characteristics,* which guide the analysis towards the social conditions of change in terms of *District, Community, Principal,* and *Teacher*. The *District* factor, according to Fullan (2015), is where decisions for implementation take place. In the event the adoption is made without thorough examination, the *Quality/Practicality* factor is affected, which, in turn, affects other factors in the *Characteristic of Change* such as *Need, Clarity*, and *Complexity*. The *Community* factor can influence both *District* and *Principal* factors in which *Community* often affects the *Principal* factor when adopting new policies whilst still influencing the *District* factor during implementation of the innovation. However, the role of *Community* is only obvious when there is a major change in demography (Fullan, 2015). The *Principal* factor then places the school level at the "centre of change" with the principal as the person in charge of planning, executing, and evaluating the implementation (Fullan, 2015). The principal also holds the role of providing support to teachers both through encouragement and through resources. As a result, the principal helps deliver the innovation of concepts into actions. Lastly, the *Teacher* factor contributes to the implementation, in which personalities and past experiences determine the level of advocacy towards the change. Fullan (2015) also acknowledges variations in the outcome depend on whether teachers work as separate individuals or exchange ideas and work as a team.

Group C, according to Figure 3.2, concerns *External Factors* with *Government and Other Agencies* as the sole factor in this group. Fullan (2015) explains this group as the driving force behind the innovation. In Vietnam, this group contains MOET and other ministries in the cabinet which may influence the implementation due to political reasons, government bureaucracies, and economic systems. The involvement of the central government establishes nationally sponsored projects. However, Fullan (2015) stresses that

conflicts may occur as federal officers and local authorities often do not collaborate well to create solutions.

According to Fullan (2015), factors in the third stage, or the *Continuation* stage, are the same as those as in the *Implementation* stage in which consideration depends on whether the change can provide opportunities for continuing development. In the third stage, *Characteristics of Change* need to improve factors associated with *Clarity* and *Quality/Practicality,* while issues arising from *Complexity* need to be reduced or eliminated. Likewise, *Local Characteristics* need to be strengthened in which the amendment of existing policies, developing new policies and regulations are the responsibility of the *District* and *Principal* factors. Besides, *Teachers* being skilful and committed to the use of ICT to enhance English teaching, the *Community* group which contains students and their parents also needs to be committed to the change. Lastly, *External Factors* may influence the *Continuation* stage on a larger scale.

Various studies have used ECT to scaffold and explain changes in education as well as observe the factors affecting each stage of the change process. Vo and Le (2014) discovered that external factors have a significant influence on teachers' uptake and integration of ICT in their classrooms, evidenced in their study of ICT integration in English language teaching in Vietnam. They concluded that certain factors are crucial to influence teachers use of ICT tools in their classrooms. These factors include: a friendly and innovative school culture, and the availability of ICT infrastructure and facilities. Some studies have looked at factors in the *Implementation* stage, such as school environment and policies for schools (Papanastasiou and Angeli, 2008; Tondeur, van Keer, van Braak, and Martin Valcke, 2008). These authors argue that school-related policies such as ICT plans, ICT support, and ICT training have a significant effect on the use of ICT in the classroom. Additionally, "people" factors, e.g. principals and teachers, play a key role in educational change (Demetriadis *et al.*, 2003: Hadjithoma-Garstka, 2011). Hatlevik (2017) argues that there is a positive relationship between teachers' self-efficacy, their digital competence, and their strategies to evaluate information, to the use of ICT at school. This point is supported by Vandeyar (2017), who claims that the teacher is an agent of meaningful educational change. However, successful implementation of technology in education depends not only on teachers' knowledge of technology but also on the social capital and informal social forces

in the school, such as parental support, permeation of technology in student learning, and teacher empowerment (Li, 2010).

In regard to the change in educational policies and practice in Vietnam, especially the change in the field of ELT, the first stage of ECT, the *Initiation* stage, has had a strong impact countrywide because new policies on educational change are at national level. *The Project "Foreign Language Learning and Teaching in the National Education System between 2008 and 2020",* signed by the Prime Minister of Vietnam, is an example. The decision to issue this directive has a direct effect on provincial policies being developed that support the change in teaching methodology. The influence of the central policy signed by the Prime Minister reflects what Fullan (2015) considers *External Change Agents*. The central policy then drives MOET to create Decision 1400/QD-TTg (MOET, 2008b) as *New Policy – Fund (Federal/Stage/Local)* which, in turn, is followed by the creation of provincial ICT policies, namely the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) and the *ICT Training Policy* (Ben Tre Educational Service, 2016a). The first stage of ECT, *Initiation Decision*, is helpful for this research study to investigate the role of administrators in drafting their provincial ICT policies. The first stage of ECT is also helpful in exploring how Principals, as head of the Board of Administrators at their school, prepare for the integration process. Several aspects of the first stage can be explored by examining the role of Principals. For instance, the differences in equipment purchasing strategies across different schools reflects how funding varies due to support from higher authorities, or *Advocacy from Central Administration*. Factors like *Teacher Advocacy* and *Community Pressure/Support/Apathy*, furthermore, can be analysed to acknowledge not only *Teacher Advocacy* but also about teachers' perspectives about policy, technology, and students regarding teaching with ICT.

The second stage of ECT, *Implementation*, needs to be explored at a provincial stage, and within schools because it is at these levels that local characteristics come into play. This stage of the change process is affected by the various sub-factors identified by Fullan as relating to *Local Characteristics*, namely: *District, Community, Principal,* and *Teacher* (Fullan, 2015; Hadjithoma-Garstka, 2011; Vo and Le, 2014; Hatlevik, 2017). The second stage concerns how educational policies are enacted in practice. Ordinances, administration, training, and funding reflect the role of the Educational Service. In other words, if policies issued by MOET are strategic, the Educational Service is responsible for devising appropriate tactics that take into

account local characteristics as key factors. For example, the Education Service in Ben Tre Province has issued different timetables for ICT integration amongst different schools within different regions in the province, due to the contrasting local characteristics, for example, due to transportation being by waterways in some rural areas, as described in Section 1.3.3, it may make it harder for teachers to receive proper ICT training. Exploring the *Implementation* stage at the school level also reveals to what extent the role of leadership is important during the integration process and whether the different ICT pedagogies used by teachers can determine if the use of ICT had an effect on teaching pedagogies. Fullan (2006, p. 3) once said, "having a 'theory in use' is not good enough, of itself. The people involved must also push to the next level, to make their theory of action explicit". The *Implementation* stage of ECT is where the investigation determines whether the process of ICT integration in teaching in Ben Tre Province makes "their theory of action" explicit. This outcome can be apprehended by looking into another aspect in the *Implementation* stage, known as *Characteristics of Change*, to explore the *Clarity, Complexity,* and *Quality/Practicality* of the educational change. Attributes of the *Implementation* stage, according to Fullan (2015), are identical to the next stage, known as *Continuation*. For this reason, the *Continuation* stage repeats the *Implementation* stage as the innovation evolves.

ECT alone is insufficient as a framework because it does not allow a thorough investigation of people's behaviours. Instead, "Diffusion of Innovation" Theory may be used to complement it because it provides a scaffold that enables me to analyse teachers' decision-making processes, alongside other factors that affect the integration of ICT in ELT. According to Moore and Benbasat (1991), "Diffusion of Innovation" Theory is also used as a tool to measure the users' perceptions of the first adoption of ICT by members of organisations, and the diffusion of technology within the organisation. The stages and characteristics of "Diffusion of Innovation" Theory, as well as how this theory relates to this research study will be explored in the next section.

3.4 Diffusion of Innovation Theory (DoIT) (Rogers, 2003)

"Diffusion of Innovation" is a theory that seeks to explain how and why new ideas and technologies have evolved. While the literature mainly mentions innovations in the field of industry and services, much attention is now being paid to public service and public

policy innovations, with significant stress on the diffusion of innovations in health care and educational environments (Nutley and Davies, 2000). Medlin (2001) also states that Rogers' DoIT is the most suitable theory to explore technology adoption in higher education and educational settings. According to Rogers (2003), the innovation-decision process is "the process through which an individual (or another decision-making unit) passes from gaining initial knowledge of an innovation, to forming an attitude towards the innovation, to making a decision to adopt or reject the innovation, to implementing the innovation, and finally to confirming this decision" (p. 168). For this reason, the present study uses DoIT as an integral part of the theoretical framework to investigate how the integration of ICT in Ben Tre Province has evolved.

The process of DoIT encompasses five phases, namely *Knowledge, Persuasion, Decision, Implementation,* and *Confirmation*. Each phase contains its own characteristics as illustrated in Figure 3.3 below:

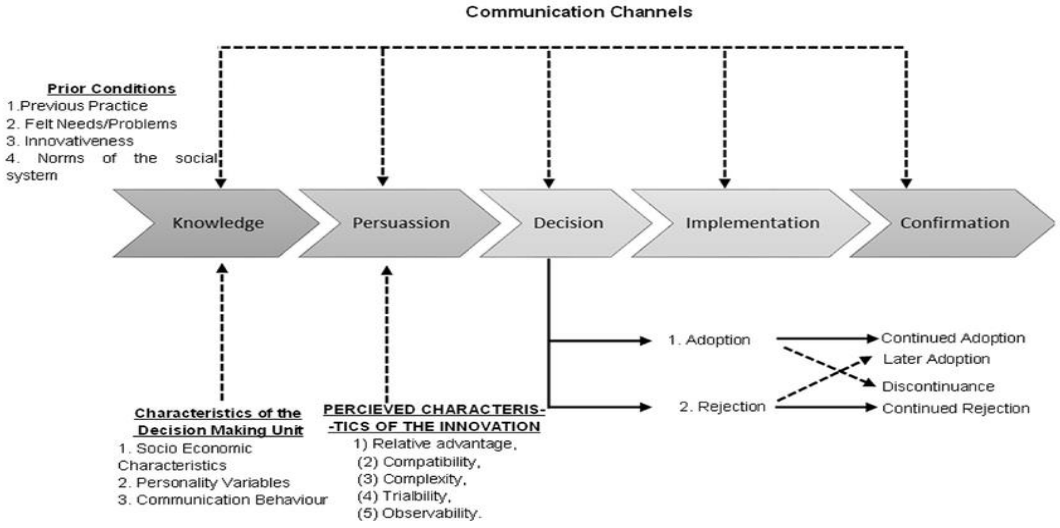

Figure 3.3 A Model of Five Stages in the Innovation-Decision Process (*Source: Rogers, 2003*)

Rogers (2003) argues that innovation cannot evolve rapidly even when it has proven advantages. Instead, innovation is an ongoing process that takes time to diffuse gradually. This theory is able to show how innovation itself can affect the diffusion process by identifying five attributes, known as perceived characteristics of the innovation, that affect the decision to adopt or reject the change during the *Persuasion* phase. The constant focus on communication channels highlights how important communication is to the process

because the perceived characteristics of the innovation are only persuasive if they are effectively communicated.

Phase 1 of DoIT is dubbed the *Knowledge* phase because it involves "an individual (or another decision-making unit) being exposed to an innovation's existence and gaining an understanding of how it functions" (Rogers, 2003, p.171). This first phase contains three aspects. The first, *Socio Economic Characteristics*, may be considered as the external factors that influence the degree of *Knowledge. Socio* involves social aspects such as the culture and education of individuals (or another decision-making unit). For example, individuals who live according to a traditional way of life may be more conservative than those who have adopted a modern lifestyle. *Economic* enables an evaluation of the extent to which individuals (or another decision-making unit) have the economic resources needed to enact the change. Understanding the *Economic* aspect is helpful in gaining a better understanding of the impact that the *District* and *Principal* elements, as identified by ECT in the previous section, might have.

The second attribute, *Personal Variables*, helps to explain different personal characteristics of individuals (or another decision-making unit) involved in the innovation. Such different personal characteristics may partially be influenced by the *Socio Economic* attribute, as described above, in terms of culture, education, and funds.

The third attribute, *Communication Behaviours* – is the way people access and exchange information. For instance, how teachers share knowledge and the way policy makers seek expert advice may be explored under *Communication Behaviours.* These contribute not only to the degree of *Knowledge* of DoIT, but also help to explain the *Clarity* or *Complexity* in the *Implementatio*n stage of ECT regarding existing policies. By examining Phase 1 of DoIT, it is possible to understand what, how, and why people have a certain degree of *Knowledge* on a given topic. Concerning this particular research study, *Knowledge* reflects the understanding of provincial administrators, boards of administrators at public schools, and teachers regarding ICT and the role of ICT in ELT. The degree of *Knowledge* of administrators and teachers, in addition, is helpful for anticipating aspects of the next phase, known as *Persuasion* (Rogers, 2003).

Phase 2 of DoIT, *Persuasion,* contains five attributes. According to Rogers, "persuasion occurs when an individual (or another decision-making unit) forms a favourable

or unfavourable attitude toward the innovation". In other words, the innovation will only be adopted if it is persuasively presented. For this reason, the five attributes in the *Persuasion* stage can be considered as key factors to be explored and analysed when seeking to explore the relationship between all the affecting factors that drive the process of change or innovation diffusion.

Firstly, *Relative Advantage* is "the degree to which an innovation is perceived as better than the idea it supersedes" (Rogers, 2003, p.15). Moreover "the greater the perceived relative advantage of an innovation, the more rapid its rate of adoption will be" (Rogers, 2003, p.15). This means that the rate of adoption increases if an innovation is seen to offer a higher relative advantage. *Relative Advantage* has been found to have the most significant effect on the adoption of an innovation (Flight *et al.*, 2011). For example, the national policy, known as *Decision 1400/QD-TTg* (MOET, 2008b), is a *Relative Advantage* in speeding up the adoption of ICT in ELT, as schools have no alternative option but to accept the innovation.

Secondly, *Compatibility* is "the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 2003, p.15). Innovations can also be compatible or incompatible with the current values, previous experiences, and the needs of individuals. Rogers (2003) states that individuals will adopt an innovation if it is compatible with their beliefs and customs. *Compatibility* is investigated in the areas of culture, policy, and technology. For example, the innovation is considered compatible if it does not conflict with the existing beliefs regarding what constitutes 'good' teaching. It is also deemed more suitable if the innovation does not create a complete overhaul in policy in order to adopt the change. Likewise, the adopted technology for the innovation needs to be compatible with not only what teachers are familiar with, but also with overall technological developments. For instance, it is incompatible to introduce an outdated Windows XP computer launched in 2000 to innovate ICT in 2020.

Thirdly, *Complexity* is "the degree to which an innovation is perceived as relatively difficult to understand and to use" (Rogers, 2003, p.16). Therefore, the complexity of an innovation acts as a barrier in its adoption. Moreover, *Complexity* is not positively correlated with the rate of adoption. This means *Complexity* and *Relative Advantage* tend to contradict each other. Complexity may also arise in the way that an innovation is carried out. For

example, the innovation may be considered complex if it requires many developments in facilities as well as training of skillsets to adopt such an innovation even if it is deemed useful. *Complexity* reflects the degree of *Compatibility* in which higher *Compatibility* will reduce the level of *Complexity*.

Fourthly, *Trialability*, is "the degree to which an innovation may be experimented with on a limited basis" (Rogers, 2003, p.16). The elements of this attribute are the ability of adopters to try an innovation on an instalment basis. This attribute is positively correlated with the rate of adoption. *Trialability*, is therefore the ability to obtain results from the trial-and-error mode. The gradual integration of ICT in ELT which will be described in detail later in Chapter Five is a good example of *Trialability* as schools have the opportunity to make necessary adjustments to reject what seems to be ineffective. Similarly, a pilot study, which is recommended in any scientific research, shares the same effects of trialability. A pilot study, in particular, is conducted in order to make necessary adjustments for the actual research. The outcomes obtained in any scientific research, then need to enter another trial phase, in which extended experiments are applied in a controllable and measurable environment. For example, pharmaceutical companies always test their newly developed drugs through a group of volunteers for further observation before releasing the drugs to consumers. By having a trial phase in this research study, the conclusion is easily accepted because outcomes are backed by trial results.

Fifthly, and finally, *Observability* is "the degree to which the results of an innovation are visible to others" (Rogers, 2003, p.16). The easier it is for adopters to see the outcome of an innovation, the more likely they are to adopt it. Therefore, this attribute is positively correlated with the rate of adoption. In the field of business, *Observability* is also known as benchmarking, in which proven successes are adopted by other companies. For example, *Observability* comes from numerous studies in which the traditional teaching methods cannot provide students with critical thinking, problem-solving, and decision making (Lin, 2018). Likewise, the scope of *Observability* concerning ICT in ELT is fulfilled if the collected data can indicate that ICT helps improve the students' learning ability. This will be described in more detail in Chapter Five.

Among the five attributes, *Relative Advantage* may boost the rate of adoption if it yields a positive result, whereas *Compatibility* helps to limit uncertainty if there is no conflict to the

adoption. *Complexity*, due to its nature, is perhaps the most significant factor as it functions as a barrier to the adoption. The higher the *Complexity*, the lower the *Relative Advantage*, which in turn, affects the rate of the adoption and vice versa. *Trialability* and *Observability* are indicators for relative advantage and compatibility because *Trialability* provides options to test the idea in a smaller, controllable scale whilst *Observability* highlights outcomes. Regarding this research study, the dictation of the national policy creates an upmost *Relative Advantage* because the innovation in integrating ICT in ELT is unavoidable. The persuasive factor, thus, is obvious. Not only this, but the fundamental knowledge of administrators and teachers also contributes to the *Relative Advantage* attribute. For example, the adoption rate would be higher if an individual (or another decision-making unit) can understand the best practice of ICT in ELT. Such fundamental knowledge, moreover, determines the outcomes of other persuasive attributes such as *Compatibility, Complexity, Trialability,* and *Observability,* for which the investigation of this research study needs to collect data through a methodology, which will be described in the next chapter.

Attributes of Phase 1 and Phase 2 influence the *Decision* proposed in Phase 3 of DoIT. *Decision*, for this reason, is based on how individuals (or another decision-making unit) are persuaded by attributes (as described in the *Persuasion,* or Phase 2). More specifically, persuasive attributes will lead to the adoption of an innovation whilst unconvincing attributes will lead to the rejection. Then, what is adopted under the influence of *Knowledge* and *Persuasion* is put into practice through the *Implementation* phase. However, Phase 3 of DoIT seems to lack specific scopes concerning what types of *Knowledge* or *Persuasions* should be required as key influencing factors for consideration during the decision-making stage. On the other hand, the *Initiation Decision* stage of ECT can provide more a more detailed picture. If applied to the first two phases of DoIT it helps set out favourable and unfavourable forms of *knowledge* and *Persuasion* regarding the seven factors at Stage 1 of ECT as found in Figure 3.1. Similarly, the remaining two phases of DoIT, namely; *Implementation* and *Confirmation*, are a repetition of Phase 3 in which the process solely involves a chain of adoption and rejection in which specific scopes for consideration are also missing. In contrast, stage 2 of ECT, known as *Implementation*, contributes very specific targets for examining the process of adoption and rejection. Principles of ECT, however, are unable to explain how individuals (or another decision-making unit) can be persuaded. In other words,

each theory possessed its own limitations, which makes it necessary to combine both theories to develop a theoretical framework for this research study.

3.5 The Coordination between DOI Theory and EC Theory Concerning ICT use in ELT

ECT and DoIT are closely related to each other because they both deal with matters of change and the processes of change. (Fullan, 2015; Rogers, 2003). In ECT the process begins with the *Initiation* stage; however, this is a very broad topic, which may prove confusing. On the other hand, DoIT begins with the *Knowledge* phase in order to gather intelligence about the research topic. *Persuasion* is the second phase, which validates the *Knowledge* phase. If these first two phases are completed, *Decision* would be the appropriate step to follow. DoIT, at this point, shifts from the *Decision* phase into the *Implementation* phase without considering other affecting factors during the decision-making process. Fortunately, the *Initiation* stage in the ECT is ready to fill the missing parts. Furthermore, the *Implementation* phase of DoIT simply reflects the adoption of what seems practical in Phase 3. On the contrary, the *Implementation* stage of ECT provides very clear objectives for translating ideas into practice.

Based on the above reasons, ECT and DoIT will be combined into one unique theoretical framework in which the first two phases of DoIT are used to explore how and why an individual (or other decision-making unit) engages in activities that lead to a choice to adopt or reject an innovation (Rogers, 2003) through the principles of ECT (Fullan, 2015). The coordination of ECT and DoIT are summarised in the table below:

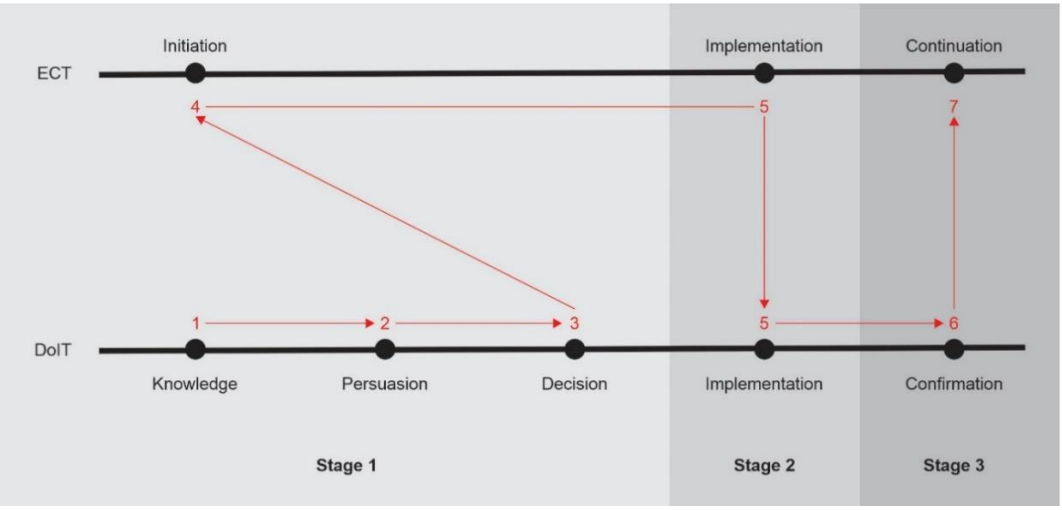

Figure 3.4 The Coordination of DOI Theory and EC Theory

The whole process, according to Figure 3.4, will include three stages, namely: Stage 1, Stage 2, Stage 3. In Stage 1, there are three phases in DoIT, which are *Knowledge, Persuasion,* and *Decision* whilst phase 4 (*Initiation*) belongs to ECT. Stage 2 comprises the *Implementation* stage in ECT and the *Implementation* phase in DoIT. Lastly, Stage 3 consists of the *Confirmation* phase from DoIT and *Continuation* stage from ECT.

Research objectives in this research study will focus closely on human factors as found in Stage 1. Hence, human factors are components for the development of the first research themes, entitled *People*. Conversely, stage 2 contains mostly policy and technology factors because this stage is where ideas are put into practice. The implementation of technology, therefore needs corresponding policies as well as the required technology. As a result, *Policy* and *Technology* are the two additional research themes which require examination. Even though research themes could be labelled in different ways such as External and Internal or Preparation and Execution, classifying research themes as *People, Policy,* and *Technology* is much clearer as each theme is self-explanatory. They also connect to the coordination between ECT and DoIT in the theoretical framework. Due to the complexity of the *People* theme as it involves administrators, teachers, and students alongside their parents, the *People* theme will be investigated last. The process of investigation, according to the research themes, then will be *Policy, Technology,* and *People*. Finally, Stage 3 is associated with further adoptions and rejections of the three research themes. Attributes and critical elements in each stage are described in the table below:

EC Phases	**DoI Phases**	**Scope**	**Applied to**	**Sub-factors**
Initiation	Knowledge	ECT: Factors Associated with Initiation	Policy Guidance Agenda	1. Existence and Quality of Innovations 2. Access to Innovations 3. Advocacy from Central Administration 4. Teacher Advocacy 5. External Change Agents 6. Community Pressure/Support/ Apathy 7. New Policy – Funds (federal/ state/ local) 8. Socio Economic 9. Personal Variables 10. Communication Behaviours

	Persuasion	DoI: Perceived Characteristics of the Innovation		1. Relative advantage 2. Compatibility 3. Complexity 4. Trialability 5. Observability
	Decision			
Implementation	Implementation	ECT: 1. Characteristics of change 2. Local characteristics 3. External factors	Training Equipment Pedagogy	1. Need 2. Clarity 3. Complexity 4. Quality/ Practicality 5. District 6. Community 7. Principal 8. Teacher 9. Government and other agencies
		DoIT: 1. Adoption 2. Rejection		1. Policy 2. Technology 3. People
Continuation	Confirmation	1. What works well 2. Additional innovations	Policy Equipment Pedagogy	1. Continued adoption 2. Later adoption 3. Discontinuance 4. Continued rejection

Table 3.1 Coordination of ECT and DoIT Stages

According to the table above, ECT may be used to investigate matters at a broad scale whilst DoIT is very helpful in exploring aspects in detail. As seen in Figure 3.4, the *Initiation* stage is the beginning of ECT in which it deals with associating factors of initiation. In particular, Fullan (2015) proposes seven distinctive factors associated with the process of initiation. Each of these attributes requires extensive study and research as described in the first three phases in DoIT.

The first stage of DoIT, the *Knowledge* phase provides an objective insight into the current situation including strengths and weaknesses. It establishes a core foundation in order to generate persuasive ideas, which belong to the second phase. The second phase, or the *Persuasion* phase, contains five distinctive attributes. The investigation needs to apply each attribute of DoIT for evaluation of each factor in the *Initiation* stage of ECT. If *Persuasion* appears unconvincing, the innovation would need additional adjustments or even termination. At a glance, the *Decision* phase appears to be similar to the *Initiation* stage; however, there is a significant difference between these two. The *Decision* phase contains reasons for the adopted innovation whereas the *Initiation* stage

includes the adopted innovation along with the preparations to implement such innovations. For this reason, the *Decision* phase of DoIT is a crucial element that has been missing in the *Initiation* stage of ECT. This means the theoretical framework would be perfect when factors of ECT and attributes of DoIT are combined in a collaborative approach.

For instance, the *New Policy – Funds* factor of ECT is examined in terms of *Relative Advantages, Compatibility, Complexity, Trialability,* and *Observability*. The sequence of using the first two phases of DoIT is repeated to explore all remaining factors in the *Initiation* stage of ECT to understand how and why decisions have been adopted. At this point, the *Initiation* stage in ECT has all necessary preparations concerning the integration of ICT into teaching once the *Decision* phase of DoIT is added. The preparations include policy, agenda, and guidance. Policy, to a great extent, may be considered as the constitution for all ICT-related activities in which ICT policies do not only regulate operations and maintenance, but they are also involved with other concerns such as legality. On the other hand, the agenda shifts into the people factors, including the appointment of ICT positions, the necessity to provide adequate training, and the development of manuals and procedures.

ECT plays a very important role in the *Implementation* stage because the implementation is closely associated with the *Characteristics of Change, Local Characteristics,* and *External Factors*. *Characteristics of Change* include nine distinctive attributes which are categorised into three different groups as illustrated in Figure 3.2. *Characteristics of Change* works in a reciprocal relationship with the *Local Characteristics* and *the External Factors* because some *Characteristics of Change* may happen to be impractical in a specific region. For example, the application of cloud-based computing in Vietnam may work well in urban areas; however, it could be impractical in suburban zones and villages where Internet connectivity is still very limited. As a result, it may require adjustments in pedagogy due to local characteristics between different regions. These *Local Characteristics* and *External Factors* should be evaluated using the five attributes in the *Persuasion* phases of DoIT, as described in Section 3.3 above, to explore the research themes *Policy, Technology,* and *People* at the *Implementation* stage. At this stage the *Policy* theme shapes the training, the *Technology* theme deals with

Equipment, and *People* theme is mainly associated with the ICT-based pedagogies used by the teachers.

More specifically, the five attributes of DoIT in Phase 2 may influence Group B (*Local Characteristics*), as shown in Figure 3.2, during the *Implementation* stage of DoIT because Group B involves decision-makers in which the *District* factor generates policies, the *Principal* factor purchases essential equipment, and the *Teacher* factor decides the appropriate ICT-based pedagogies for teaching. People in Group B, therefore, take the five attributes of DoIT in Phase 2 to examine and evaluate Group A (*Characteristics of Change*), as shown in Figure 3.2. In regards to this extent, the *Need* factor in Group A is strongly associated with the *Relative Advantage* attribute of DoIT because the higher the *Need,* the faster the rate of the adoption. Likewise, the *Clarity* factor in Group A enlightens the *Compatibility* attributes because "the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 2003, p.15) is hard to achieve if purposes are not clarified (Fullan, 2015). Then, Fullan (2015) and Roger (2003) appear to agree about the influence of *Complexity* concerning the adoption towards implementation, in which both authors believe that it is hard to implement the innovation if the degree of difficulty is high. In other words, the *Complexity* is the exact opposite of *Need* and *Clarity* in ECT as well as *Relative Advantage* and *Compatibility* in DoIT. Lastly, the *Quality/Practicality* factor of ECT can be investigated through the *Trialability* and *Observability* attributes of DoIT as the *Practicality* aspect needs to experiment through *Trialability* whilst the *Quality* aspect must be visible to others through *Observability.*

Therefore, these five attributes are used as indicators for further adoption or rejection. If trial results provide positive outcomes at this point, it is easier for the innovation to reach its desired goals because what does not work well should be all eliminated at the end of this *Implementation* stage. The elimination of any non-working component also marks the beginning of Stage 3 starting at the *Confirmation* phase of DoIT in which this research study reaches its final findings. The complete critical analysis of the integration of ICT into teaching is provided at this point. The findings comprise factors affecting the use of ICT along with the relationship among these affecting factors. Finally, this research study enters the *Continuation* stage in ECT, in which it proposes appropriate recommendations in improving the integration of ICT, including the improvement of the existing innovations as well as the development of

further innovations in the scope of policy, technology, and teaching, and pedagogy. Any change at the *Continuation* stage must repeat the process stated in the *Implementation* stage above to consider whether such change should be adopted or rejected. The coordination of ECT and DoIT regarding the research themes is summarised in the table below:

Themes	Stages	Sub-factors
Policy		
	Stage 1	**ECT:** New Policy – Funds; External Change Agents; Access to Innovation **DoIT:** Socio Economic Characteristics; Personal Variables; Communication Behaviour
	Stage 2	**ECT:** Need; Clarity; Complexity; Quality/Practicality; District; Principal; Government and Other Agencies **DoIT:** Relative Advantage; Compatibility; Complexity; Trialability; Observability
	Stage 3	**ECT:** Repeat of Stage 2 **DoIT:** Repeat of Stage 1 and Stage 2
Technology		
	Stage 1	**ECT:** Access to Innovation; Advocacy from Central Administration; Teacher Advocacy; Community Pressure/Support/Apathy **DoIT:** Socio Economic Characteristics
	Stage 2:	**ECT:** Need; Clarity; Complexity; Quality/Practicality; District; Principal; Teacher; Community **DoIT:** Personal Variables; Communication Behaviour; Relative Advantage; Compatibility; Complexity; Trialability; Observability
	Stage 3	**ECT:** Repeat of Stage 2 **DoIT:** Repeat of Stage 1 and Stage 2
People		
	Stage 1	**ECT:** Access to Innovation; Advocacy from Central Administration; Teacher Advocacy; Community Pressure/Support/Apathy **DoIT:** Personal Variables; Communication Behaviour
	Stage 2	**ECT:** District; Community; Principal; Teacher **DoIT:** Relative Advantage; Compatibility; Complexity; Trialability; Observability
	Stage 3:	**ECT:** Repeat of Stage 2 **DoIT:** Repeat of Stage 1 and Stage 2

Table 3.2 The Emergence of Three Key Themes from the Coordination of ECT and DoIT

The table above shows how different factors of ECT and attributes of DoIT can apply to each research theme at different stages, (as shown in Figure 3.4), to guide the data collection and analysis. Also, principles of ECT at Stage 3 are the repetition of Stage 2 whilst principles DoIT are the repetition of Stage 1 and Stage 2.

Concerning the ***Policy*** theme at Stage 1, *New Policy – Funds*, *External Change Agents*, and *Access to Innovation* are the contributing sub-factors which may influence the policymaking process. The role of policymakers, in turn, is driven by attributes of DoIT in terms of *Socio Economic Characteristics*, *Personal Variables*, and *Communication Behaviour*. At Stage 2, *Need*, *Clarity*, *Complexity*, *Quality/Practicality*, *District*, *Principal*, and *Government and Other Agencies* are contributing factors from ECT during the implementation of innovation. Likewise, the *Persuasion* attributes of DoIT, including *Relative Advantage, Compatibility, Complexity, Trialability,* and *Observability*, show their impact on the implementation of new policies.

Then, the ***Technology*** theme, at Stage 1, is driven by ECT's factors of *Access to Innovation, Advocacy from Central Administration, Teacher Advocacy,* and *Community Pressure/Support/Apathy*. Applicable DoIT's attribute at this stage is *Socio Economic Characteristics* as the implementation of technology is closely associated with the local conditions. At Stage 2, the *Technology* theme is influenced by ECT's factors of: *Need, Clarity*, *Complexity*, *Quality/Practicality*, *District*, *Principal*, *Teacher*, and *Community* as well as DoIT's attributes including: *Personal Variables*, *Communication Behaviour*, *Relative Advantage*, *Compatibility*, *Complexity*, *Trialability*, and *Observability*.

Lastly, the ***People*** theme, at Stage 1, takes ECT's factors of *Access to Innovation*, *Advocacy from Central Administration*, *Teacher Advocacy*, and *Community Pressure/Support/Apathy* whilst *Personal Variables* and *Communication Behaviour* are DoIT's applicable attributes taken onboard to investigate the degree of knowledge of administrators and teachers. At Stage 2, *District*, *Community*, *Principal*, and *Teacher* are ECT's human-related participating factors which, in turn, are driven by DoIT's attributes of *Relative Advantage*, *Compatibility*, *Complexity*, *Trialability*, and *Observability* during the implementation process.

3.6 Summary

This chapter has introduced two theories: Fullan's (2015) ECT, Rogers' (2003) DoIT. It has also explored why the two theories have been adopted as the theoretical framework for this research study. In each theory, stages and phases along with their associated factors and attributes have been identified and introduced. In addition, this chapter has described how

these stages and phases along with their associating factors and attributes may be used to research the integration of ICT into teaching in Vietnam. Furthermore, this chapter has discussed the coordination of ECT and DoIT to illustrate how these two theories may support each other and contribute to the three research themes of *Policy, Technology,* and *People*. According to the particular structure of this research study, ECT has been selected as the main approach whilst DoIT has been used to support elements of theory where ECT does not provide enough sufficient detail. The next chapter will describe the research methodology and designs for this research study.

Chapter 4

METHODOLOGY

4.1 Introduction

Conducting research in the social sciences without an appropriate methodology is similar to mapping a new territory without any knowledge of mapping techniques. Thus, social science researchers need to have a suitable methodology for their studies. Research methodology is defined as "the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and the use of methods to the desired outcome" (Crotty, 1998, p. 3). However, the selection of a proper methodology often requires a research philosophy to be developed beforehand because a researcher's methodology is directed by his/her ontology and epistemology (Cohen, Manion, and Morrison, 2011). It is worth noting that a research methodology is different from research methods, in which a research methodology is the approach, which deals with the nature of research design and methods, whereas research methods are the specific techniques and procedures used for the data collection and analysis (Crotty, 1998).

This chapter begins with a consideration of the research philosophy in terms of ontological and epistemological positions in order to properly and critically select the methodology. Then, it shifts into exploring the research approaches and strategies that form the foundation for the selection of methods used in the process of data collection. The discussion then examines ethical considerations and the researcher as an insider. All of the above sets the guidelines for the data collection process that is explored in detail before moving onto how the theoretical framework, described in Chapter Three, informs a thematic analysis of the collected data to answer the following research questions:

(1) How has ICT been used effectively in ELT at secondary schools in Ben Tre Province?

(2) What obstacles impede the effective use of ICT in ELT at secondary schools in Ben Tre Province?

(3) What is the relationship between the factors affecting the use of ICT at secondary schools in Ben Tre Province?

4.2 Research Philosophy

Research philosophy is the core of any research study and the "background" of social science research that possesses the potential to construct a frame of reference for researchers (Williams and May, 1996). Easterby-Smith, Thorpe, and Lowe (2002) list three reasons why developing a research philosophy is important: firstly, a research philosophy helps to clarify the design that was used in the research study; secondly, knowledge of research philosophy can aid researchers in choosing appropriate types of methodologies; thirdly, understanding the basic issues of a research philosophy, as well as its positive and negative aspects, will help researchers to be more creative and exploratory in their research methods.

Although there is a wide range of different research philosophies in circulation, positivism and interpretivism are the most recognised umbrella terms. On the one hand, positivism argues that the social world exists externally and can be measured through an objective approach, rather than being deduced subjectively through reflection or an analysis of feelings (Gill and Johnson, 2010). Consequently, positivism does not focus on human interactions and value systems or highlight the perspectives of both the researcher and the research subjects (Sritanayarat, Kanjanajuta, and Tanawattanakorn, 2010). As a result, positivism struggles to explore the complex relationship between factors that influence human activities. On the other hand, interpretivism argues that humans are different from objects because they create meaning. In other words, interpretivism looks at the world subjectively and is attentive to particular contexts, such as the place where people work and live, to understand their culture and history (Smith, 1983). Furthermore, interpretivism does not try to test hypotheses as positivism does; the purpose of interpretivism is to create new, deeper understanding and interpretations of social worlds and contexts (O'Donoghue, 2006).

As this research study aims to investigate factors affecting secondary school English teachers' use of ICT in the classroom in Ben Tre Province, an interpretivist approach is more suitable than a positivist approach because this research study concentrates on human perceptions, primarily those of teachers. The research philosophy in terms of ontological and epistemological positions will be discussed in the sections below.

4.2.1 Ontology

Understanding ontology is important for researchers because a deep awareness of ontological issues will support them in developing an epistemological position that will, in turn, inform their methodological approach. Ontology is defined as "the study of being" (Crotty, 1998, p. 10) which is a component of philosophy that "asks what reality is and what the fundamental categories of reality are" (Neuman, 2014, p. 94). In other words, ontology is concerned with the question of whether there exists an objective reality to which we have access. A positivist ontology, on the one hand, believes that reality is atomistic, separate, and visible (Blaikie, 1993). It is considered to be objective, rational, and independent from the observer (Bryman, 2012). On the contrary, an interpretivist ontology believes that reality is perceived as the "product of processes by which social actors together negotiate the meanings for actions and situations" (Blaikie, 1993, p. 96). Reality, in the interpretivist viewpoint, is constructed, subjective, and dependent on individuals creating meaning (Bryman, 2012).

In regard to the research study, an interpretivist ontology allows for the subjective meaning from the participants' own experiences and points of view to be investigated in greater depth. For example, interpretivism may help explain why different teachers respond differently when dealing with a particular technical problem. Also, interpretivism helps answer why some teachers may create solutions to overcome the problem while other teachers simply give up. These diverse yet unique outcomes which are influenced by different personalities are indicators of the depth and complexity of what is being researched. Positivism with its objective approach is not suitable for exploring personal opinions. In contrast, interpretivism helps achieve the purpose of this research by relying as much as possible on the participants' perspectives of what is being researched (Creswell, 2013). For this reason, an interpretivist ontology was adopted.

4.2.2 Epistemology

If ontology helps ascertain the nature of the reality to be investigated, epistemology provides an insight into the nature of knowledge and how it can be acquired. Specifically, epistemology is defined as "the theory of knowledge embedded in the theoretical perspective and thereby in the methodology" (Crotty, 1998, p. 3). Epistemology is "the theory or science of methods or grounds of knowledge" (Blaikie, 1993, p. 6). If ontology helps develop the

concept of “what we know”, epistemology helps clarify “how we know” about “what we know” (Crotty, 1998, p. 8). In other words, epistemology is concerned with the theory of knowledge, how it is obtained, how is it validated and new ways of knowing that are more effective than other knowledge-gathering models and theories. Therefore, the central issue of epistemology is concerned with the question of what knowledge is and how it can be acquired (Grix, 2002). Epistemology has a strong influence on the rest of a research design. For instance, epistemology has a direct effect on the choice of methodology used in the research (Snape and Spencer, 2003) which makes choosing an epistemological position a key decision within methodological considerations. This is because it gives rise to the methods used to collect and analyse the research data (Cohen, Manion, and Morrison, 2011).

Similar to its ontological companion, epistemology can be divided into two main categories, which are positivism and interpretivism. Positivist epistemologies holds the view that knowledge of the world is objective and independent from the researcher. Consequently, knowledge is gained through the application of the scientific method, through “mathematic models and quantitative analysis” (Cohen, Manion, and Morrison, 2011, p. 8). Conversely, interpretivist epistemologies hold the view that reality is dependent on the participants. They believe that knowledge is achieved through a strategy that finds out the differences in opinion between different people and from this strategy, the researcher can gain subjective meaning from individuals (Bryman, 2012).

It is quite clear that positivism is not applicable to diagnosing the differences in people’s perspectives. Interpretivism, on the other hand, is very well suited because this research study is about examining perceptions and collecting observations of different individuals. Concerning the research topic of investigating the relationships between factors influencing teachers’ use of ICT in ELT in a province in Vietnam, the interpretivist approach helps explain why certain teachers respond in certain ways. Thus, an interpretivist epistemological and ontological position provides a specific approach for this research.

4.3 Research Approaches and Strategies

This section describes how an interpretivist ontology and epistemology inform the research approaches. It begins by considering the difference between deductive and inductive approaches before settling on an appropriate research strategy.

4.3.1 Research Approaches

Most researchers conduct research using either a deductive or an inductive approach, also known as deductive reasoning or "top-down" logic, and inductive reasoning or "bottom-up" logic. The deductive approach stresses the importance of testing theories; this approach is also considered as a "theory then research" approach (Walliman, 2011, p. 63). In the deductive research process, hypotheses are developed from existing literature, and these are then tested through collecting and analysing data. In contrast, the inductive approach puts the stress on the generation of theories; this approach is considered as "research then theory" (Walliman, 2011, p. 63). In the inductive research approach, data is collected first, then from the data collected a theory will be created: this occurs by grouping the data to form "sets of generalisations which act as theories" (Burns, 2000, p. 8). Deductive and inductive approaches are associated with quantitative and qualitative data analysis with a deductive approach typically being associated with quantitative data analysis, while an inductive approach tends to be associated with qualitative data analysis (Bryman, 2012).

The interpretivist ontological and epistemological stances of this research study sit more comfortably with qualitative research rather than quantitative research. Specifically, interpretivism helps interpret and understand the classroom environment as well as academic life at secondary schools in Ben Tre Province through qualitatively investigating teachers' experiences and perspectives. For instance, while a quantitative approach may tell how many teachers liked or disliked an ICT training course, a qualitative approach helps understand why some teachers like the ICT training courses versus those who disliked it. Using this approach, it is possible to capture what participants say and do in their fields to understand more deeply the phenomenon in order to answer the research questions and meet the research objectives. Therefore, the qualitative approach using inductive reasoning is the best choice for this research study.

4.3.2 Research Strategies

Research strategies are considered to be the "general orientation to the conduct of social research" (Bryman, 2012, p. 715). Qualitative research can involve a wide range of strategies. The common strategies in qualitative research are ethnography, narrative inquiry, phenomenology, grounded theory, action research, and case study (Mills and Birks, 2014).

This research is an investigation of teachers practice and perceptions in relation to ICT use in ELT using two research instruments, namely, observation and semi-structured interview.

Although other research strategies may be applied to this research study, each of them cannot help answer the research questions entirely. For instance, ethnography is a research strategy that studies an entire culture-sharing group (Leedy and Ormrod, 2001). An ethnographic approach requires "researchers to stay inside a community of people being studied for a period of time" to establish first-hand accounts (Suryani, 2013, p. 122). On the other hand, action research seems applicable for this research study because it is "a method of qualitative research the purpose of which is to engage in problem-solving through a cyclical process of thinking, acting, data gathering and reflection" (Savin-Baden and Major, 2013, p. 245). Action research is a time-consuming process. Concerning this research study, it would require the researcher to take part as an English teacher at a secondary school for a long period of time in order to go through a cyclical process of thinking, planning, acting, gathering the data and reflecting. Action research and ethnographic approaches could be effective for this research study; however, they would not be able to generalise and examine different uses of ICT in ELT at different schools across Ben Tre Province. Under the ethnographic approach, the data collection process could only be done at one school because the researcher would need to spend a considerable amount of time within the research community to gain knowledge. Similarly, action research would only be helpful for establishing personal experiences rather than acquiring the perspectives of other teachers regarding the use of ICT in ELT.

In exploring the factors affecting teachers' use of ICT in teaching ELT, interviews and observations conducted across the province can be used to answer the research questions. Firstly, observations help construct an overall picture of the classroom environment, including teachers, students, and associated activities. This provides a context within which to understand teachers' perceptions of events (Cohen, Manion and Morrison, 2011). Secondly, interviews provide access to teachers' perspectives and opinions. By asking well-planned questions during interviews, the questions of "how", "who", "why", or "what" (Burns, 2000) can be answered. The "who" and "what" factors can be used to explore

principles of ECT (Fullan, 2015) as described in the previous chapter while “how” and “why” can be used to explore principles of DoIT (Rogers, 2003).

4.3.2.1 Choosing the Research Sites

As the research topic is about the investigation of teachers' use of ICT in ELT in Ben Tre Province, it is logical to select secondary schools in Ben Tre Province as the research sites. Ben Tre Province, formerly known as Kien Hoa province under the administration of the Republic of Vietnam (1956 - 1975), is located in the Mekong Delta in the southern part of Vietnam. Areas of the province are isolated from each other and from nearby provinces due to a complex waterway system of the Mekong River. Boats are the primary means of transportation which means it is difficult to travel within regions in Ben Tre Province. Like the state capital in the USA, the city is the provincial capital, and hence, it is the most important area in the province. Districts appear in the form of towns throughout the province. They are the secondary level of the provincial administration where commerce and trade take place. Districts are also important but less significant from an administrative point of view. Lastly, villages are located on the outskirts of the city and districts which account for 60% of the population.

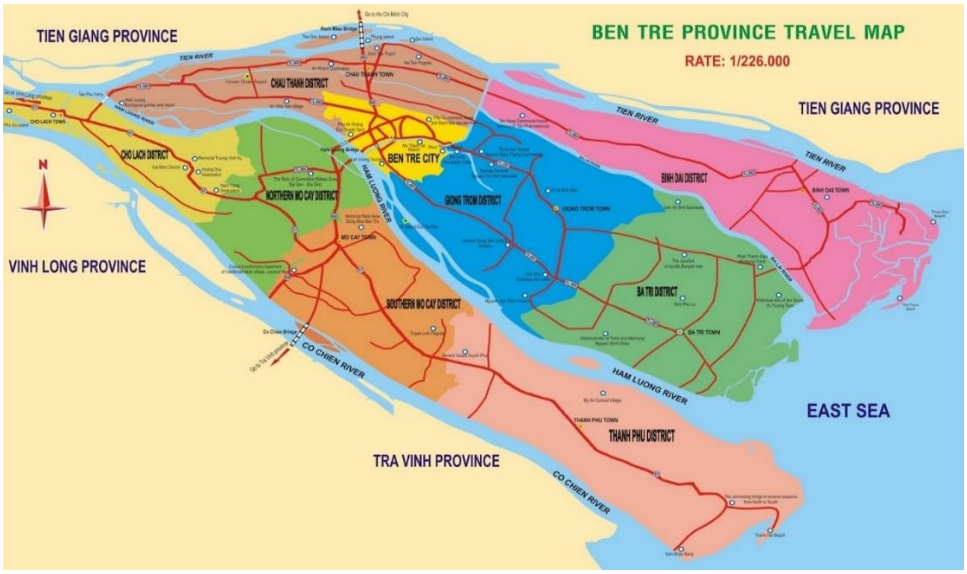

Figure 4.1 Map of Ben Tre City and Districts *(source: Wikipedia)*

The structure of cities, districts, and villages also reflects how budgets are allocated to public schools throughout the province. In addition, there are two different types of villages, which are the normal villages and remote villages.

The research sites chosen for this research have been chosen to provide an insight into schools across these different settings. Sites in one major secondary school in the city, one major secondary school in a district, and two secondary schools in villages (one normal village and one remote village). The reason for selecting a school in a remote village is because there are several disadvantages in remote villages such as limited transportation, poor living standards, high crime rates, and numerous illiterate residents. Furthermore, researching at a remote village school may help to understand how teachers and administrators may overcome the particular difficulties experienced by a large number of schools in Ben Tre. Selecting schools from different settings allowed for comparisons to be made between them and enabled the researcher to take regional variations into account. Data collection was conducted through interviews and observations with a total of sixteen English teachers at four schools, in which five English teachers were interviewed and observed per school, apart from in the remote village school where there was only one English teacher who manages all English teaching at the school as summarised in Table 4.1.

Due to ethical considerations, the personal identities of the participants are omitted. Instead, pseudonyms are used as identifiers for each interview. The same ethical considerations are also applied to research sites, which are labelled according to their locations within the province. As a result, secondary schools in this research study have been identified as the City School, District School, Village School, and Remote Village School. The descriptions of research sites follows:

City School:

The City School chosen for this research study is one of the largest within the city limit, serving students within the ward where the school is located and villages nearby. This school has been awarded the Certificate of Merit for outstanding results in teaching and learning with eight out of nine English teachers having met English proficiency guidelines set by MOET (City School, 2018). This school is also famous for its pioneering use of ICT due to a large and steady stream of investment from provincial institutions. However, the Board of

Administrators at City School has acknowledged that only thirty out of seventy-eight teachers can integrate ICT into teaching.

District School:

The District School is relatively new as it was opened just after the millennium to serve students in the town where it is located. Being used as a major school in the region, the District School is large and funds are sufficient to equip each classroom with modern technology. The English department, comprising nine experienced English teachers, has one dedicated audio-visual room that is equipped with an interactive board, a computer, and headphones for students. The Board of Administrators always encourages teachers to integrate ICT into teaching. The school also emphasises the development of electronic lesson plans as well as improving online materials for teachers and students (District School, 2018).

Village School

The Village School is a big, old school which is ranked among the top schools within the province. Situated in a large village, this school is bigger than a typical village school, not only in terms of size but also in terms of assets. Its ICT arsenal is equipped with many modern tools that can only be found in schools at city and district levels. The English department has a dedicated learning room, equipped with one interactive board, one 49-inch television, and a computer. This village school, on the other hand, has suffered from the technological disadvantages caused by the existing infrastructure in village areas. According to the Board of Administrators, Internet connectivity is the most serious obstacle which is beyond the authority of the school (Village School, 2018).

Remote Village School:

The Remote Village School is located in a rural commune where farming is the main activity. Situated on the most remote corner in a very remote village, the Remote Village School has received very little attention from the provincial administrators. This school, for this reason, has a very limited number of teachers. For instance, there is only one English teacher at this particular school. Distance from urban zones, moreover, can explain the lack of ICT equipment used in teaching. According to the Board of Administrators, there is only a 49-

inch television, a computer, and a pair of small speakers. Most teachers are self-equipped with personal laptops, Bluetooth speakers, and smartphones for their teaching. Despite having all characteristics of a school in a remote area including a lack of funding, a shortage of staff, insufficient classrooms and equipment, and several other difficulties to overcome, the Remote Village School has progressed to meet the requirements of the *ICT Training Policy* (Ben Tre Educational Service, 2016b) by providing ICT training, developing digital courses, and integrating equipment to ensure an ICT-ready approach (Remote Village School, 2018).

The selection of the four secondary schools in four different administrative regions of city, town, village, and rural/remote village in Ben Tre Province as the research sites helps illustrate how ICT has been integrated across the province. In addition, the selection of schools which are known for successfully integrating ICT in ELT can provide information for how ICT has been best integrated in each administrative zone. According to information issued by the Board of Administrators at each school, ICT has not been integrated equally across the selection of schools. The selection of schools in different administrative zones also provides information for the data analysis in investigating whether teachers' ICT skills and ICT-based pedagogies are different between urban and rural areas. Similarly, the differential in administrative regions helps examine different roles of leadership according to geographical areas. The selection of schools is illustrated below:

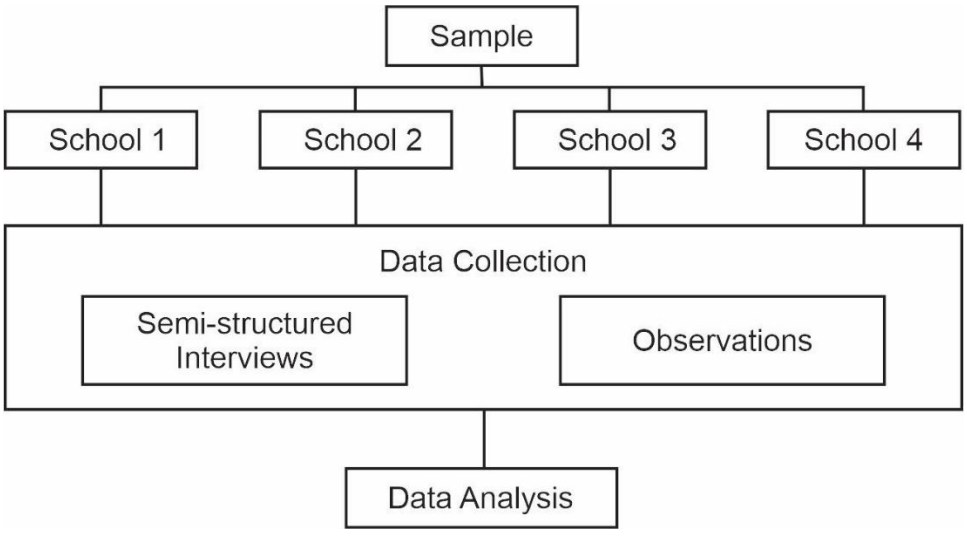

Figure 4.2 Data Analysis Process

4.3.2.2 Sampling

Criterion-based sampling was applied to selecting teachers within the schools to participate in the research study because it served the researcher's purposes in understanding a particular phenomenon (Burns, 2000). This research study aimed to develop a deep understanding of the factors that influence the use of ICT in English teaching at Vietnamese secondary schools. For this reason, the target sample had to be English teachers who regularly apply technology in their teaching. This allowed for an understanding of how ICT could be used to improve ELT in the province. Collecting data from less experienced or able teachers would have made it impossible to explore how obstacles to integrating ICT might successfully be overcome.

Accordingly, candidates who were practiced at applying ICT in ELT were selected as a sample. In particular, sixteen English teachers at four secondary schools within four administrative regions in the province were recruited. Candidates were selected to provide a range of ages, genders, and teaching experience. English teachers who participated in interviews and observations are summarised in the table below:

Pseudonym	**Gender**	**Age (year)**	**Experience (year)**
City School			
Lan	Female	43	22
Hoa	Female	47	26
An	Female	44	23
Thu	Female	47	27
Tha	Female	46	24
District School			
Tan	Female	48	27
Sao	Female	40	18
En	Female	40	17
Nho	Female	29	08
Phung	Female	39	17
Village School			
Vu	Male	43	21

Diem	Female	40	18
Ngoc	Male	48	26
Quynh	Female	42	20
Lin	Female	47	25
Remote Village			
Tuan	Male	43	17

Table 4.1 Descriptions of Participants

These teachers were spread across four research sites including a City School, a District School, a Village School, and a Remote Village School. Statistics according to demographical attributes among the four schools are displayed in the following table:

Demographic Attributes		**School 1**	**School 2**	**School 3**	**School 4**	
Gender	Male	0	0	2	1	
	Female	5	5	3	0	
Ages (years old)	Under 25	0	0	0	0	
	26 – 35	0	1	0	0	
	36 – 45	2	3	3	1	
	46 – 55	3	1	2	0	
	Over 55	0	0	0	0	
Experiences (years)	Under 10	0	1	0	0	
	11 – 19	0	3	1	1	
	Over 20	5	1	4	0	

Table 4.2 Summary of Recruited Secondary School English Teachers by Demographic Attributes

Across the province, there are 131 Secondary schools (Ben Tre Statistical Office, 2019) comprised of 8 city schools, 5 district schools, and 118 village schools. 27 out of 118 villages schools are in 30 remote villages according to *Decision No. 131/QĐ-TTg* signed by the Prime Minister of Vietnam on 27 January 2017. Likewise, there are 3,966 Secondary school teachers of which 2,035 are females and 1,931 are males (Ben Tre Statistical Office, 2019). Neither Ben Tre Statistical Office nor the Education and Training Services in Ben Tre province has available data about English teachers as well as teachers' ages and teaching experiences. For this reason, obtaining detailed demographic data on 131 schools has not been possible.

In terms of my positionality, I am both a practitioner as well as a researcher. My dual role presents methodological challenges as well as benefits. As Holliday (2007) indicates, undertaking research in an area of highly familiar practice can lead the researcher to overlook or make assumptions about what is said or not said in the interview context. As such I had to be vigilant in my approach to methodology.

As a teacher, I had already had first-hand experience of the process of ICT integration into ELT. Being a researcher-teacher contributed quintessential benefits for the data collection process, as I had in-depth experience of ICT training and obstacles. I chose to focus solely on the teachers because I wanted to privilege the teachers' voices and shed a light on their practices. Teachers' practices in Ben Tre Province are under researched in relation to ICT in ELT and within the confines of the thesis I wanted to further explore their flexibility, resourcefulness and proactivity in the face of educational change. While it would have been interesting to include administrators in this research, my focus was on ensuring that I researched teachers' perspectives as fully as possible.

From an ethical perspective, I was careful to ensure that my participants, some of whom were my ex-students did not fear the Vietnamese tradition that they needed to obey their teacher at all cost, as described in detail later in Section 4.4.4. Indeed, my experience of teaching in Ben Tre gave me a good understanding of how I could approach candidates in ways that were unthreatening. For example, I know that most of my participants were not familiar with interviews and observations. Therefore, I chose to use voice recording in the beginning. Approaching video recording at this early stage could have caused them to feel uncomfortable and suffocated and this may have resulted in them withdrawing from the research. Besides, having the voice recording was sufficient because these interviews were conducted in open dialogue. Any uncertainty could be easily clarified with additional questions.

4.3.2.3 Pilot Study

Prior to the actual data collection, a pilot study was carried out to make necessary adjustments, modifications, and corrections concerning interview questions as well as the research settings selected. The pilot interview was also helpful in testing how well the interview flowed and helping the interviewer to get some experience (Bryman, 2012). For

this reason, an English teacher at a secondary school in a village was chosen as the pilot study for two main reasons. Firstly, secondary schools in remote areas are equipped with the least technology, meaning teachers at these schools have limited experience of using ICT. Therefore, the pilot study could establish an understanding of what might be a base-level. Secondly, most public schools in Ben Tre Province are located in villages. This means the pilot study could obtain results from a subject representative of a majority of secondary schools in Ben Tre Province.

In this pilot study, the participant was asked the same interview questions that had been designed for the actual interviews. Any confusing questions were then modified to ensure that all interview questions could be easily understood. The pilot study, furthermore, helped establish whether further questions needed to be developed. Open-ended questions were particularly useful in this respect and they ended up providing information for additional interview questions which had been completely overlooked before the pilot study. For example, the original interview questions did not explore the "power cut" factor as a technical issue. However, questions regarding blackouts were added to interview questions to investigate what secondary teachers would normally do when blackouts occur. Similarly, the pilot study contributed another piece of useful information for constructing interview questions in which mobile apps would not always be applicable for students due to the ban on mobile devices at some public schools. Even though the pilot study was carried out using a telephone interview due to geographical differences between England and Vietnam, a tremendous amount of useful information was gathered. As a result, additional interview questions were developed. Also, the pilot study helped shape the flow of the actual interviews by highlighting the unease teachers felt in criticising existing policies. Therefore, all policy-related questions were revised using indirect questioning to allow participants to discuss these areas more freely.

4.4 Research Designs and Procedures

This section describes the process of collecting data in qualitative research using interviews and observations. It begins with a consideration of interviews and observations. Then it goes on to describe the importance of triangulation, validity, and reliability in collecting data through the use of more than one data collection method. Finally, this section

concludes with ethical considerations and a reflection on how researching as an insider affects the research design and procedures.

4.4.1 Research Methods

As Cohen, Manion and Morrison (2011, p. 129) point out, "the decision on which instruments (methods) to use frequently follows from an important earlier decision on which kind (methodology) of research to undertake". In other words, there is a close link between specific methods of investigation and particular research strategies (Robson, 2011). Interview and observation are methods commonly used in a qualitative research. Thus, these two methods have been chosen to provide data that is able to answer the research questions and meet the research objectives of this study.

Interview is the most popular choice for collecting data using a qualitative approach (Robson, 2011; Bryman, 2012; Sarantakos, 2013; Savin-Baden and Major, 2013). Savin-Baden and Major (2013) state that "an interview in qualitative research is a conversation between two individuals in which the interviewer asks questions and the interviewee responds" (p. 357). The structure of an interview, then, is either categorised as structured, unstructured, or semi-structured (Savin-Baden and Major, 2013). In structured interviews, the researcher asks a series of pre-established questions; all participants receive the same questions in the same order; the questions are usually in a closed or multiple-choice format to minimise flexibility and variation (Punch, 2005; Sarantakos, 2013, Savin-Baden and Major, 2013). In unstructured interviews, "the questions tend to be open-ended questions that require broad responses and that enable a conversation about a specific topic" (Savin-Baden and Major, 2013, p. 359); unstructured interviews require the researcher to have a deep understanding of the topic because, unlike structured interviews, there is no pre-established question. Instead, key answers for the topic may be indirectly mentioned or even implied through conversations about broader topics. A semi-structured interview is halfway between a structured interview and an unstructured interview. In a semi-structured interview, questions are in both closed and open-ended formats; the session often begins by asking key questions which are similar to structured interviews, about the theme of the study. Then, additional open-ended questions are asked to get more detailed information about what is being researched (Lambert, 2012; Sarantakos, 2013).

Among the three types of interviews, semi-structured interviews are best placed to deliver a rich set of results for this research study because both closed and open-ended formats can be used for asking questions. This supports the researcher in gathering facts and perspectives at the same time. Interview questions were informed by key themes from the literature and were designed to explore the research questions. The Theoretical Framework as described in Chapter Three was also factored into designing interview questions, and questions were drafted to explore aspects of ECT (Fullan, 2015) and DoIT (Rogers, 2003). Specifically, the three main themes of *Policy, Technology,* and *People* were used to give rise to a framework for the interview (Hesse-Biber and Leavy, 2011).

The language used in interviews is another concern because the researcher needs to use "language that is comprehensible and relevant to interviewees" (Bryman, 2012, p. 473). All interviews within this study were carried out using the Vietnamese language for two reasons. The first reason was that participants might not be familiar with English terminologies in the field of education even though they were English teachers. The second reason dealt with the fact that many English teachers at secondary schools in Ben Tre Province were not able to conduct a full conversation in English as a result of their limitations in listening and pronunciation. Using the participants' native language also helped them feel much comfortable during interviews which were critical to ensuring that they responded as honestly and accurately as possible. Another means of making the participant feel more comfortable with the interview process was the careful structuring of the interview. According to Lambert (2012), the structure of the interview in education research involves four stages: introduction, simple start, meaty middle, and rounding off at the end. The role and responsibility of the researcher during these stages must be to help the participants feel confident and comfortable to share their perspectives on the topic. Ethical issues, which will be discussed later in Section 4.4.3, must be also maintained in the interview.

In ensuring that the collected data is reliable and complete, two interviews were carried out per participant in which the first interview was face-to-face while the second interview was conducted on the telephone. In face-to-face interviews, each interview was structured according to four distinct stages (Lambert, 2012). In the first stage, the introduction involved me introducing myself as a researcher rather than as a lecturer from

the college in which the participant used to study. Then the discussion shifted to the purpose of the research study as well as the importance of ethical issues such as confidential measures in safeguarding the interviewee's identity and voice-recording records. In the simple start, or the second stage, I asked some questions about the interviewee's background to create a relaxing atmosphere and build a reciprocal relationship with the interviewees (Hesse-Biber and Leavy, 2011; Lambert, 2012). The meaty middle stage was the longest and most important part of the interview. In this stage, I asked key questions on specific aspects such as ICT tools used in the classroom, ICT policies, guidance, operation, training, support, administrations, pedagogy, ICT plans, and other ICT-related issues. Many follow-up questions were also used to generate more specific data. The central issues that were discussed most in the interview were what factors affected their use of ICT in teaching. In the last stage, I invited the interviewees to discuss anything else that they deemed important or that they would like to discuss further. Finally, an appreciation was offered in which I said thank you to each of them while assuring them that their inputs would be very valuable and useful for my research.

The second round of interview took place after the contents of the first interviews were briefly examined. The second interviews were conducted on the telephone because face-to-face interviews required additional appointments for which participants did not have the time. Telephone interviews were also chosen because of their "cost-efficiency and speed of data collection" (Frey and Oishi, 1995, p. 4). Each interview took approximately fifteen minutes and aimed to collect information that was missing from the first interviews (See appendix 3 for interview schedule).

Besides interviews, observation was the second method adopted for the data collection in "gathering data through vision as its main source" (Sarantakos, 2013, p. 229). Savin-Baden and Major (2013) argue that this method is a way for a researcher to observe participants' daily practices in order to gain a better understanding of the participants' experiences. In addition, this method is very useful in collecting more specific data because it can help the researcher "to discover things that participants might not freely talk about in interview situations" (Cohen, Manion, and Morrison, 2011, p. 456). Observation is the way to study untold stories effectively. For example, observation may provide information about the effectiveness of using ICT in teaching by paying attention to the students. The high degree

of concentration among students during learning could be likely an indicator showing effectiveness. Also, observation provides a complete picture of the topic overall such as ICT tools, teaching content, classroom size, and how policy is enacted.

Like interviews, observations are also classified as structured, unstructured, and semi-structured. A structured observation entails a set of predefined rules and procedures which is commonly found in textbooks but less often in the research field (Gillham, 2008). In this method, the researcher must know precisely who, what, where, and how to observe in advance. In contrast, an unstructured observation requires the researcher to have some general ideas but not in the form of a specific procedure for observation (Gillham, 2008). A semi-structured observation takes the characteristics of both structured and unstructured observations (Gillham, 2008). Besides, semi-structured observation is "particularly suited to the kind of research which seeks to identify practical problems people experience" (Gillham, 2008, p.19).

Based upon three different structures as stated above, observations taken in this research study could not satisfy the characteristics of a structured observation due to the lack of predefined rules and procedures. The unstructured observation, on the other hand, would be partially applicable as some general ideas had been established beforehand. For this reason, a semi-structured observation would be the most appropriate approach to gather pre-determined information "to discover things that participants might not freely talk about in interview situations" (Cohen, Manion, and Morrison, 2011, p. 456).

As granted by all participants, semi-structured observations were conducted with the use of video camcorders during teaching sessions rather than physical observations. The setting involved two cameras in which I placed one camera on the teacher's desk to capture students and one in the opposite direction to record the participants. These videoclips served as an eyewitness for the process of data analysing. For example, these video clips illustrated how students participated in an entire session in which most of the students tended to focus more in the beginning while they showed signs of fatigue at the end of the session. Similarly, these videoclips provided information on how teachers performed in a session without any technical problem versus a session in which teachers needed to spend time to overcome an unexpected issue. In the event of troubleshooting

technical issues, observations provided useful information regarding how teachers tackled unexpected issues while teaching; In brief, observations helped validate information as provided during interviews and provided a means of examining the psychological aspects of exercising ICT policies and digital tools.

4.4.2 Trustworthiness

Achieving trustworthiness in a qualitative piece of research that investigates a real context has been questioned by scholars in the research field, especially positivists who believe that outcomes in terms of validity and reliability in the scientific works are significantly different (Shenton, 2004). Gupa (1981) proposes four equivalent terms that can be used in qualitative research, namely, credibility, transferability, dependability, and confirmability. Compared to positivists' standpoints, credibility can be seen to align with internal validity; transferability reflects the scope of external validity or generalisability; dependability is in preference to reliability, and confirmability is a more appropriate term than objectivity in qualitative research (Gupa, 1981). Shenton (2004) takes an extra step in arguing that the terminologies proposed by Gupa (1981) are more appropriate to qualitative study than the notions of validity, reliability, and objectivity. How this research study has relied upon these four criteria to ensure trustworthiness is described below.

4.4.2.1 Credibility

Lincoln and Guba (1985) and Shenton (2004) argue that one way to ensure credibility is through triangulation which involves the use of different research methods, different types of participants, and different sites. This study aimed to achieve credibility by employing two different methods: interview and observation. It also set out to recruit a wide variety of participants from a representative range of different sites (see Section 4.3.2.2.). The choice of research sites is based upon the provincial structure of education in Ben Tre province. As a local teacher, I have experienced the significant differences that exist between school in rural villages, townships and the city. As a result, the advantages and disadvantages of integrating ICT in ELT across the province can be explored by selecting schools in different regions. For this reason, strategies, designs, and procedures adopted in this research study facilitate the Transferability as described below.

4.4.2.2 Transferability

Denscombe (2014) suggests that although each study is unique the processes through which data is gathered should be transferable to other contexts. Borgman (1986) also notes that understanding a particular phenomenon may be a gradual process and may evolve through a range of studies. In this way, what at first might seem contradictory may in fact be multiple variations of reality that are reconcilable through research. Transferability yields what Dervin (1997) refers to as the possibility of inconsistency, errors and contradiction; however, such differences are not necessarily errors, but rather, insights for further development in seeking possible answers. Therefore, this particular research study could lead to inconsistent findings if it is undertaken at different research sites and with different participants. For example, the findings might be slightly different if the interview took place at another rural village school. Similarly, different interviewees at another school in the city centre could contribute a different set of data concerning how teachers had overcome numerous obstacles. However, the conceptual principles are relevant and equivalent because this study aims to investigate the advantages as well as the roots of all impeding obstacles concerning the use of ICT in ELT in Ben Tre province. While Ben Tre province offers unique research findings the research design is well structured and explained clearly enough to enable the research to be carried out in different contexts. This is particularly the case for other provinces in Vietnam who are also in the process of adopting technology into teaching due to this being a national policy dictated by MOET as described in Chapter One. For this reason, the theoretical framework and the research methodology are well-suited to being applied in different settings to to understand the process of ICT integration into ELT.

The conceptual principles, in addition, serve as the backbone of this research study where trustworthiness will also be achieved through dependability as set out in the next subsection.

4.4.2.3 Dependability

Dependability, as described earlier in this section aligns with reliability from a positivist standpoint, meaning that the research needs to show similar results if repeated in the same context using the same methods and the same participants (Shenton, 2004). However, the positivists' standpoint has missed one crucial element which is the changing

nature of the phenomena as coined by Fidel (1993) as well as Marshall and Rossman (2014). Therefore, the differences found in previous studies help ensure the outcomes of the latter (Lincoln and Guba, 1985) in which the research design may be considered as a "prototype model" to repeat a research study alongside the use of "overlapping methods" when generating data from the focus group and individual interview (Shenton, 2004).

Section 4.3.2.2 has described the "overlapping methods" in selecting participants for interviews that comprise two focus groups. The first focus group contains participants whom I know well in a professional capacity. The second group was not known to me in a professional capacity. Both groups comprised participants of different ages, genders, teaching experience, and ICT-competence. It is hoped that Dependability is built into this research design as information will be generated both within and between these groups.

4.4.2.4 Confirmability

Confirmability refers to the need to ensure that the findings are the results of the data provided by the participants rather than being over influenced by the view of the researcher (Shenton, 2004). However, it is impossible to eliminate all the personal biases and preferences of the researcher who creates the research design (Miles and Huberman, 1994). Shenton (2004) has emphasized the use of triangulation to reduce personal bias while exploiting data-driven outcomes. Moreover, the "audit trail" is critical as it helps examine the course of the research step-by-step (Shenton, 2004).

The triangulation approach, in fact, is helpful for this research study because, as described in the previous subsection, it helps to concentrate more on the validation of dependability throughout the investigation using different data generated by the interviewees. The adoption of observation helped to cross-check different data from the interviews to determine whether such differences are unique or unreliable. Personal biases, as a result, are reduced significantly during the second round of interviews as described in Section 4.4.1. In addition, diagrams used as illustrations in the Data Analysis, Section 4.5, which will be described later in this chapter as well as diagrams used in Chapter Six and Chapter Seven are examples of the "audit trail" in which diagrams shown in Section 4.5 are equivalent to what Shenton (2004) refers to as the theoretical trail while other diagrams are examples of a data-oriented trail.

Confirmability, according to Guba (1981), is not only the last step of ensuring trustworthiness but it is also crucial for my research study to authenticate the Dependability which, in turn, strengthens the Credibility to satisfy Transferability. These four criteria altogether ensure trustworthiness for the data collection.

4.4.3 Ethical Considerations

Creswell (2013) states that researchers need to obtain approval from their university review board and from the participants in the study. In terms of ethics, firstly, I obtained approval from the University Review Board through the project approval process that is designed to ensure that research carried out by staff and students poses no risks to participants or researchers. Secondly, I gained permission from the participants in the study. Preliminary agreements with the leaders of the four secondary schools were made before contacting potential participants. Then, written agreements with the potential participants were established through meetings, emails, and telephone conversations. Participants were fully informed of the study's aims and methodological approach. They were also advised that the raw data collected would be only accessible to me and my supervisors. Recordings for all interviews and observations have been kept safe while participants' identities are rendered anonymous through the use of aliases. Overall, the University of Gloucestershire's Handbook of Research Ethics is adhered to during the whole research process.

Besides ethical guidelines written in the University of Gloucestershire's Handbook of Research Ethics, the ethical dilemmas arising from existing power relations have been fully considered. Power relations have been considered to try and reduce the distance and separateness of the researcher from participants by offering a friendly and non-threatening atmosphere (Karnieli-Miller, Strier, and Pessach, 2009). The friendly environment enables "people [to] open up about their feelings" (Taylor, Bogdan, and DeVault, 2015, p. 58) in sharing information. Concerning the data collection process for this research study, a friendly and non-threatening environment was created to try and establish an equal partnership. For example, the use of language helped minimise the sense of hierarchy during interviews as I always coined the word "professor" when greeting and speaking to participants even though some of the participants were my students. This practice is quite important according to the Vietnamese culture in which senior teachers always have higher authority over their juniors.

By calling my ex-students professors, I tried to create an equal partnership and avoid them feeling like they were being questioned by their teacher. Instead, each interview was designed to set up a manner of two professors exchanging expert opinions about the use of ICT in ELT. Similarly, I chose to use video recordings as the instrument for observations instead of participating in the classroom myself even though this option was available. This practice ensured a friendly environment for which participants did not feel that their lessons were being interfered with. As a result, teaching activities in a normal classroom could be observed as naturally as possible. These attempt to minimise existing power inequalities has helped to ensure that valid and reliable data was collected.

4.4.4. The Role of the Researcher in this Study

Unluer (2012, p. 1) argues that "researchers that undertake qualitative studies take on a variety of member roles when they are in the research setting". According to Adler and Adler (1994), the researcher's roles can be either as an insider or an outsider. Insiders are researchers who are already a member of the community, while outsiders are researchers who are strangers to that community and who may need a lot of time to gain an understanding of it. As an English teacher at Ben Tre College for over twenty years, I have had a great deal of experience as an insider regarding English teaching which is the scope of this research study. I have first-hand experience of several advantages and disadvantages of teaching in Ben Tre Province – where this research study takes place. For this reason, I can ask informed topic-oriented questions concerning English teaching. The insider position offers advantages for me to influence the whole data collection process (Hockey, 1993) because I know "what to ask" and "where to look" to obtain information. However, there are also some drawbacks to being an insider, such as the potential loss of objectivity for which my assumptions, during interviews, could be somewhat biased (DeLyser, 2001; Hewitt-Taylor, 2002). The awareness of being biased is the reason which led me to create a semi-structured interview and to include a series of open-ended questions. As a result, I collected different opinions as objectively as possible through these open-ended questions. Furthermore, the selection of secondary schools instead of Ben Tre College as the research site is an additional means of trying to maintain an objective perspective.

Consequently, my research position may be considered to be that of a semi-insider rather than a complete insider because I have never had any experience in teaching English at the secondary level. The awareness in differentiating myself from a complete insider alongside the attempt to create an equal relationship with my participants helps establish the stability and similarity, also known as the credibility of data, throughout the whole data collection process as described in the section below.

4.5 Data Analysis

The proposed research themes developed from the theoretical framework as described in the previous chapter have led to me selecting *Thematic Coding Analysis* as an appropriate method for the data analysis process. This is because it narrows the collected data through themes that can be borrowed from the existing theoretical frameworks used in this research study. Thematic coding analysis, as its name suggests, is the process of analysing collected data by grouping (coding) data into themes. According to Braun and Clarke (2006), themes are "patterns of meaning"; by categorising data sets into themes, the thematic coding helps organise data to a very detailed level. Regarding this research study, the data analysis process involved the coding of data as collected through interviews and observations into themes that were suggested by the theoretical framework set out in Chapter Three and that emerged from the data.

Bearing in mind the possible emergence of new themes, the process of data analysis was conducted in an open-minded frame of mind through six phases of analysis as outlined by Braun and Clarke (2006). The six-phase thematic analysis is summarised in the table below:

Phase	Description of the process	
1. Familiarising with the data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.	See Appendix 5 (Table to show the reduction of data)
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.	
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.	
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.	

5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.	
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.	

Table 4.3 Phases of Thematic Analysis *(Source: Braun and Clarke, 2006, p. 87)*

In the first phase, I familiarised myself with the collected data. This involved translating, transcribing data, reading and re-reading, and noting down some initial ideas (Braun and Clarke, 2006; Maguire and Delahunt, 2017). This phase was, in fact, the preparation of "raw materials" to be processed for meaningful purposes. In this research study, audio recordings of interviews were transcribed and translated from Vietnamese to English after all interviews were completed. Keynotes were also taken in chronological order from videoclips which were recorded from observations. Then, I read the transcribed documents and examined them to generate a broad concept about the entire content for each interview and observation. The research themes, developed in the theoretical framework – *Policy, Technology,* and *People*, were used as guidelines to highlight related information from the data. At this point, I also noted any newly discovered theme for further examination. Indeed, re-reading with an open-mind revealed some new codes which could be grouped as the *Local Characteristics* theme which contains: education, funding, infrastructure, facility, and equipment.

In the second phase, the process involved *Generating Initial Codes*. In this process, all sets of explicit and implicit data were identified by features which supported the research study. If codes appeared not to be associated with any theme as proposed in the theoretical framework, they were either considered as part of the newly discovered themes or they were eliminated. For this reason, the process of data coding was repeated several times in which coding for explicit or semantic content was undertaken in the first attempt while the second approach was about spotting implicit or latent content which required further analysis to identify. Moreover, a single statement could have several codes. Furthermore, the quality of each code generated was not a factor of consideration at this point because codes might turn out to be overlapping, off-topic, or even contradictory to one another. All codes were generated from transcript one

to transcript sixteen using Excel software as attached in Appendix 5. An example of how codes are generated for further analysis is illustrated in the table below:

Data (extracted)	Coded for
I will ask my colleagues first. If I still cannot get the answer, I will reach for my ICT trainer for help because I still keep in touch with him on a regular basis. (Lan: Q27)	1. Support: ICT Support 2. Support: Teachers solve ICT problems. 3. Support: Teachers may seek help from outside sources. 4. Support: Is there any technical support team at school?

Table 4.4 Coding Sample

In the "Coded for" found in the table above, "Support" was not part of the code, but it was generated for future use. First, it was useful in the event of data sorting in Excel as all codes starting with "Support" would be displayed adjacently on the computer screen. Secondly, it functioned as an indicator for theme searching. In particular, "Support" was associated with the main theme of "*Technology*". Therefore, assigning an indicator at the beginning of each code helped reduce the time required to look for themes throughout a collection of codes. Searching for themes from the generated codes was crucial as it connected the data to the theoretical framework; and theme searching was the third phase of the six-phase thematic analysis.

In the third phase, all codes generated in the second phase were sorted into themes (see Appendix 5). A theme, as proposed by Maguire and Delahunt (2017) is "a pattern that captures something significant or interesting about the data and/or research question" (p. 3356). By mapping codes into equivalent themes, it was possible to identify codes in terms of the relationship between these codes within a particular theme as well as the relationship between codes and themes. Specifically, some codes could take in the form of the main themes, some others could fall into sub-themes, and others needed to be discarded. However, discarding at this point seemed not to be the appropriate decision because these unrelated codes would still have their functions at a later time. For this reason, these codes were categorised into a theme known as "Others".

Theme reviewing, the fourth phase, was the most crucial phase during the process of data analysis because it provided a second chance to validate the role, the necessity, and the relationship between codes, between codes and themes, and between themes and themes in a coherent and meaningful way. At this stage, all codes marked as "Others" needed to be assigned to the appropriate themes. Otherwise, these codes were eliminated as illustrated in the diagram below:

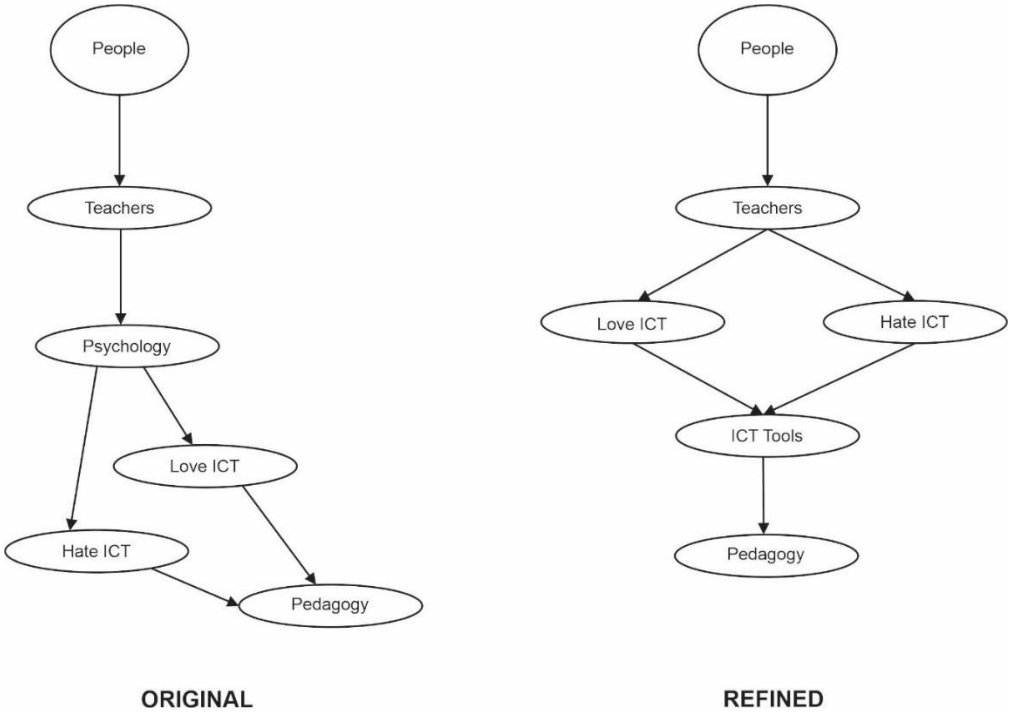

Figure 4.3 Examples of Code Elimination

In the above diagram, the "*Refined*" as shown on the right illustrates codes which were eliminated and added from the "*Original*", shown on left. Specifically, the code labelled as "*Psychology*" in the "*Original*" was eliminated because "*Hate ICT*" and "*Love ICT*" would be sufficient to reflect different attitudes toward the adoption of ICT in ELT. These attitudes, then, led to the addition of a new code, labelled as "*ICT Tools*", as shown on the right side of the diagram because teachers with different attitudes about ICT would select different ICT tools to develop their ICT-based pedagogies.

In the fifth phase, the process was quite similar to the fourth phase; however, the attention was on the themes themselves. First, it was necessary to look at the theme in comparison to the embedded codes to assure that there were no irrelevant themes nor any

contradiction between themes and their supporting data sets which had been refined to ensure the equivalent between themes and codes. At this point, addition and reduction took place because new codes were necessary for a theme while some other codes were removed. The whole sequence of the fourth phase was repeated. For this reason, it was extremely important to conduct the second and third phases with a considerable amount of thoughtfulness to avoid repeating the same process several times. Secondly, the focus shifted onto the way themes were named using short, one or two letters long codes, and named using self-explanatory principles. Lastly, and most important, names had to be unique; in other words, there should not be two or more themes that had the same name.

The complete theme naming and mapping for this research study are shown in the diagram below:

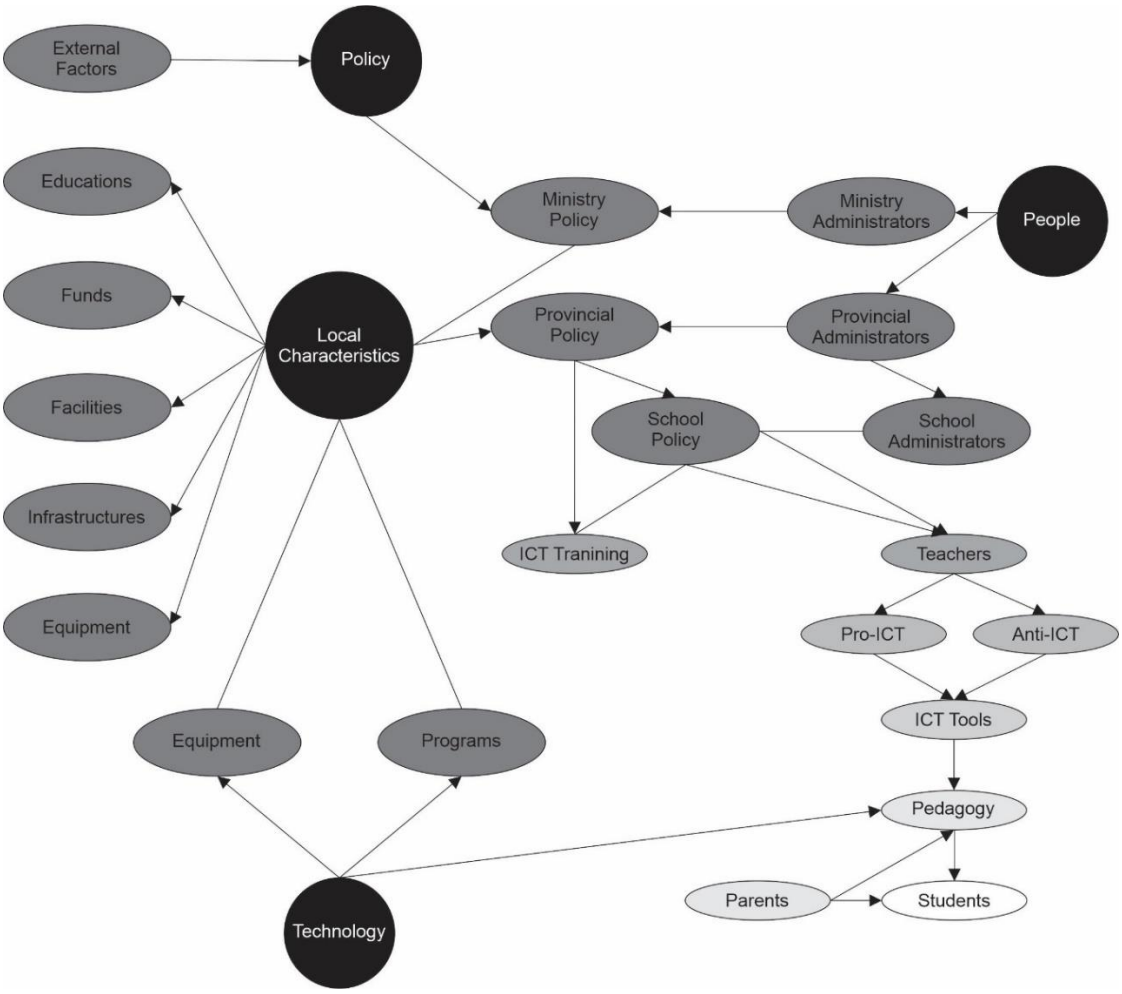

Figure 4.4 Themes and Sub-themes at a Glance

In the sixth phase, and final phase, the process of data analysis was finalised through reporting. Analysed data were used in association with arguments which supported the research objectives and were fully described to provide answers to the research questions. Outcomes written in the thesis are the result of this data analysis using the data sets collected through interviews and observations along with coding and thematic mapping as well as the researcher's unique perspectives. The outcomes of this phase form the content of Chapter Five.

4.6 Summary

This chapter has covered all the steps necessary to conduct scientific research. The research methodology begins with the establishment of interpretivism as the research philosophy which helps identify the proper research methodology by adopting the inductive method in qualitative research. Next, research approaches and strategies for qualitative research are laid out through the choice of research sites, research sampling and a pilot study as a test drive to make any necessary adjustments. Then, the discussion examines the the chosen research methods which are semi-structured interviews and observations. Criteria in ensuring trustworthiness are also considered alongside other essential factors such as ethical considerations and the role of the researchers in this study. Finally, this chapter describes how data is analysed through six phases as proposed in the Thematic Coding Analysis.

Chapter 5

FINDINGS

5.1 Introduction

This chapter presents the findings that have emerged from the process of data analysis described in the previous chapter. These findings will be used to answer the following research questions:

(1) How has ICT been used effectively in ELT at secondary schools in Ben Tre Province?

(2) What obstacles impede the effective use of ICT in ELT at secondary schools in Ben Tre Province?

(3) What is the relationship between the factors affecting the use of ICT at secondary schools in Ben Tre Province?

This chapter contains findings which are associated with the three themes borrowed from my theoretical framework – *Policy, Technology* and *People* - and a fourth theme that emerged from my data – *Local Characteristics* – regarding the use of ICT in four administrative zones: city, district, village, and remote villages. These findings are described in detail to provide a clear picture on which to build my discussion in Chapter Six. Firstly, it is important to establish the theme of *Local Characteristics* because the characteristics of the region influence all the other themes at the local level. Secondly, the focus will shift onto exploring findings related to ICT policies and ICT regulation at public schools. Thirdly, findings concerning technologies will be fully described. Lastly, the theme of *People* will be examined. This theme will be subdivided into four sections which will consist of administrators, teachers, students, and their parents. At the end of this chapter, sufficient evidence will be provided for a deeper discussion designed to answer the three research questions. The extracted data from interviews and observations will be used in this chapter as supporting evidence for the findings of this research study by the thematic approach as follows.

5.2 Local Characteristics

The theme known as *Local Characteristics* was not recognised originally as a standalone theme in the theoretical framework even though I had been aware of its

existence when investigating the *Socio Economic Characteristics* attributes in Phase 1 of DoIT as described in Chapter Three. The role of what should have become *Local Characteristics*, as a theme, was solely considered as an underlying factor which affects the main themes developed from the theoretical framework, namely *Policy, Technology,* and *People*. However, the role of this underlying factor grew during the data analysis to the point that it was decided to treat it as an independent theme containing: structure of the education system, demography, funding, infrastructure, and facility. Besides, there were codes that uniquely belonged to the theme of local characteristics such as blackouts and overcrowded classrooms. Therefore, it became necessary to investigate *Local Characteristics* as a standalone theme to thoroughly understand how it affected the process of ICT integration.

It is important to acknowledge that information regarding the *Local Characteristics* is the teachers' opinions. Actual statistics may yield different data. However, interviews in both city and village schools identified blackouts as one of the major obstacles to the successful integration of ICT in ELT. In the city, blackouts are considered an "obstacle" (Tha, 29a)[2] even though blackouts do not occur regularly (Tha, 30a). Conversely, in the village, "teachers are afraid of using ICT because of frequent blackouts" (Ngoc, 19c). A blackout occurred during the observation that took place at a village school (Observation Diem) which necessitated teaching to shift from using ICT to using the traditional method. Blackouts in village school are considered "the most serious obstacle [to ICT integration] because they are totally out of our control" (Ngoc, 34a). Consequently, traditional teaching methods need to be kept on standby according to the interviewees from the different locations. Teachers at all schools explained that they revert to the traditional method in the event of blackouts (Lan 46b; Tha 47b; Phung 38b). In the case of the Remote Village School, blackouts were not seen to be as much of a problem because of the complete lack of an internet connection (Tuan, 8c) thus, ICT was not integrated very regularly (Tuan, 1b); only once in every two or three weeks (Tuan, 1c).

[2] For quick references, the extracted data from interviews will be formatted as Participant's Name plus Question Number and the part of the question. For example, the reference listed as (Lan, 1a) means the reference is extracted from Question 1a in the interview with the participant whose name is Lan. In addition, observation data will be formatted as Observation plus the name of the participant. For instance, the reference listed as (Observation Diem) means data is extracted from the observation with the participant whose name is Diem.

The frequency and ubiquity of blackouts and the lack of Internet connectivity in some areas highlighted the different infrastructures available in Ben Tre Province. Urban zones like the city and the district are more developed than villages and remote villages in rural locations as blackouts did not occur very often in such metropolitan areas, especially in the city area (Tha, 30a). The unequal development of infrastructure also explained how public funding had been concentrated in economic hubs instead of being equitably distributed throughout the province. Being one of the poorest provinces in the region as illustrated in Table 1.1, it is understandable that Ben Tre Province has prioritised its precious funding to develop areas that can enhance economic growth despite 90% of the population residing in the countryside, as shown in Figure 1.2.

Education has not been prioritised through funding either. According to the extracted data, funding was an obstacle to the successful integration of ICT in ELT (Ngoc 25a). The lack of funding for education was evident in the overcrowded classrooms which were mentioned by many interviewees who testified to some classes consisting of more than forty students (Hoa, 24b, Lan, 32a, Sao, 18b). A teacher in the village explained that classes "always [contain] above forty students" (Diem, 11a) and consequently, "teachers find it very difficult to deliver their lessons" (Diem, 11b). Data from my observations confirm that the average number of students per classroom was forty. English teachers believed that the number of students should be reduced (Diem, 10c; Hoa, 31b; Sao, 26a) from the current numbers to around twenty students per class (Hoa, 24e; Lan, 34e; Sao, 18c) as "it is impractical for a teacher to use ICT tools which are designed for twenty students in a classroom with forty" (Diem, 20b). The number of students per classroom, from observation data, is summarised in the table below:

Observation Name	Zones	Students per Class
Lan	City	41
Hoa	City	42
An	City	43
Thu	City	46
Tha	City	40
Tan	District	37
Sao	District	37
En	District	35
Nho	District	38
Phung	District	38
Vu	Village	43
Diem	Village	41
Ngoc	Village	42
Quynh	Village	37
Lin	Village	39
Tuan	Remote Village	35

Table 5.1 Number of Students per Classroom

According to the table above, the City School had the most overcrowded classrooms across the province. The least crowded classroom contained forty students (Tha) and the most crowded classroom had forty-six students (Thu). In comparison, the District School was less crowded as the most occupied classroom accommodated only thirty-eight students as found in Nho and Phung whilst En's smaller classes contained thirty-five students. In addition, classrooms in the Village School were more crowded than the District School but less crowded than the school in the city region. The most crowded classrooms in the Village School had forty-three students (Vu) while the lowest number was thirty-seven (Quynh). The remote village school had a similarly small class to that found in the District School with thirty-five students.

The overcrowded classrooms were reflective of funding issues as additional classrooms would require funding for construction and for hiring additional teachers. Whilst the reason behind the scarcity of construction funding was uncertain, the shortage of funding for hiring new teachers was disclosed by an interviewee in the City School:

> "Besides, this school has been recommended to the higher authority for additional teachers; however, this has not been applied yet. Perhaps funding is the obstacle in this matter" (Tha, 14d - 14e).

The shortage of funding was especially detrimental in the Remote Village School where there was only one English teacher who provided lessons for the entire student body. As this teacher stated: "I teach all four secondary grades at this school" (Tuan, 1a) because "the Board of Administrators have denied the idea of having additional teachers" (Tuan, 20b). The unavailability of funding was also inhibiting the replacement of outdated equipment across schools in Ben Tre Province. At the City School, funding prevented the upgrading of equipment as Tha explains:

> "There is a control panel installed beneath each desk for students to answer multiple-choice questions, but these panels no longer function. Replacement of these panels has been requested but it is still awaiting funding" (Tha, 17a - 17b).

At the District School, "funding is a major issue in the improvement of equipment" (Tan, 10a). Another district school teacher added,

> "I would love to see more projectors, but I do not think the Board of Administrators would approve my request because these projectors are very expensive" (Phung, 15b).

Upgrading equipment was also a concern at the Village School where,

> "speakers are one of the many devices that seriously need upgrades; but it is impossible to replace all speakers at once, due to limited budgets" (Ngoc, 23b - 23c).

Another teacher at the Village School believed that other tools should be introduced in classrooms as he said,

> "I have seen a lot of these devices which could be helpful for listening. However, it is hard to request school funding to purchase these devices" (Vu, 14c).

Lastly, the teacher at the Remote Village School raised his concerns regarding the enhancement of displays in which he suggested,

> "The Education and Training Service should make funding available for the Board of Administrators to purchase a larger, 65-inch television to provide better visibility for everyone in the classroom" (Tuan, 23a).

Teachers from different research sites across Ben Tre identified funding as a serious obstacle which impeded the integration of ICT in ELT despite the province's recent economic growth in 2018 when the provincial per capita income had increased from $756 in 2010 to $1,536 (Ben Tre Statistical Office, 2018). Nonetheless, living standards were still much lower than the national average per capita income at $2,567 as of 2018 (World Bank, n.d.). Furthermore, the geographical location has made it difficult for modern technology to be used widely across the province where farming and fishery still remain the main industries as described in Section 1.5.3. The poor living standards and the geographical location of Ben Tre will continue to prohibit the province from witnessing any substantial technological innovation in the coming future.

The lack of modern technology makes it particularly difficult for the older generations to adapt to modern technologies in the workplace due to their limited experiences of it. This was pointed out by an interviewee in the city school who stated that technology seemed too complex for many teachers, especially the older generations (Lan, 25b): "some teachers still prefer the traditional method with no ICT at all" (Lan, 23b). Similarly, another interviewee from the village school argued that,

> "some elder teachers may always find ICT a challenge because they neither are not efficient in learning ICT nor do they consider ICT as a necessity for teaching" (Quynh, 46b).

Preparing ICT-based lectures was even more complicated for teachers in rural areas because,

> "preparing [ICT-based] lectures are not easy for teachers who do not have an Internet connection at home. Internet connectivity is not made available in most rural villages in the provinces" (Quynh, 46c).

The lack of the Internet was also confirmed by another teacher at the remote village school as,

> "There is a disadvantage as Internet connectivity is not yet available in this village. Therefore, I am unable to use my smartphone to search for online content while in class" (Tuan, 8b – 8c).

The infrastructure, economy and equipment available in Ben Tre Province posed several obstacles to the integration of ICT in ELT. The impact of these underlying obstacles will become more evident through the examination of the three proposed themes of this research study. In the next three subsections, *Local characteristics* will be used alongside

the collected data for the findings of the use of ICT in regard to *Policy, Technology,* and *People.*

5.3 Policy

The data shows the importance of having a national policy because proactive policies at the national level encourage education institutions and greatly improve the use of ICT (Peeraer and Van Petegem, 2011). The integration of ICT into teaching was initiated by a national policy issued in 2002 and known as the National Strategy for Information and Technology for Vietnam (Quach, 2004). As a result, MOET issued the ministerial policy on educational reform with *Decision No. 1400/QĐ-TTg on Approving of the Project "Foreign Language Learning and Teaching in the National Education System between 2008 and 2020"* as a guidance for its subordinate offices, known as the Education and Training Service, throughout the country to implement and to intensify the use of information technology in foreign language teaching as a top priority (MOET, 2008b). As a result, the Education and Training Service in Ben Tre Province issued two ICT policies: the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) which required teachers to attend ICT training courses and the *ICT Training Policy* (Ben Tre Educational Service, 2016a) which encouraged the use of ICT in ELT (Ben Tre Educational Service, 2016a, 2016b).

5.3.1 ICT Training Policy

The *ICT Training Policy* issued by the Education and Training Service in Ben Tre Province provided the opportunity for teachers to receive official training in ICT use from the Education and Training Service in Ben Tre Province (An, 45a). Each training course "took about three months with 8-hour classes every weekday" (Hoa, 33b). Contents in the ICT-training courses covered a lot of different topics. The interviewee named Tha states:

> "I have been trained with the use of multi-media. For example, I have been trained to embed audio into a typical document. This means a reading lesson can be converted into a listening exercise" (Tha, 26a, 26b, and 26c).

For another teacher in the City School named Thu, "the training courses cover dedicated software for pronunciations" (10a). In general, teachers spoke highly about the training courses. They claimed, "the training courses are exciting and effective" (Hoa, 33c), "ICT

training courses are helpful" (Hoa, 34d), and that "the training courses provide a lot of benefits for teachers in applying ICT into teaching" (An, 13b). However, not all teachers were confident about the effectiveness of the ICT training courses. For instance, a teacher at the remote village stated, "the training courses should concentrate on one specific topic or one application, instead of covering a lot of applications at the very basic level" (Tuan, 26a) and "current training courses have made it impossible for teachers to use any application fluently" (Tuan, 26d). Another teacher, at the city school, suggested that it would be much better for teachers to receive training annually (Hoa, 36d) so that, according to a teacher from the village, "teachers can update their knowledge in new applications as well as website resources" (Phung, 31a). This was reiterated by the teacher in the remote village who suggested that "teachers should receive additional training in order to keep up to date with the latest software for education" (Tuan, 23d). For this reason, a teacher from a district school believed that "ICT classes should be open for any teacher who may participate at any time to learn whatever they desire" (En, 35d).

Whilst most teachers conveyed positive attitudes about the importance of training, the courses undoubtedly had a few drawbacks. Firstly, several teachers believed that the ICT training courses should have taken place during the summer when teachers are not busy teaching (Hoa, 30c; Thu, 30a). Existing ICT training courses took place during the school year and caused several problems not only to the participants but also to other teachers as mentioned by an interviewee working in the city school named Tha:

> "It [the ICT training course] causes a burden not only for the teacher who receives the training, but it also affects the teacher who takes over classes in the absence of the participating trainee" (36a).

Secondly, Vu stated that many teachers had to wait to be trained (Vu, 25b) because each school was only able to appoint one or two teachers at a time (Diem, 13a; En, 24c). The waiting time could be much longer if the schools had many teachers (Diem, 14c). Therefore, teachers needed to queue up to receive proper ICT training as explained by a teacher from the village school "I think all teachers will receive the training in the future, but it is still pending in the meantime" (Diem, 13e).

According to the extracted data, several teachers had not participated in the training course, as summarised in the table below:

Participants	Have Trained	Reference
City School		
Lan	Yes	Lan, 12a
Hoa	Yes	Hoa, 32a
An	No	An, 43a
Thu	Yes	Thu, 23a
Tha	Yes	Tha, 26a
District School		
Tan	Yes	Tan, 17a
Sao	No	Sao, 17a
En	No	En, 7b
Nho	No	Nho, 6a
Phung	Yes	Phung, 1b
Village School		
Vu	Yes	Vu, 18a
Diem	No	Diem, 13f
Ngoc	No	Ngoc, 37a
Quynh	Yes	Quynh, 21a
Lin	No	Lin, 21a
Remote Village		
Tuan	Yes	Tuan, 7b

Table 5.2 Trained versus Untrained Interviewees

According to the table above, seven out of sixteen interviewees had not participated in the training courses when this research was conducted. Thus, the untrained teachers account for 44% of the total interviewees. Regionally, the City School had one untrained participant, the District and Village School had three untrained participants and the Remote Village School had no untrained teachers. However, there was only one English teacher at the Remote Village school (Tuan, 1a). The ratio of the untrained to trained interviewees by regions is illustrated in the chart below:

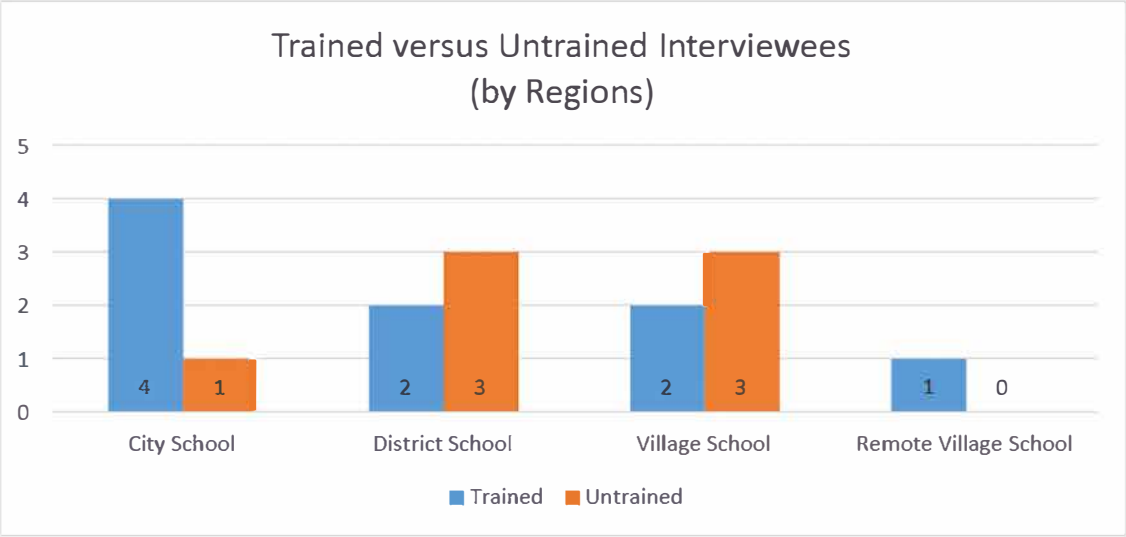

Figure 5.1 The Ratio of Trained versus Untrained Interviewees (by Regions)

The inability to provide the training courses to all teachers at once was an example of how local characteristics in terms of funding had influenced the decision-making process as the Education and Training Service could not afford to host training sessions for all teachers in the summer or to keep the training sessions active all year round. Details about the influences of local characteristics during the training course will be discussed further in the next chapter.

In addition, the method for selecting candidates reflected how inappropriately the ICT training policy was being applied. On the one hand, the extracted data revealed that it could take quite some time to be able to attend the training course because each school was only able to appoint one or two teachers at a time (Diem, 13a; En, 24c). The waiting time was much longer if the school had many teachers (Diem, 14c). On the other hand, a participant at the Village School had received training three times (Vu, 18a) even though, according to Table 5.2, three out of five interviewees had never participated in any training course. According to Lan, a City School teacher, "ICT training is only available for teachers who have been certified at B2-Level [of Cambridge First Certificate in English] and above" (36e). Schools' administrators often bypassed this prerequisite because many teachers did not have this qualification. The extracted data showed that "some [school] districts may not have any [qualified] attendee at all" (Tuan, 35b). As a result, experienced teachers were often selected to attend the training course rather than those who fulfilled the prerequisite (Tuan, 34b). Furthermore, although the ICT training

policy included no prerequisite for ICT qualifications, it was "designed for those who knew how to use a computer at a basic level" prompting Tuan to suggest that "it would be more appropriate to have a prerequisite for participating in ICT training courses" (24a and 24b).

Finally, the training courses only focused on teaching the trainees how to use computer software and the training for operating devices, especially troubleshooting, had not been considered which was concerning as the teachers may soon have to encounter this problem. Lan, a city school teacher highlighted the necessity for technical training:

> "Incompatibility actually occurs and it often happens that I have to conduct my own research to prepare my lessons because the training courses are insufficient. I have been discouraged a lot of times in self-discovering solutions to use ICT in my class because of my limited ability. Actually, I have skipped several problems to continue my lectures, using what I am capable of" (14a - 14f).

For the reasons emphasised in Lan's statement, the *ICT Training Policy* (Ben Tre Educational Service, 2016a) was not constructed well enough due to the lack of specifications in selecting the candidates and prerequisites. Despite the high number of untrained teachers, the use of ICT could not be postponed regardless of teachers' ICT skills because of the dictation of another ICT policy, which will be described next.

5.3.2 ICT Integration Policy

The *ICT Integration Policy* (Ben Tre Educational Service, 2016b) officially dictated that ICT should be integrated into teaching at all public schools within Ben Tre Province. Under the issuance of this provincial policy, funding was contributed by the Education and Training Service, the highest educational authority, to public schools to enable the purchase of necessary equipment for ICT-based teaching. From the extracted data displayed in the table below it can be concluded that ICT was integrated into teaching to a limited extent across all of the research sites:

	ICT Integration	References
City School	Yes	Lan (1c); Hoa (1a); An (7a); Thu (1a); Tha (1b)
District School	Yes	Tan (1a); Sao (1d); En (1a); Nho (2c); Phung (1a)
Village School	Yes	Vu (1c); Diem (1a); Ngoc (1a); Quynh (1a); Lin (1c)
Remote Village School	Yes	Tuan (1c)

Table 5.3 ICT Integration into Teaching

However, the use of ICT was different between teachers even though a minimum quota of two credit hours per school year had been set (Lin, 41a; Quynh, 44a;). English teachers at the City School did not speak freely about the quota but hinted that ICT was used very actively (Hoa, 28a). In the District School, according to a participant named Nho, ICT was required to be used in a minimum of 50% of all teachings (10a). This meant the District School was very proactive in integrating in ELT. Similarly, ICT was applied in every session weekly at the Village School (Ngoc, 1a). In contrast, ICT did not take place very regularly at the Remote Village School in which ICT was used once every two or three weeks (Tuan, 1c). On the one hand, the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) had been strictly obeyed at public schools as ICT had been taught, according to school policies, from a minimum of two credit hours to 50% of all teachings. On the other hand, administrators seemed to bypass the follow-up actions to ensure the training courses, as described earlier, could be used as effectively as possible. According to one participant, "policy and reality are very different".

Moreover, the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) lacked specific instructions for public schools to modify and/or remove policies and regulations which could obstruct the use of ICT in ELT. According to an interviewee named Thu, the ban on mobile devices should be lifted despite its negative impacts because:

> "Besides, most teachers use mobile apps in teaching while students are not permitted to use mobile phones in class. Even though students are somehow responsible for the ban on mobile devices, as some students use their phones to play games rather than to study, I still believe students will receive more of the benefits that ICT can offer through the use of mobile apps. Also, the ban on mobile phones has caused a side effect in which parents also discourage their children from using mobile phones as well. Therefore, students are missing a great opportunity to discover the mobile option. As a result, I cannot

> gain much advantage in using the online option. For example, it is possible for students to submit their work online, but current policies at this school do not permit this method. In the end, the offline method is the only option available" (21e - 21j).

The offline method, as stated above, was not only limited to students but it was also the only option for teachers, as prompted by Thu, "the training courses, for one, involve a lot of online applications, while offline is the only option at this school" (22a) for which "many teaching opportunities have to be skipped. As a result, my knowledge may sink into oblivion" (Thu, 22c, and 22d) Furthermore, the regulation built on the traditional belief of a noisy classroom should be stopped as explained by Thu:

> "Management is also an important factor. For example, effective teaching [including ICT] often comes with noise, as students proactively participate. However, management considers a noisy class as an out-of-order class. For this reason, most teachers prefer to keep their class as quiet as possible, which means students cannot participate much" (27c and 27d).

Even though it could be argued that the Education and Training Service in Ben Tre Province should not necessarily pass policies that interfere with the school's activities, providing instructions in ensuring the effective use of ICT in ELT would be surely the responsibility of the highest authority in the province. The lack of indications for public schools concerning the mobile ban and the traditional concept of a quiet classroom, as described above, showed that provincial policies seemed to lack the details needed to practically implement the integration of ICT uniformly across the district. The lack of a uniformed approach also made the distribution of instructions and troubleshooting manuals at the provincial level impossible. These limitations were exacerbated by errors within the policymaking process which will be discussed in the next chapter. Finally, the lack of a uniform approach led to different schools integrating ICT in different ways by selecting different equipment, computer applications, maintenance programs, and technical support. How schools tackled the task of ICT integration will be investigated in the technology section below.

5.4 Technology

The lack of details within the documentation of ICT policy regarding how to integrate ICT meant that public schools approached the implementation of this policy differently. At

some schools an audiovisual lab, or 'lab' for short, was set up, while at other schools, basic ICT tools were installed directly into classrooms for daily use. This section will concentrate on the use of ICT tools specified within *Decision No. 1400/QĐ-TTg*. Other tools such as, compact-disc players and cassette players will not be included because these tools are considered to be traditional tools by policymakers.

5.4.1 The Lab

The Boards of Administrators at some schools invested in the development of dedicated learning rooms including, audiovisual labs and/or English learning rooms, namely ICT dedicated learning environments (Tha, 16a; En, 12a). Lan described the lab as being "equipped with modern devices such as an interactive board and a telecom system" (Lan, 17d) in contrast to other classrooms where there was a lack of a stable Wifi network (An, 1d). According to the collected data, the ICT-dedicated learning environment tended to be equipped with a form of display such as a television, projector, or interactive board (Lan, 19e; Hoa, 4a). At some schools, there exists more than one display type in a dedicated lab as mentioned by Sao (12c) who spoke of the lab having an interactive board and an overhead projector. Out of all display types, teachers preferred the television (Lan, 19e; Hoa, 19b) because projectors tended to be outdated and could no longer display correct colours (Nho 13a; Ngoc 9c; Quynh 20b). On the other hand, the interactive boards were hard to operate if teachers had not received training to operate them (Nho, 19a; Phung, 2b). As a result, many interactive boards were used as display devices rather than as interactive teaching tools (Diem, 9d). This meant teachers were likely to choose televisions as the main display tool for teaching along with loudspeakers (Tha, 21b) which were available in every lab. While loudspeakers were considered as suitable for teaching (Tha, 21b), most televisions were not considered large enough. According to Diem (9i), "This room also has a mounted television but the screen seems not large enough". Some students, thus, had difficulty watching the displayed contents as "displays are not clear for students who are at the back of the room" (Diem, 9j). Even though teachers had requested upgrades, several schools had not had the funding for larger televisions.

Additionally, each lab was equipped with a set of control panels as found in,

> "There is a control panel installed beneath each student's desk with buttons labelled as A, B, C, D, which can be used to answer multiple-choice questions" (Tan, 4b).

Alongside control panels were headphones available on each desk for which students can answer multiple-choice questions during listening exercises (Tan, 4b; Sao, 12b; Diem, 9f). The use of a control panel with headphones to play audio contents from a computer server or a compact-disc player was considered a very effective way to teach listening (Sao, 12c). However, teachers tended to find that these control panels were unusable due to being broken. They spoke of how the "replacement of these panels has been requested but it is still awaiting funding" (Tha, 17a), "this system broke after just one year of service. And no repair has been done ever since" (Tan, 4c), "they are no longer in service" (Sao, 12d). They also found that a "lack of headphones causes difficulties in teaching with ICT integration" (Tan, 20d) and other interviewees reported headphones as being out of service (Diem, 9g; En, 28b) while replacements were still pending for approval (Tha, 17b).

Lastly, each lab was equipped with a server computer in which educational applications were installed along with other software such as the anti-virus application (Diem, 9e; Thu, 17b). In theory, a central computer would be an effective way to implement ICT for many reasons. First, a computer server, in general, should be more powerful than a personal computer for which it could operate several types of applications. Second, only one copy of computer applications should be required because the installation could be done on one computer. Third, the use of just one server computer should simplify the task of backing up contents as all submissions could take place on just one computer. However, the collected data showed very different outcomes. For instance, the server computer, despite being a state-of-the-art device at the time of implementation, was outdated according to current technology (Ngoc, 61d). One interviewee stated that teachers rarely use the server computer (Thu, 17b) due to the lack of software updates making the anti-virus application unreliable (Thu, 17c). For this reason, most teachers preferred to use their own laptops in teaching because "It is easy for me to use my own" (Lan, 20a). This meant teachers only needed the lab to use the displays and speakers which were not available in the classroom rendering the provision of a specially equipped lab nonsensical (Hoa, 19a).

As a result, investing in a dedicated lab and/or English learning rooms appeared to be ineffective due to the influences of local characteristics such as the lack of funding for

replacements and upgrades. Besides, schools seemed to overlook the importance of maintaining these dedicated tools because the extracted data indicated that non-professionals were assigned to manage the lab. For example, the ICT administrator at Remote Village School was a literature teacher (Tuan, 10a). Perhaps, the choice of equipping ICT in every classroom could be a better approach.

5.4.2 The Classroom

Making ICT available in every classroom was another approach to integrating ICT in ELT. In this approach, televisions and speakers were installed in every classroom (Tha, 14g) so teachers could display teaching contents from laptops. An interviewee said that "televisions have only been installed at this school for just two weeks" (Ngoc, 9a). At another school, "new televisions are expected to arrive soon" (Hoa, 17b). Some schools even had been equipped with 72-inch televisions which should be large enough for displaying purposes (An, 24a). The observations also found that interactive boards had been installed in classrooms alongside other tools as summarised in the table below:

ICT Tools in Classrooms

City School	
Lan	Smartphone, Speaker, Microphone
Hoa	Computer, Interactive Board (used as a display)
An	Laptop, Speaker, Interactive Board
Thu	Laptop, Television
Tha	Computer, Interactive Board (used as a display)
District School	
Tan	Laptop, Speaker, Projector, Interactive Board (used as a display)
Sao	Laptop, Speaker, Projector, Interactive Board
En	Computer, Speaker, Projector, Interactive Board (used as a display)
Nho	Computer, Speaker, Projector, Interactive Board (used as a display)
Phung	Laptop, Speaker, Projector, Interactive Board
Village School	
Vu	Laptop, Speaker, Projector, Interactive Board (used as a display)
Diem	Laptop, speaker, Projector, Interactive Board (used as a display)
Ngoc	Laptop, Speaker
Quynh	Laptop, Speaker, Projector, Interactive Board (used as a display)
Lin	Laptop, Speaker, Projector, Interactive Board (used as a display)

Remote Village	
Tuan	Laptop, Speaker, Television

Table 5.4 ICT Tools in Classrooms

The table above shows that different ICT tools were installed not only in classrooms across different schools but also in classrooms at the same school. Laptops, speakers, and interactive boards were found in most classrooms. However, most teachers used interactive boards as displays rather than interactive devices. Also, two classrooms had not been equipped with any display medium as observed by Lan at the City School and Ngoc at the Village School. The ICT tools provided in classrooms at the District School and Village School were roughly equivalent, while there was a significant difference between tools provided at the Remote Village School compared to other research sites.

In comparison to the ICT dedicated learning environment, this approach could cost more to implement because many televisions and speakers needed to be purchased along with multiple computer applications required to be installed on several of the school's laptops (Ngoc, 25c). However, teaching sessions no longer needed to be cut short to switch from typical classrooms to the lab. Vu (23d) argued that the time saved could be used in further teaching. Besides, the cost for maintenance could be reduced dramatically as maintaining televisions and speakers would be much easier than maintaining an entire lab with many types of dedicated equipment such as the interactive boards and control panels. Furthermore, teachers were able to find alternative solutions much more quickly and easily if devices in classrooms were non-functional. For example, teachers could use "a Bluetooth speaker to play audio files" (An, 1b) in the event loudspeakers were out of order. The use of Bluetooth speakers in combination with laptops and smartphones as storage devices (Thu, 2b) offered options for teachers to use ICT even in the case of blackouts as these tools could operate on batteries.

Concerning school-owned laptops, teachers preferred to use their own laptops (Nho, 12c; Tha, 15b) because the school's laptops tended to be shared by many teachers which led to the possibility of data loss as well as the threat of virus infections (Lin, 20b). This explained why teachers always carried their laptops and speakers to school on a daily basis (Lan, 20d). As teachers preferred to use their equipment, the boards of administrators only needed to

maintain televisions in workable order to ensure that teachers had access to display devices. This, in turn, costs much less in terms of replacement costs and efforts.

Investing in each classroom provided the opportunity for ICT to be used not only by English teachers but also by other teachers as one interviewee stated, “the learning room is sometimes acquired by other departments” (Ngoc, 22c). Truly, according to Tuan, anyone could convert a class session from the traditional teaching methods into a digital-based method by connecting a laptop or a smartphone to the television which had been made available (8b). Furthermore, the approach of installing televisions and speakers in every classroom created the possibility for ICT to be taught in every subject instead of English alone.

This approach to integrating ICT had a couple of drawbacks. Firstly, teachers were often not told what kind of televisions or speakers were to be installed which meant that they experienced connecting issues (Tuan, 30a; An, 28a). One interviewee said, “lessons which I prepare on my laptop are not compatible with the equipment at school” (Tan, 20b). Another interviewee also shared this point,

> “Even though smartphones can be connected to larger displays, this option is not available at this school because the current LCDs do not have appropriate connecting ports” (Thu, 19c).

Even though teachers tried to use adapters to fix the compatibility issues, the trial-and-error attempts in finding the correct adapters were very time-consuming because most teachers were not able to get information about the brand and model of the television they planned to connect to.

Secondly, due to teachers using their own laptops it was difficult for support staff to help troubleshoot and provide technical support because they were not familiar with the teacher’s equipment (Tha 15b; Quynh 18a). It was also difficult for teachers to help each other and share devices because some teachers used Apple computers that were operated on Mac OS while others used Windows-based laptops (Tha, 15b; Nho, 12c). The range of different devices and software in use made it difficult for manuals and training to be devised by the Education and Training Service. For instance, the extracted data showed that one particular teacher had used jet Audio, which was not included in the training to edit audio

files after being introduced to it by a music teacher (Sao, 4a, and 4b). jet Audio is free to use; however, it is difficult for the Education and Training Service to create a proper manual because the Help section in the software is the only place to find instructions. Likewise, it is almost impossible for the Education and Training Service to keep up with the thousands of new mobile apps that are added to Apple Store and Google Play every month.

Finally, Internet connectivity was not good enough to support devices installed in classrooms. In the Remote Village School, the Internet was not available due to a lack of infrastructure within the region (Tuan, 8c). However, the lack of Internet at other schools was due to a lack of infrastructure within the school. At the City School, the Internet was intermittent (Lan, 21a) and the Wi-Fi was unreliable (An, 1d; Hoa, 21c). Teachers at the District School also experienced the same issues as their colleagues in the city as mentioned by Tan, "online exercises are hard to apply because of poor Internet connection" (19b). At this school, the Internet was only available in the lab and learning rooms (En, 3a) while individual classrooms had to rely on an unstable Wi-Fi signal (En, 3b). Likewise, there was an unstable Internet connection in the Village School (Ngoc, 44c; Quynh, 29a). As a result, browsing online content while teaching was impossible (Tuan, 8d). Hoa even suggested the presence of e-books in the form of CD-ROMs "should be available because it is not possible to access these e-books via the Internet at the moment due to a lack of a Wifi system" (21b and 21c).

For all of the above reasons, equipping each classroom with ICT tools might be preferable to create a dedicated lab. However, if this option is pursued across the province it will be necessary to ensure that an adequate infrastructure is in place both within the school and outside of the school to provide a reliable Internet connection. In addition, if teachers continue to use their own equipment, providing technical support will continue to be challenging. It will also be challenging to develop user manuals and training courses to support teachers. As a result, ICT integration and troubleshooting would rely solely on teachers' competence in ICT. Unless all teachers could achieve the same level of ICT competence, teaching quality would be significantly different between different teachers.

5.5 People

The *People* theme contains all human factors associated with the innovation according to the theoretical framework as described in Chapter Three. In particular, human factors that comprise the *People* theme are administrators, teachers, students, and the community which includes parents. Findings regarding these subsections are described in this section.

5.5.1 Administrators

The subtheme of administrators has been adopted from the theoretical framework in which *District* and the *Principal* as proposed by Fullan (2015) in his ECT are equivalent to the roles of the Education and Training Service in Ben Tre Province and the Boards of Administrators at public schools. Due to administrators not taking part in the data collection, it must be highlighted that administrator-related findings are solely based on teachers' opinions. Hence, this section will focus on what teachers think about administrators and what teachers hope administrators should do regarding the integration of ICT in ELT.

Having the highest authority in educational administration, administrators at the Education and Training Service in Ben Tre Province issue ICT-related policies for the whole province as described earlier in Section 5.3. They also contribute funding for public schools, including investments in ICT tools. According to a teacher named Lan, "a dedicated lab was established through funding from the Education and Training Service in the province" at her school (Lan, 17b and 17c). Also confirmed by another teacher at the City School, "the Board of Administrators [Principal] has reached out to higher authorities in seeking additional funding" (Hoa, 27d). However, funding contribution appeared to be a bureaucratic process in which, according to a teacher at the Village School,

> "it is quite hard to spend state funding. For one thing, it takes a very long time for a funding request to be approved, prior to the release of money" (Ngoc, 24a and 24b).

The way funding had been contributed is further described here by Ngoc:

> "For example, the English department [at the Village School] has requested to purchase a 65-inch display because the existing projector is about to fall through. In addition, quality speakers should be

> purchased. Even though the Board of Administrators has approved all of these requests, no actual purchase has been made because funding [from the higher authority] have not yet been released. Sufficient funding should be available upon request to replace devices for which replacements have been requested. These are very urgent support I wish to receive" (25b, 25c, and 29a).

From this particular teacher's viewpoint, having proper audio and video equipment is essential to his teaching, but the delay in funding contributions had made teaching tasks more difficult. Additionally, this problem, did not only occur at the Village School but also the Remote Village school. According to the only English teacher who taught all secondary grades (Tuan, 1a),

> "the Education and Training Service should make funding available for the Board of Administrators to purchase a larger, 65-inch television to provide better visibility for everyone in the classroom" (Tuan, 23a).

Tuan added that the request for less expensive CD players had still been pending for approval (Tuan, 14b).

On the one hand, the Boards of Administrators at public schools, or the Principal, had attempted to fulfil requests made by teachers by seeking additional funding from the Education and Training service. Such attempts helped explain why many teachers believed their principals were very supportive (An 39a; Hoa 27b; Nho 18b; Lin, 35a; Ngoc, 35c). The Principal at the Village School was described as encouraging teachers to teach with ICT and doing "their best to fulfil any request in regard to ICT" (Vu, 16a). Another teacher, at the District School, believed that,

> "the Board of Administrators will review each request according to current policies and protocols. If it is within regulations, the Board of Administrators will be likely to grant my request. In general, this school prioritises long-term investments" (Sao, 16a – 16c).

On the other hand, the Boards of Administrators at public schools had not been able to fulfil all necessary requests made by teachers especially those that sought to replace equipment which had been on the verge of being out of order like projectors as found in Ngoc (25b) because schools had to request funding from the Education and Training service (Hoa, 27d).

Besides seeking funding to purchase different ICT tools, the boards of administrators is in charge of assigning a dedicated person to take on the role of ICT maintenance and

technical support. The extracted data revealed that different schools had different arrangements regarding ICT maintenance and support. At the City School, no dedicated support team was established (An, 26a.) Instead, "computer-science teachers sometimes provide assistance, but it is not very consistent because technical support is not what they are responsible for" (An, 27a and 27b) and they could only support in some troubleshooting if they were not busy with their teaching (An, 46b). Another teacher at the City School also confirmed the help from computer science teachers, especially for the installation of the new software (Tha, 24b). This same teacher also mentioned that there had been a dedicated expert who had retired from the City School. English teachers could ask this person to help with complicated issues via telephone (Tha, 19b). A dedicated team, in contrast, had been established at the District (En, 23c; Nho, 10c) and Village Schools (Vu, 15a) in which computer science teachers had been assigned as ICT specialists (Quynh, 43a; Tan, 7a). Lastly, and oddly, the Remote Village school had appointed a literature and rhetoric teacher as the ICT maintenance staff (Tuan, 10a).

It is likely that teachers in the City School sought help for ICT issues from computer science teachers. However, assistance at the City School would be voluntary as the City School had not yet created a dedicated ICT maintenance and support team. At the District School, the role of the technical support staff was clear with ICT equipment "under the administration of one computer teacher, who has been appointed as the specialist at this school" (Tan, 7a). The technical support team, however, had been understaffed which made it difficult for them to respond to all the teachers. The problem was explained by a teacher at the Village School:

> "This specialist is often busy because he has to respond to all requests made by all teachers at the school. Teachers, therefore, hesitate to bother due to his being overwork. Technical problems, thus, are often bypassed as teachers do not report them" (Diem, 12d – 12f).

The lack of technical support due to staff shortages at the District School and Village School could lead some boards of administrators to be unaware of some technical issues because teachers did not report them.

Finally, the Boards of Administrators at public schools are involved with the evaluation of ICT use in ELT for the purpose of ratings and awards. This was evident at the City School

(Lan, 25a) and the District School (En, 30b), but it was not yet developed at the Village School (Quynh, 45a) which meant ICT had not yet been considered as a factor for ratings and awards (Ngoc, 42a). Even though none of the participants were willing to discuss this in detail the effects of the ratings and awards on their careers is significant, as an English teacher in Ben Tre Province myself I can attest to ratings and awards being beneficial for future promotions and increases in salary. The Boards of Administrators at the City School and the District School have been able to better promote the use of ICT in ELT because the teachers' motivation is obvious. On the other hand, the findings, as illustrated in Table 5.5 in the next section, show that neglecting to put teachers forward for awards did not stop teachers in the Village School from proactively applying ICT in their teaching. This suggests that promotions and increases in salary are not deciding factors for insuring ICT integration. Consequently, it is crucial to more closely explore the role of teachers facilitating educational change.

This section has explored the role that administrators play in relation to the integration of ICT in ELT. The role that provincial administrators play in the distribution of funding has been discussed while other aspects of their role will be discussed in Section 5.3 to understand how and why these administrators made such decisions. In contrast, this section has explored the role of the boards of administrators at public schools in fulfilling ICT requests made by teachers and in establishing technical assistance for teachers. Finally, this section has uncovered that an absence of salary increases and promotions does not necessarily discourage teachers from supporting educational change. In the next section, the discussion will explore how teachers integrate ICT in ELT when equipment and technical support appears to be insufficient.

5.5.2 Teachers

In Ben Tre province teachers were only required to carry out two ICT-based sessions within an entire school year in order to comply with policy (Quynh, 44a). The teachers believed that this existing requirement was very low and insufficient:

> "Currently, there is a quota for using ICT at a minimum of two credit hours per school year, but most teachers can easily meet this requirement. I think this quota is very low" (Quynh, 45b).

As there was not enough equipment to go around within a school, teachers were encouraged to use their own equipment with no restrictions. Most teachers preferred to use their own laptops (Lan, 20a; Tha, 15b) because school-owned laptops had to be shared by many

teachers, according to a teacher in the Village School (Lin, 20b). Being granted the liberty of using their laptops meant that teachers were able to select any computer application to enhance their English teaching.

The table below illustrates how ICT was integrated into teaching according to the extracted data:

Participant	Listening	Speaking	Reading	Writing	Vocabulary
City School					
Lan	Y	N	Y	Y	Y
Hoa	Y	Y	N	N	Y
An	Y	N	N	N	Y
Thu	Y	Y	Y	N	Y
Tha	Y	N	N	N	Y
District School					
Tan	Y	Y	Y	Y	Y
Sao	Y	Y	Y	N	Y
En	Y	Y	Y	Y	Y
Nho	Y	Y	Y	Y	Y
Phung	Y	Y	Y	Y	Y
Village School					
Vu	Y	Y	Y	Y	Y
Diem	Y	Y	Y	Not Given	Y
Ngoc	Y	Y	Y	N	Y
Quynh	Y	Y	Y	Y	Y
Lin	Y	Y	Y	Y	Y
Remote Village School					
Tuan	Y	Y	Y	Y	Y

Y: Yes
N: No
Not Given: No data

Table 5.5 ICT Tools Used by Different Teachers in ELT

All sixteen teachers used ICT when teaching listening and vocabulary. Most teachers had also used ICT to teach speaking teaching with only three participants not using it (Lan, 3b; An, 4a; Tha, 4a). Similarly, ICT was incorporated regularly in teaching reading with only three teachers who had not opted to use ICT (Hoa, 5a; An, 5a; Tha, 5a). Finally, the findings showed that six teachers had not yet embraced ICT in teaching writing (Hoa, 7d; An, 6a; Thu, 7a; Tha, 6a; Sao, 8a; Ngoc, 11a). One teacher at the Village School named Diem did

not provide information. Besides, ICT had not been applied much in grammar teaching according to a City School teacher who stated, "I have no knowledge about the use of ICT for grammar teaching" (An, 12b). Another teacher at the District School added,

> "ICT seems not to provide many benefits in grammar teaching because it often requires grammar structures to be written on a blackboard for students to practice over and over" (Sao, 10a).

The findings showed that only three teachers had used ICT in grammar teaching: Diem (2c) and Ngoc (15b) at the Village School, and Tuan (29a) at the Remote Village School. As grammar teaching involved only three cases, it was not included in Table 5.5 as shown above.

Moreover, not integrating ICT in teaching may not necessarily mean that teachers did not have the capability. Hoa explained that she had decided not to use ICT to teach writing because:

> "There was an overhead projector for each room before, but this device has been out of service for a while. Teachers have requested the re-installment of this device because it is effective, especially during correcting. It allows teachers to project written texts on the wall for the whole class. Due to the lack of this device, students have to submit their writings on a piece of paper for correction. I, then, write some corrections on the blackboard as samples" (7a – 7d).

In this case, technological difficulties were preventing the adoption of ICT in teaching writing. In another instance, using ICT to teach speaking was deemed not to be appropriate due to the capabilities of students as explained by Tha, "I have not applied ICT in speaking yet, because most of my students are below-average" (42a). Some teachers did not use ICT because they were unaware of how they might use alternative equipment or software to supplement a deficiency in the equipment provided by the school. For example, one teacher explained that the reason they did not use ICT in teaching reading was because "it is hard to apply ICT into reading because it must take place in the audiovisual lab" (Hoa, 5a). On the other hand, using ICT in assignment could be done with very basic tools, according to Tan:

> "Students only listen to pronunciations of new words in the reading assignments. Videoclips are often in use to display new words along with the embedded audio files for pronunciations. This is how a reading session is taught" (10a and 10b).

Therefore, the use of ICT depended on both the availability of equipment and the ICT-competence of the teachers. For this reason, it is important to more fully explore how teachers use ICT to create interactive lessons that cover different aspects of language teaching (e.g. speaking, listening etc.) and use real-life contexts.

The following table summarises whether interviewees teach with interactive lessons covering different aspects of language teaching using real-life contexts within interviews and observations:

Participant	Combine Skills	Use Real-Life Contexts	References (If Yes)
City School			
Lan	N	Not Given	6a;
Hoa*	Y	Y	8a; 11b
An	Y	Not Given	8a
Thu*	Y	Y	9b; 36a
Tha*	Y	Not Given	7a
District School			
Tan*	Y	Y	12a; 31b
Sao	Y	Y	9a; 30a
En	Y	Y	47a; 43a
Nho	Y	Y	28a; 26a
Phung	Y	Y	8a; 49a
Village School			
Vu	Y	Y	35b; 32a
Diem	Y	Y	27d; 24a
Ngoc*	Y	Y	13a; 53a
Quynh	Y	Y	8a; 49a
Lin*	Y	Not Given	12a
Remote Village School			
Tuan	Y	Not Given	27a

*: Older teachers (45 years of age or above)
Y: Yes
N: No
Not Given: No data/Cannot confirm

Table 5.6 Interactive Use of ICT

Combined skilled teaching requires more time to plan for than teaching standalone topics. Table 5.6 shows that most teachers combine multiple skills into one lesson to engage students

with the topic more interactively. For example, a reading session using combined skills was described as follows:

> "I often assign my students to do some writing and speaking before teaching a reading lesson. Further exercises can take place in post-reading sessions. For instance, students can talk about the reading topics, or they can answer some questions from the reading exercises" (Vu, 35b - 35d).

In Table 5.6, only one teacher did not combine skills in one lesson because of the layout of the textbook (Lan, 6b) which was the older version (Lan, 5a). Differences between the older and the latest versions of the textbook were explained by a City School teacher as:

> "Students simply answer the questions in the older version. With the new approach [the latest version], students need to conduct some research about a certain topic. They are required to collect information, pictures, etc. to include in their presentations. Even though contents are still based on older versions of textbooks, teaching method has been modified to suit the new teaching method [in the latest version]" (Thu, 40b – 40d).

Lan, a City School teacher, also confirmed that "this practice was not available in the older textbooks, but combining skills is available in the latest version" (Lan, 27a). Hence, the latest version of the textbook favoured the interactions between students and the teaching topic because students needed to conduct research for presentations rather than answer questions.

This interactive practice was further developed when teachers introduced real-life contexts to engage students in practicing English through simulated scenarios as shown in Table 5.6. For example, students took on the role of shoppers to practice how to return merchandise at a shopping mall (Thu, 15f). Another teacher described how real-life contexts could be used in teaching listening and speaking:

> "The topic was about the natural wonders of the world. In this assignment, I used pictures taken in nature, for which I combined all pictures as a video clip by using a software known as Movie Maker. Then, students, in the role of a travel agent, would do their best to introduce the place as a tour guide by using references in the video clip" (Sao, 30b).

ICT provided a lot of benefits for teachers when engaging students with the teaching topic because students were no longer passive receivers of knowledge. Instead, they actively participated in the topic. As a result, students made more progress as Ngoc explains,

> "Students are very excited to learn. Videoclips with lively pictures attract their attention. Furthermore, students even develop further searches if a certain topic appears to be interesting and intriguing" (13a -13c).

Older teachers are identified using asterisks in Table 5.6. This demonstrates that, on the whole, they are able to use ICT as effectively as their younger counterparts to plan lessons that combine aspects of English teaching and that use real-life scenarios to engage students. This finding runs contrary to many of the opinions expressed by both younger and older teachers during the interviews. For example, one young teacher describes how, "some elder teachers may always find ICT a challenge because they neither are not efficient in learning ICT nor do they consider ICT as a necessity for teaching" (Quynh, 46b). Some older teachers even admitted to age-related issues, "I have lost the energy for learning due to my age." explained Thu, "It is easy for me to forget things at this old age" (Thu, 23b and 23c). Another experienced teacher stated, "I feel that my age is a disadvantage in using ICT because my acquisition is much slower than younger people" (Tan, 21b). However, Table 5.6 proves that old teachers can use ICT as effectively as all others to combine different aspects of English teaching and to introduce real-life contexts (Hoa 8a; 11b; Thu 9b; 36a; Tan 12a; 31b; Ngoc 13a; 53a). Those who found ICT challenging could learn from their peers through knowledge-sharing practices identified by interviewees as being common (An, 47a; Thu, 26c; Tan, 29d; Sao, 17b; En, 7b; Nho, 10e; Phung, 30a; Ngoc, 27a; Lin, 40a). However, in some cases older teachers appear to outperform their younger colleagues as evidenced in Table 5.6 (Tan and Lin) and as admitted by younger teachers at the District School, "I even know some older teachers who are experts in ICT" (Nho, 17d) and at the Village School, "the elders are better because they have earned a great deal of experiences through their number of years in teaching" (Quynh, 31a).

On the whole, it was found that teaching experience enabled teachers to use ICT to adapt their teaching for students with different learning capabilities. For example, an experienced teacher claimed that ICT supported them in developing targeted content to engage students with different levels of English competency (Hoa, 13e and 13f). Interviewees spoke of using lively pictures (Sao, 23b) along with audio and video clips (An, 10c; Hoa, 34c; Lan, 40c; Tha, 3c) to enhance their teaching and engage students in learning. These multimodal resources were able to support weaker students without disadvantaging more able students as can be seen in the following extract:

> "Pictures sometimes can be used to practice speaking in which two pictures are displayed along with cue-words. Students, then, can use these pictures with suggestions from cue-words to describe many aspects such as similarities, differences, and so on" (Lan 42c and 42d).

Here Lan describes how pictures provided a scaffold for weaker students by providing them with prompts to support their speaking, while at the same time being able to challenge more students by inviting them to extend their vocabulary and try out more complex sentence structures.

In general, ICT helped students make progress (Hoa, 16a; Ngoc, 18a; Phung 10a). However, some teachers believed that it was only helpful for "good and excellent students" as they could "carry on their progress while average students seem to lose some of what they have learned" (Hoa, 16c). For this reason, it is necessary to explore in more detail how ICT may be used to support students with all levels of English and in particular weaker students in the next section.

5.5.3 Students

Students learning abilities vary within the class with some performing well and others requiring additional teacher support (Tha, 13c). Lan describes high performing students as needing very little teacher support because they are able to read and correctly pronounce words (Lan, 40b). Tha remarked on ICT being particularly good at maximising the ability of high achieving students to learn (Tha, 13b) because they tended to be able to progress faster when learning with ICT (Diem, 7b; Ngoc, 57a; Thu, 25b; An, 38a). Thu pointed out that "many students nowadays are participating in learning centres besides learning at school" (Thu, 9c) to improve their skills in English and ICT among others which could have contributed to the parallel development of ICT and English skills. Data indicated that some students were very knowledgeable about ICT and, according to Diem, some students could use ICT better than their teachers (5c) and knew about, "applications which teachers have never been trained for (19g)". Diem confirmed that some students helped her to search for teaching content on the Internet and concluded that she, "admired what my students can find on the Internet" (Diem, 19c). However, strong ICT skills did not necessarily lead to strong English skills. Lan, a City School teacher, pointed out that:

> "Students who are weak at English struggle to learn using ICT (29b) even though they might have strong skills in ICT. For example, some of my students are unable to do English exercises using ICT; however, they can find all the songs I requested on the Internet" (29b and 29c).

Furthermore, strong ICT skills had a potential negative impact on English learning due to students using these skills to cheat. As Diem explained, there were rising concerns about plagiarism:

> "I am even unable to spot the plagiarism used in some of their work. It is difficult for me to grade writing assignments because they may copy existing writings online. Even though I may raise my suspicious in their writing, I am unable to prove that because texts are copied from several sources. So, good students may make progress in learning while some others abuse the convenience that ICT can offer" (19i and 19j).

Preventing plagiarism is not an easy task. The recommendations in Chapter Seven will propose some effective ways to address this problem.

An suggested that ICT appeared to be good at supporting some average and weak students (An, 18b). Another teacher observed that,

> "these below-average students seem to be more interested in a class taught with the use of ICT. Conversely, they are completely distracted in a class taught with the traditional method" (Thu, 38c and 38d).

On the other hand, a teacher at the District School believed,

> "the majority can surely make progress. Only a minority of students cannot make progress because they only pay attention to the pictures and videos, rather than focusing on learning" (En, 20a and 20b).

This implies that ICT may create a distraction for some weaker students (Vu, 38a) which prevented them from making progress. A number of interviewees (Thu, 15b; Hoa 16e; 16f; 16g; Tha, 42b; 45d) claimed that weaker students struggled with notetaking, retention and confidence in lessons taught according to a more traditional method. Integrating ICT added an additional layer of difficulty for these students (Diem 7c; Ngoc, 58a; Tuan, 17b). One teacher at the District School believed that teaching with ICT in the audiovisual lab disadvantaged weak students (Sao, 20g) and the teacher at Remote Village School also noted that "these weaker students often cannot keep up with the lessons as contents are constantly changed on the display" (Tuan, 17c). Distractions while learning with ICT alongside a weak

foundation in English were reasons which made it hard for weak students to follow the lesson (Sao, 30e; Thu, 38a). The situation is exacerbated by these students not having a great many opportunities to ask questions because more able students tend to be selected by teachers who are prohibited from falling behind schedules (Lan, 34c; Tuan, 32d). In addition, some teachers are worried that weaker students might accidentally damage ICT equipment if given free reign (Tha, 33b).

Helping these low performing students to progress in ICT-based learning is not an easy task. However, one teacher at the City School believed there were ways to help (Hoa, 30d). According to this teacher, rearranging seating positions was an easy way to begin providing support because "a weaker student could sit next to a good one who may provide help" (Hoa, 30a) "pronouncing new words while in class by repeating from their classmates" (Hoa, 16e). A teacher at the District School suggested that weak students should be assisted and encouraged first (Phung, 37a). Another teacher explained the importance of improving confidence as follows:

> "I also let better students help them by assigning exercises in pairs and groups. For very weak students, I let them accomplish very basic tasks such as reading questions out loud for better students to answer. This way helps build confidence in these weak students because, at the very least, they know they can achieve something in English. Even though I have not found any perfect solution to turning weak students into good and excellent students, my options have gradually improved their learning ability" (Phung, 37b - 37d).

The involvement of weak students seems fairly limited in the above example. However, the tactic proposed by Phung could be crucial to providing weak students with a way of participating in classroom activities and building their confidence to cope with the fact that "most weak students become weaker [when learning with ICT]" (Lan, 45b). Teachers at the City School and Village School suggested assigning weaker students with just the basic requirement in a lesson (An, 53b; Ngoc, 59a). For instance, Ngoc said, "I only expect them to learn new vocabulary rather than constructing complex sentences by using new words which they have been taught" (60a). Another teacher at the Village School talked about using ICT to support low performing students learn new vocabulary through games (Vu, 38c). Vu's colleague at the Village School also believed that pictures, videos, and games could help weak students in learning (Lin, 49b). For example, "pictures should be used in accordance

with new words to help weak students to understand better and easier" (Sao, 35d). Then, further explanations would be used to assure weak students could understand the teaching topic (Quynh, 54c). These students could also improve their English skills by participating in private tutoring sessions after class free of charge available at the City School (An, 36j; Thu, 9c; Tha, 45b), District School (Tan, 30b; En, 50b), and Village School (Vu, 23b) because weak students had weak English foundations (Sao, 20e).

In this section teachers have been shown to use several pedagogies and tactics to help weak students to learn effectively when ICT is integrated in ELT; however, teachers need families to mirror this support at home. As one teacher worried that "students who are from low-income families do not have much opportunity to learn ICT" (Hoa, 25e). Another teacher worries that some parents did not pay much attention to their children (An, 40a) and stressed the importance of parents supervising their children's work outside school:

> "I know some students who may do well in school, but they later turn out to be ignorant in their study due to the lack of supervision from their parents" (40c).

Parents can be meaningful influences for the students; therefore, it is necessary to explore more about parents in the role of community as described in the section below.

5.5.4 Community

The term 'community' would normally stretch to include everyone residing in Ben Tre Province. However, this section focuses on the school community and explores the role students' parents might play in supporting educational change. This is because they have a direct impact on their children's approach to learning and on their familiarity with ICT. As students' parents did not take part in any interview and observation during the data collection process, information obtained about them is entirely from the teachers' perspectives. However, I strongly believe that it is reliable because I have also experienced similar experiences during my teaching career.

Teachers within the study identified the students' family background as having a significant impact on the students' learning ability. Hoa (25f) argued that students from low-income households tended to have parents who did not pay close attention to their children's academic achievements. This often meant that these children struggled in school.

Unfortunately, their parents tended not to offer them the opportunity to improve their academic performance by enrolling them in private tutoring centres after class (Hoa, 16d; 25e). Consequently, students from low-income households often had a weak grasp of the foundations of English language which became more evident as they progressed through the school (Sao, 20e; Lin, 30a). Difficulties in English language were often compounded by an unfamiliarity with ICT. According to a teacher at the District School, students who lived in urban locations had better ICT capabilities than those who lived in rural areas (Phung, 23e) where the majority of the population were low-income workers as described in Chapter One. In contrast, a City School's teacher believed that students who came from middle-class families were more practiced at using ICT and had more experience of it (Hoa, 25c; Tha, 34a). This belief was shared by a teacher at the District School (Phung, 23d). Moreover, middle-class parents tended to enrol their children in English learning centres for additional English learning (Phung, 25a). According to a City School's teachers,

> "many students nowadays are participating in learning centres besides learning at school. I, therefore, must find a way to show my students that my teaching is reliable" (Thu, 9d).

Different family backgrounds can be seen to have an effect on students' learning ability with weaker students tending to be from low-income families. The teachers interviewed found that they have to devise different approaches to integrating ICT in ELT to be able to support all students within their class. Even though the gap between weak and strong students was reported as being substantial, teachers were hugely motivated to support all the students within their class. One City School's teacher said:

> "Obedient students who come from troubled family backgrounds are one of the most encouraging motivations. Their dedication and hardship in class have eased my exhaustion". (An, 41a).

In my opinion, the dedication of their students and the hardships they experience drive teachers to work harder to ensure that they are able to provide them with the best quality teaching. This drives teachers to be more flexible, resourceful, and proactive in integrating ICT in ELT as described in the next chapter.

5.6. Summary

This chapter has set out the research findings based on data collected from interviews and observations and coded using a thematic analysis. Throughout this chapter the relationship between themes including *Policy* and *People, People* and *Technology*, and *Technology* and *Policy* has started to emerge in which the *People* theme appears to be dominant because people determine policy and technology use. How English teachers use ICT effectively despite facing a series of interrelated obstacles will be described in detail in the next chapter to seek to answer the research questions.

Chapter 6

DISCUSSION

6.1 Introduction

This chapter takes all findings, as described in the previous chapter, and seeks to answer the three research questions proposed in Chapter One. These are:

(1) How has ICT been used effectively in ELT at secondary schools in Ben Tre Province?

(2) What obstacles impede the effective use of ICT in ELT at secondary schools in Ben Tre Province?

(3) What is the relationship between the factors affecting the use of ICT at secondary schools in Ben Tre Province?

Answering these research questions is important in aiding the integration of ICT into ELT in Ben Tre Province because, as mentioned in Chapter Two, there is no comparable study. Studies exploring different aspects of ICT use have been carried out, for example, there are publications about the integration of ICT in ELT (Dang, Nicholas, and Lewis, 2012; Ngo, 2016), or the benefits of using ICT in ELT in developing countries where funding is an obstacle (Vo and Le, 2014; Dinh, 2015). There are also studies about the technological disadvantages educators face due to faulty infrastructures such as electricity and the Internet (Li and Walsh, 2011; Basak and Govender, 2015). Moreover, there are studies about the relationship between traditional mindsets and the Confucian ideology (DeVos, 1998), including the impact Confucius's ideas have on the modern era (Yao, 2000). However, no study has attempted to combine all these aspects into a single study to explore the relationship between factors affecting the adoption of ICT and propose appropriate solutions which may improve the use of ICT in ELT.

In order to deliver persuasive outcomes, the data related to each research question will be discussed in chronological order using the principles of *Education Change Theory* (ECT) (Fullan, 2015) and *Diffusion of Innovation Theory* (DoIT) (Rogers, 2003), as described in Chapter Three, to structure the analysis of themes generated in Chapter Five. The following diagram illustrates how themes, theory, and chronological time come together:

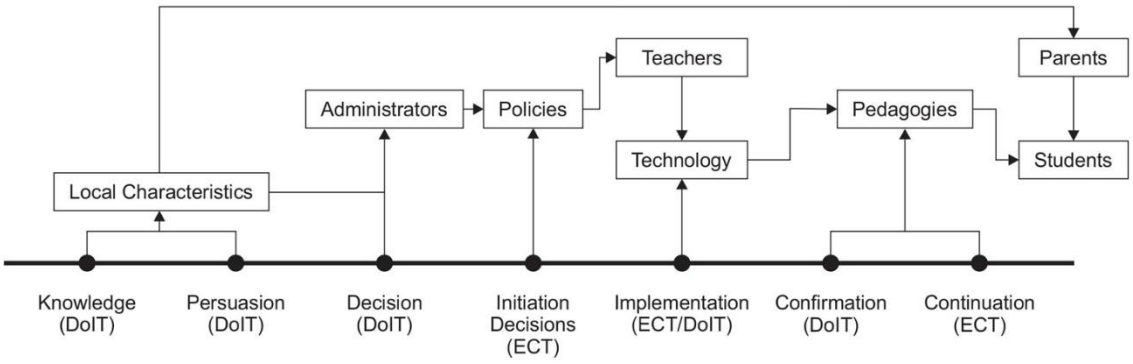

Figure 6.1 Discussion Sequences

Discussions in response to each research question will begin with an investigation of the cluster of subthemes (culture, demography, education, and infrastructures) pertaining to the main theme of *Local Characteristics*. Investigating how they relate to the other three themes (*Policy, Technology,* and *People*) will lead to an understanding of the effective uses of ICT in ELT at secondary schools in Ben Tre. The principles of ECT and DoIT will be applied in response to each research question to help explain how and why each theme affects the implementation of ICT in ELT, as illustrated in the following diagram:

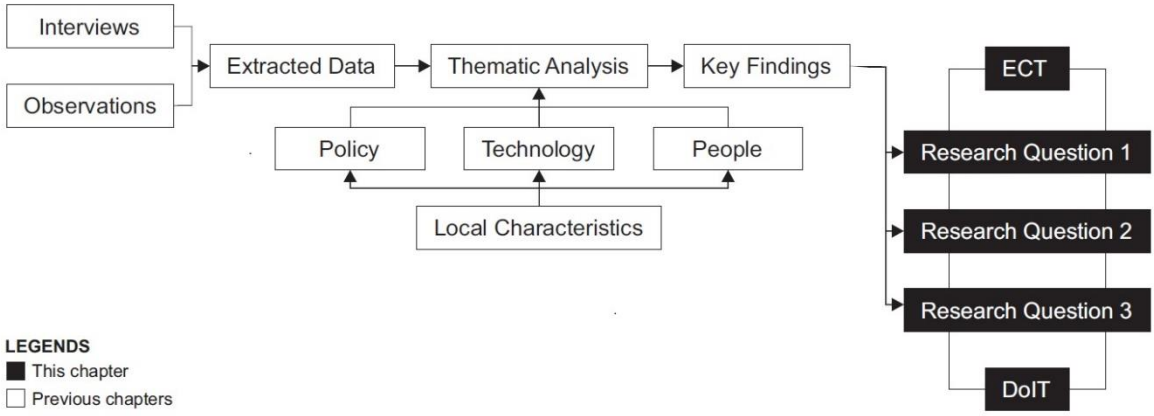

Figure 6.2 Discussion about Research Questions

6.2 How ICT Has Been Used Effectively for ELT at Secondary Schools in Ben Tre Province

Despite the process of ICT integration containing many obstacles, as described in Chapter Five, teachers are persuaded by the benefits brought by ICT in creating innovative, interactive, and flexible learning environments (Qin and Shuo, 2011). The adoption of ICT in ELT reflects the need for good communication skills in English. Thus, in the field of ELT, "the Communicative Language Teaching methodology has been very popular among English learners and is becoming a predominant teaching methodology today" (Xiaotong, 2014, p.100). Findings in the previous chapter have revealed that teachers are able to use ICT effectively in ELT at secondary schools in Ben Tre Province due to their flexibility, resourcefulness and proactivity.

6.2.1 Flexibility

Teachers have played a major role in integrating ICT effectively into their teaching in Ben Tre Province. They have had to be flexible and innovative in their approaches to integrating ICT in ELT due to the lack of administrative support at every level in providing training and equipment. For example, seven out of the sixteen interviewees in this research study had not participated in any ICT training. Although a lack of proper training has been shown to prove an obstacle to the use of ICT (Buabeng-Andoh, 2019; Samuel and Zitun, 2007), all teachers are required to integrate ICT into teaching, despite the lack of training, for "a minimum of two credit hours" (Quynh, 44a) or "a minimum of two to four credit hours" (Lin, 41a) depending on regulations dictated by the boards of administrators at their schools. These requirements seem very low. However, they set a minimum baseline which schools can then build on. In fact, all schools in the study required teachers to use ICT more often. For example, Nho said that her school "requires ICT to be used in a minimum of 50% of all English teachings" (Nho, 10a).

At the same time as local authorities are struggling to provide training, Boards of Administrators in secondary schools are struggling to provide adequate learning environments for using ICT in ELT. All interviewees spoke of their requests for projectors (Hoa, 7b), CD players (Tuan, 14b), and other essential ICT tools for teaching (Vu, 14c) not being met and of a lack of technical support. In one case, there was no plan to establish a

technical support team (An, 28a) for the foreseeable future, and in all cases it was hard for teachers to receive support regardless of whether a technical support teams had been established. As one interviewee explained, “Even though I can ask for help from others, it would be a problem if the problem required immediate attention” (Nho, 14c). This is because “this specialist is often busy because he has to respond to all requests made by all teachers at the school” (Diem, 12d). As a result, teachers had to solve technical problems by themselves as stated by Tha “I will try my best to resolve the problem” (47c) and Tan “I usually solve technical problems by myself” (29a). Tong and Trinidad (2005) found that without receiving proper technical support, teachers may become frustrated resulting in their unwillingness to use ICT. However, this was not currently the case for the interviewees in this study because English teachers at different schools throughout Ben Tre Province had flexibly come up with solutions to overcome technical problems by themselves.

The local characteristic of Ben Tre Province, including a lack of infrastructure associated with the rural nature of the province, support research explored within the Literature Review that claims that a “lack of adequate ICT equipment and internet access is one of the key problems that schools specifically in rural areas are facing now” (Ghavifekr and Rosdy 2015, p.176). However, unlike existing research studies (Ghavifekr and Rosdy, 2015; Mereku *et al*., 2009) this study showed that existing obstacles to integrating ICT into teaching in Ben Tre do not exist as stand-alone entities. Instead, they are a combination of multiple factors such as no training, inadequate equipment, a lack of funding, and inexperienced administrators who are heavily influenced by the traditional lifestyle grounded in a Confucian ideology. The existing condition for an ICT campaign in Ben Tre province contains more attributes than what Warschauer and Matuchniak (2010) has discussed about the digital divide. In addition, no prior study has shown that teachers are able to achieve a considerable amount of success despite such a combination of obstacles. The successful integration of ICT in ELT in the teaching practice of interviewees in this research study, thus, challenges existing research within the field of ELT that claims obstacles such as obstructive ICT policies (Groves and Zemel, 2000), a lack of adequate ICT equipment and Internet access (Ghavifekr and Rosdy, 2015), and a lack of technical support (Basak and Govender, 2015) make it impossible to successfully integrate ICT in ELT. In the light of these results, it is imperative to closely explore why teachers in Ben Tre Province have succeeded where others have not.

The unexpected findings that point to the successful integration of ICT in ELT despite several obstacles help make this research study unique. During interviews, the teachers spoke of wanting to use ICT because they could see the progress students were making through using it and some of them highlighted how it enabled them to support weaker students. As the interviewee, Thu, says, "I believe these [weak] students would improve their learning if ICT were used more often, in every session" (38b). It is possible that what stopped teachers from attempting to differentiate their lessons to a greater extent is a fear of falling behind the teaching schedules (Tuan, 32d). Despite this fear, evidence of differentiation can be found in interviewee responses such as An's when she describes creating "assignments at basic levels for weaker students. Advanced levels, on the other hand, are suitable for good and excellent students" (An, 53b and 53c). Sao also speaks of how, "providing simple content is a crucial step in developing confidence among weak students. Otherwise, they will go completely off-track" (Sao, 35e). Besides Hoa mentions how, "with ICT, they [weaker students] focus much more on the contents displayed which supports them in learning more quickly" (Hoa, 14c).

Shyamlee and Phill (2012) found that ICT triggers students' interest in learning, widens students' knowledge in understanding deeply, improves interaction between students and teachers, and provides flexible teaching courses. This was confirmed by interviewees within this study. For example, a teacher at the Village School named Vu suggested that the use of ICT tools favoured by weak students such as games in vocabulary teaching engaged students in learning and supported their learning and retention (Vu, 38c). A teacher at the District School emphasised how the use of pictures helped weak students to understand [new words] better and more easily (Sao, 35d). And a third teacher described how they used ICT to support weaker students and increase interactions between them:

> "I have arranged weaker students to study in groups. They may refer to similar teaching contents online which I have shown them. I have also explained to these students with further details to assure that they understand the teaching topic" (Quynh, 54a - 54c).

In addition, benefits delivered by ICT appear to becoming obvious even for older teachers who "still prefer the traditional method with no ICT at all" (Lan, 23b). Extracted data indicates that not only younger teachers but also "the elders can effectively learn and use ICT as well" (Nho, 17c). Some older teachers are even "experts of ICT" (Nho, 17d).

In interviews, teachers spoke of how Boards of Administrators at public schools have attempted to fulfil as many requests for new technology or repairs made by teachers as possible (Nho, 21b). Even though administrators were unable to necessarily fulfil these requests, they tried their best to "encourage teachers to use ICT" (Lan, 29a) and to ensure that ICT could be integrated into teaching. They achieved this in two ways: firstly, they approved and contributed many funding requests for public schools to buy ICT tools even though it might "take a very long time for a funding request to be approved, prior to the release of money" (Ngoc, 24b); and secondly, they granted teachers the permission to use their own technology within the classroom (Thu, 28e) such as laptops and speakers (Nho, 12c). Research within the field suggests that leadership support enables the use of ICT in teaching because "without the leadership support, the educational potential of information and communication technology may not be realised" (Schiller, 2013, p.171). Interviewees recognised and appreciated the administrators' flexibility, with one interviewee's statement,

> "the board has encouraged teachers in teaching with ICT. In addition, I believe they have done their best to fulfil any request in regard to ICT" (Vu, 16a).

The support and encouragement of administrators is essential because data from the study suggests that it is the flexibility of English teachers that enables ICT to be integrated effectively. Interviewees highlighted how they worked with colleagues to find solutions to tackle problems as they emerged. Smartphones became a crucial resource for many ICT based activities. For example, using a Bluetooth speaker paired to a smartphone was useful as a means of replacing a broken CD player (Lan, 20f; 20e). Teachers were also able to use smartphones to provide a high-speed Internet connection (An, 1c) to tackle connectivity issues as a "Wi-Fi network is not available at this school in the meantime" (An, 1d). According to one research study, Internet connectivity is a major obstacle to integrating ICT in teaching and learning (Hockly and Dudeney, 2018; Mereku *et al.,* 2009). By using a simple device like a smartphone, English teachers in Ben Tre Province demonstrated how a flexible approach enabled them to overcome issues of connectivity.

Smartphones are also incredibly portable, meaning teachers can decide when and where to use them (Wastiau *et al.,* 2013). In this research study, smartphones were seen to be used by teachers to store teaching materials (Lan, 20g) while mobile apps were useful in providing written and audial resources as one interviewee points out,

> "I have downloaded textbooks as well as additional audio files onto my phone, from which my students can listen to the sound of native speakers" (Thu, 2b, 2c).

Furthermore, when paired with Bluetooth speakers, smartphones permitted teachers to provide ICT based listening and speaking (Lan, 2c) by playing audio files stored in smartphones (Vu, 1a) without the need of a computer. The use of smartphones was evidence of the genuine flexibility of English teachers in Ben Tre Province because several obstacles can be resolved through using one device. As smartphones have become more affordable these days (Hockly and Dudeney, 2018), the flexibility in using smartphones as an integrating tool in ELT could soon be available to all teachers besides laptops and speakers which are also teachers-owned equipment (Nho, 12c).

By initiating the Bring-Your-Own-Device (BYOD) in permitting teachers to use their own equipment alongside school-owned devices (Hockly and Dudeney, 2018), schools allowed teachers to use any software rather than simply using software introduced in the ICT-training courses. For instance, the audio editing software introduced by a music teacher known as jet Audio (Sao, 4b) was widely used even though it was not introduced in the ICT-training courses (Sao, 4a). In addition, permission to use teacher-owned laptops in classes helped avoid several technical issues, such as becoming infected by a computer virus, which tended to arise due to the unreliability of the existing anti-virus application installed in the school's computers (Thu, 17c).

Interviewees also showed their flexibility in planning for technological failures and spoke of always having an alternative approach ready. For example, interviewee Diem explained how:

> "I have prepared for some unexpected mishaps which could happen such as blackout and no Internet connection. However, these mishaps will still somewhat affect the quality of my teaching. For example, the impact could be less serious in reading and speaking sessions; however, if technical problems occur during a listening session, the best solution is changing topics" (29a, 29b, 29c).

Similarly, another interviewee illustrated how they planned an alternative lesson in case of technology failure:

> "If a Bluetooth speaker does not work, for example, I can either use the speakers on my laptop or switch to the traditional methods. Besides, I always prepare all teaching materials for offline modes;

> therefore, losing Internet connection is not really a concern. So, I believe that well-prepared is the best solution" (An, 54a, 54b, 54c).

These responses suggest that the integration of ICT is not dependent on "access to ICT infrastructure and resources in schools" (p.99), as Lawrence and Tar (2018) suggest. Nor is teachers' training a "key factor to successful integration of computers into classroom teaching" (p.275) as Buabeng-Andoh (2019) stated. Instead,

> "if teachers' attitudes are positive toward the use of educational technology. They can then easily provide useful insight into the adoption and integration of ICT into teaching and learning processes" (Yeboah-Fofie, 2015, p.200).

Additionally, results from this study show that formal ICT training has a relatively minor impact on the innovative use of ICT as findings in the previous chapter have shown that many untrained teachers can use ICT in teaching by learning from their colleagues to use technology from those who have participated in the training courses (En, 8c). Drent and Meelissen (2008) found that the desired to reach the teaching goals that educators want to achieve by ICT are more important. This is in keeping with results from the present study that found teachers' positive attitudes contributed to a flexible use of ICT despite numerous obstacles including a lack of funding, infrastructure, and connectivity (Shin, 2015; Yeboah-Fofie, 2015).

Teacher's positive attitudes, demonstrated by their flexibility in adopting ICT in ELT, cannot be explained using only Fullan's (2015) Educational Change Theory as illustrated in Figure 3.1. This is because although the "*Characteristics of Change*" – comprising of *Need*, *Clarity*, *Complexity*, and *Quality/Practicality* help to identify the various obstacles that teachers face when integrating ICT in ELT. They do not account for the role that a flexible and positive attitude might have in overcoming these obstacles. For this reason, it is necessary to take the *Diffusion of Innovation Theory* (DoIT) by Rogers (2003) to explore this phenomenon further.

Even though the integration of ICT in ELT in Ben Tre Province faces several obstacles that may be identified by using Fullan's (2015) theory of ECT as a lack of *Clarity* which leads to *Complexity*, the flexibility of English teachers has enabled them to overcome these obstacles. Therefore, it is necessary to turn to Rogers' (2013) DoIT which takes into

account psychological aspects and allows for a more careful consideration of the teachers' role. According to DoIT (Rogers, 2003), the second stage in any diffusion of innovation process is all about persuasion with five attributes, namely *Relative Advantage, Compatibility, Complexity, Trialability,* and *Observability*. Results from this study suggest that it was difficult for teachers in Ben Tre Province to understand the relative advantage of integrating ICT in ELT because they had no experience with modern technologies due to the fact that many teachers had not participated in any ICT-training course. However, a more detailed analysis of the interview transcripts indicates that interviewees shared a strong belief that ICT supported their students – and particularly their weaker students – in their learning. Another reason behind the strong belief held by teachers that ICT supported their students' learning is that they were forced to develop ICT skills through independent learning as well as asking other teachers (Sao, 17b; En, 8c). Even though it takes longer to learn something if you are teaching yourself (Lin, 25b), it is suitable for integrating ICT into teaching through self-taught and peer-to-peer assistances (Lin, 25a), and untrained teachers were able to "perform some [ICT] installations and settings" (En, 8a). and develop some advanced skills including the ability to "convert text-based documents into video files" (En, 8b).

Teachers were found to benefit from the *Relative Advantage* of using their own equipment. Bluetooth speakers and smartphones appeared to be the ICT equipment of choice for teacher in Ben Tre (Lan, 1d). Alongside teacher-owned laptops, smartphones gave teachers the liberty to select computer software and mobile apps. The BYOD (Hockly and Dudeney, 2018) allows untrained teachers to teach themselves how to use their personal equipment and explore software available to them on their devices to become experts in that particular niche. Using personal equipment also gives teachers the freedom to apply ICT as and when they like because they have complete control over the equipment. This means teachers have the final decision in selecting creative ways to support learners (Shulman, 1986). As a result, an interviewee believes that the existing "[ICT] quota is very low" (Quynh, 45b) because they use ICT much more regularly.

The use of personal ICT tools instead of school-owned equipment, then, helped make the integration of ICT much more compatible with existing teaching strategies. The use of personal devices can put the issue of software conflicts to rest. For example, the issue caused by incompatible fonts due to different Vietnamese typing software (Lin, 33a) does not tend

to present itself when teachers use their own equipment. Internet connectivity is also less of an issue because teachers can access the Internet via their smartphones (An, 1c) instead of relying on the unreliable Wi-Fi network at schools. As a result, conflicts tend to occur most often when connecting teacher-owned devices to schools' equipment as one interviewee admitted, "I cannot connect my laptop to the television in class due to incompatible ports" (Lan, 20b). Rogers (2003) argues that higher *Compatibility* reduces levels of *Complexity* which is the third element of the *Persuasion* stage in DoIT. Furthermore, the *Relative Advantage* in allowing teachers in using their own devices provides the opportunity for teachers to integrate ICT in their teaching through a process of trial-and-error that enables them to select the most appropriate ICT tools. For instance, teachers can test both Microsoft PowerPoint and Google Slide to determine which is the better software for their equipment and teaching style. Consequently, *Trialbility* increases and teachers can try out new tools and track the effect that they have on helping students make progress in their learning (*Observability*).

From the above, it is clear that there are persuasive elements for English teachers being flexible when tackling existing difficulties in integrating ICT effectively in their teaching. However, flexibility cannot be maintained if teachers do not have a reliable and trustworthy resourcefulness for developing ICT competency and ICT based teaching materials, which will be described next.

6.2.2. Resourcefulness

Teachers have had to be resourceful in gaining access to invaluable resources needed to integrate ICT in ELT in Ben Tre Province. The official ICT training courses, initiated by the *ICT Training Policy* (Ben Tre Educational Service, 2016a), provide the opportunity for teachers to learn different ICT skills from experts (Nho, 31b) to ensure that training supported teacher's use technology in schools (Chen, 2010). Teachers who did not have the opportunity to attend these training courses need to be proactive in learning "from other teachers who have been fully trained" (En, 7b; Lin, 40a). An interviewee was keen to stress that they had increased their understanding of ICT "by asking their colleagues" (Lan, 22b) to "share and learn from each other" (En, 24a). Peer-to-peer assistance provided a great source of ICT knowledge for teachers including those who had attended the training course and needed

reminding of a part they had forgotten (Phung, 30a). Peer-to-peer assistance is precisely what British Council (2015) has shown as an indicator for Continuing Professional Development (CPD). It also is "an excellent barometer of the level of passion" a teacher has for their chosen career (Perkins, 2002, p. 97).

At this point, it is important to note that this 'knowledge-sharing', or personal learning networks (Stanley, 2013), was not limited to the community of English Language teachers but extended to all teachers within the school. The music teacher who introduced the audio editing software called jet Audio (Sao, 4b) is a very good example of knowledge sharing practices amongst teachers. Besides, teachers might reach out to their ICT trainers at the ICT training courses (Lan, 27b). The dedication to learning and sharing knowledge is comparable to results from Cohen's (1987) study, highlighting teachers' perspectives on the curriculum and pedagogical practices as crucial factors that determine how technology is used. Moreover, knowledge sharing does not only help teachers in learning new skill sets, but it also provides an opportunity for teachers to tackle technical issues altogether. Two interviewees explained that in their school "teachers have formed discussion groups to share knowledge and experiences with each other" (Lan, 26b). Teachers would often seek assistance from their "colleagues first" (Lan, 27a) rather than from the overworked technician "because he has to respond to all requests made by all teachers at the school" (Diem, 12d).

Furthermore, teachers gained ICT skills from sources besides the official training courses hosted by the Education and Training Service in Ben Tre Province. For example, sponsors, such as book publishers and software developers, provided additional training for teachers who needed it. In fact, an interviewee, mentioned going to seminars and short training courses hosted "by sponsors, especially book publishers" (An, 45b). If sponsors mainly provide training for computer applications, manufacturers are the gateway for teachers to receive appropriate training in using ICT tools. An interviewee pointed to how his training to operate the interactive board was provided by the manufacture. He said,

> "I was trained by the manufacturer in using the interactive board. In fact, I was the one who performed the presentation of the interactive board in front of all the teachers in the district" (Vu, 40a, 40b).

The ability to operate the interactive board permits teachers to combine audio, video, Web browsing, and word editing to improve reading and comprehension (Chhabra, 2012; Krashen,

1985). In this case, training provided by the manufacture did not only enrich the ICT skills of one particular teacher, but it also introduced new technology and skills to other teachers within the school and district through the process of peer-to-peer mentoring identified earlier in this subsection.

Lastly, teachers' resourcefulness was driven by their motivation to improve their ICT ability. The extracted data indicates that teachers are very passionate "to learn more about ICT" (Lan, 12d). This passion is also present among teachers who have not participated in any training course (Lan, 22a) but that are motivated to "catch up with modern trends" (Thu, 26b). Thus, the fear of low ICT usage due to the lack of training (Al-Mulhim, 2013; British Council, 2015) can be put to rest if teachers are motivated to learn independently or through peer-to-peer mentoring.

Although some data collected from younger teachers indicated that they believed older teachers lacked the energy to learning new things (Thu, 23b), other data indicated that younger colleagues believed that their older colleagues could use ICT even more effectively than them (Nho, 17a). In fact, some older teachers were experts in using ICT as stated by one younger teacher, "I even know some older teachers who are experts in ICT" (Nho, 17d). It is clear to see that "aging is not the obstacle in using ICT" (Lin, 23a). This is in keeping with Mahdi and Al-Dera's (2013) research that concludes that there is no significant difference in using ICT between different ages. Likewise, Muslem, Yusuf, and Juliana (2018) place emphasis on preparation, tools, training, and ICT knowledge as contributing factors rather than age.

The previous section shows that teachers have been flexible in their use of ICT in teaching because they are resourceful in finding alternative ways of learning and gaining experience in using different ICT tools (Stanley, 2013). As Diem puts it, "For those who do not receive any official training courses, they have to learn and improve by themselves" (Diem, 13d) because using ICT in ELT is mandated.

Knowledge and experience in using ICT, in particular, are what Fullan (2015) describes as *Local Characteristics* in his model of ECT. In addition, teachers have established what may be called a "*Community*" in which teachers learn and share ICT knowledge between each other (En, 24a). This is, in fact, the *Community* element as found in the *Local Characteristics* of

ECT. Furthermore, resourcefulness has been supported by the *Principal* element in the *Local Characteristics* of ECT as the extracted data shows that Boards of Administrators at public schools have done their best to ensure ICT is used effectively (Hoa, 27b; An, 39a; Ngoc, 35c). Support from principals is described by an interviewee as:

> "The Principal at this school is an English teacher also. Therefore, she is very supportive of the English team. From what I know, the Board of Administrators has requested additional funding in order to update ICT equipment at this school" (Hoa, 22a, 22b).

At the same time, resourcefulness also comes from what is known as *External Factors* in ECT. Teachers can learn a great deal from working with different computer applications through the ICT-training courses hosted by the Education and Training Service in Ben Tre Province. Moreover, teachers can gain knowledge and experience in ICT by participating in events hosted by sponsors (An, 45b) and manufacturers (Vu, 40a).

Local Characteristics and *External Factors*, hence, play a crucial role in enabling the resourcefulness of teachers in Ben Tre Province, building a strong foundation to counteract the *Characteristics of Changes.* This includes the ineffective ICT policies and approaches as described in Section 5.3.1 and 5.3.2. In other words, resourcefulness provides an opportunity for English teachers to develop the necessary knowledge for ICT integration. This means the first phase in DoIT, known as *Knowledge*, has been addressed. According to Rogers in his DoIT, the *Knowledge* phase contains *Personality Variables* and *Communication Behaviours. Personality Variables* reflects how English teachers respond to innovative change. All sixteen interviewees agreed that ICT provides a lot of benefits in teaching. Therefore, *Personality Variables* helps account for the positive attitudes toward the adoption of ICT within the majority of English teachers. The positive attitudes, then, trigger the *Communication Behaviours* as English teachers, especially those who are untrained, are keen to learn ICT from those who have been trained and from any other source available. The extracted data shows that teachers frequently share knowledge and draw on each others problem-solving abilities when faced with a technical challenge (Nho, 10e; Ngoc, 39b). Older teachers, in particular, have received "encouragements and support from other people" (Tan, 21c) that have helped them improve their ICT capabilities so that they can integrate it successfully into their daily practice.

In this section, the *Knowledge* phase is achieved through the resourcefulness of teachers. In turn, their resourcefulness contributes to their flexibility, as described in Section 6.2.1, and vice versa. The *Knowledge* phase, through *Personality Variables* and *Communication Behaviours*, helps explain the positive attitudes for English teachers to acquiring ICT skills, as identified by ECT through *Local Characteristics* and *External Factors*. These positive attitudes serve as the backbone for the *Initiation Decision* stage of ECT in which teachers decided to adopt ICT in ELT, not only as mandatory but also with passion as one interviewee said, "it would be 'messy' to teach without ICT" (Ngoc, 17c). Supporting factors found in teachers reflect what Fullan (2015) describes as *Teacher Advocacy* in Figure 3.2. Moreover, teachers also have received *Advocacy from Central Administrations* as well as a way to *Access to Innovation* as described in the "*Local Characteristic*". *Teacher Advocacy*, *Advocacy from Central Administrations*, and *Access to Innovation* are reasons for teachers to overcome other obstacles during the *Initiation Decision* stage including the major *New Policy – Funds* obstacle. For this reason, the *Initiation Decisions* made by English teachers make the entire ICT implementation process viable. At this point, the discussion has shown that teachers' resourcefulness supports their flexibility in adopting ICT in ELT. In the next section, the investigation will shift to explore teachers' proactivity as well as exploring the *Implementation* stages proposed by both ECT and DoIT in the theoretical frameworks.

6.2.3. Proactivity

ICT has been used proactively by most English teachers because benefits brought by ICT are plentiful according to the collected data. Compared to the traditional teaching method, ICT saves a lot of time as found in Thu (12a), Phung (9a), Ngoc (16a), and Tuan (17d) because teachers no longer need to write the same contents repeatedly on the blackboard in every session. "The repetitive task of writing the same contents on the blackboards, as found in the traditional method, can be omitted" (An, 15b). Thus, teaching with ICT is "much easier in class" (An, 31b) and "more interesting" (Tha, 10b). These examples mark the transition from traditional teaching which uses handwriting on blackboards to the use of digital tools. For instance, audio features allow a reading lecture to be converted to a listening exercise easily (Tha, 26c) enabling students to practice by listening to native language speakers (Vu, 1b). Practicing by listening to native language speakers

through the use of ICT reflects what Cetto has described in the Literature Review as the "engagement otherwise not possible" (2010, p.121). The use of images and special effects also helps content be present in a "more attractive (An, 16b) way, and "the atmosphere in the classroom is somehow ebullient" (An, 16c).

Interviewees found that studying in a class with the integration of ICT allowed students to "concentrate more on the lessons" (An, 17a), and students are able to "learn more quickly and retain knowledge because lively pictures created a strong impression on their minds" (Tha, 12b). Lively pictures are useful tools for supporting weak students with learning as described earlier in Section 5.5.3. According to many interviewees, ICT provides benefits in most teaching activities including vocabulary, one interviewee stated, "I think the use of ICT is effective for all three phases of teaching vocabulary" (Tan, 25d). The data shows ICT is applied most when it comes to pronunciation followed by meanings and spelling in vocabulary teaching (Quynh, 47a). Information gathered from the extracted data is similar to other studies. According to Bransford, Brown, and Cocking (2000) (as cited in Zare-Ee and Shekarey, 2010), technology can simulate real-world experiences within the classroom, individualise activities, facilitate interactions between teachers, students, and their parents, and, lastly, enhance teaching development.

Interviewees showed that they were proactive in exploring the different approaches and collection of ICT tools used during vocabulary teaching. In many ways, the software available on the Internet is a large source of genuine materials available as pictures, audio, video clips and animation (Alkamel and Chouthaiwale, 2018; Jayanthi and Koumar 2016). Moreover, teachers have been proactive in using audio files in vocabulary teaching (Lan, 40c) for students to practice pronunciation and pictures or videos in speaking exercises (Quynh, 5a). Audio files also function as the bridge which leads to the use of ICT in listening and speaking (Lan, 9a) because vocabulary is taught in combination with other subjects (Tha, 7a) whenever necessary (Tha, 7b). The use of audio files alongside downloaded pictures and videos from the Internet show how different CALL (Computer-Assisted Language Learning) programs, as described in Chapter Two, have been adopted in ELT teaching to encourage non-English speakers to be proactive learners. This, in turn, improves their language competence (Akpabio and Ogiriki, 2017).

Research has found that the use of videos, such as YouTube videos, can enhance speaking skills such as accents, pronunciations, and voice modulation (Chhabra, 2012). Furthermore, videos allow students to not only learn "about the sound but they can also learn about different shapes of the mouth, as well as movements of the tongue" (Phung, 7b). This perspective is identical to what Benmoussat and Zekkal (2016) believe to be the benefits of ICT for non-English speakers. In the teaching of listening skills, online apps are used (Lan, 2c; Tha, 2b; Vu, 2a) so students can get acquainted with native sounds (Tha, 9a). The use of mobile apps, specifically, shows how MALL (Mobile Assisted Language Learning) provides an efficient way for language acquisition, known as TELL (Technology-Enhanced Language Learning), to help students improve their English communication through the use of different social platforms (Kranthi, 2017).

In fact, interviewees found that students liked listening sessions the most because they could listen to the accents spoken by native speakers (Tan, 26a). Consequently, teachers were proactive in using real-life contexts during speaking and listening as illustrated in Table 5.6 because they engaged students and helped them successfully developing these skills sets (Sao, 30c). For instance, downloaded pictures and videos were used in speaking exercises (Quynh, 5a). Kim's study (2015) shows that authentic videos, apart from providing real context, offer a lot of benefits such as maintaining students' interest, motivating students in practicing English listening, and aiding them in acquiring real vocabulary by being exposed to real situations. Video clips, especially on YouTube, can illustrate everyday English spoken by normal people (Chhabra, 2012). The use of ICT in generating real-life contexts is another example of how CALL has been integrated into teaching.

Aside from the teaching of speaking and listening, interviewees also used ICT in other subjects including writing (Hoa, 7c), reading (Hoa, 37d), and grammar (Hoa, 37b) because they felt ICT improved the overall teaching quality (Lan, 8a). Some teachers were proactive at adapting audio clips to teach writing by introducing podcasts as an aid to writing (Lan, 2d; Quynh, 9a), Even though the findings do not show that writing tools on mobile platform such as Airstory or Hemingway are being used (More 2015; McNulty, 2019), podcasts are being used to develop creative thinking skills in writing (Vandenberg, 2018).

Finally, it was found that teachers considered the Internet to offer multiple opportunities for teaching reading. For example, web-based materials such as blogs and wiki sites are a good source for teaching reading because hypertext, hypermedia, glosses, and annotations are interactive features which help learners interact with the text, control their reading, and access linked content for further reading. Moreover, reading authentic texts on the Internet has been found to be beneficial in developing learners' language literacy skills and intercultural understanding (Abraham, 2008) because authentic texts are "written by members of a language and culture group for members of the same language and culture group" (Galloway, 1998, p. 133, as cited in Glisan, 2015). As a result, the Internet can help teachers introduce a wider range of topics that learners may find more interesting.

These findings recognise that ICT has been used effectively in all aspects of ELT which proves a point that "technology's role has been socially shaped within the field of language teaching, and language teaching has changed profoundly too" (Motteram, 2013, p. 184). Data shows that most teachers have met or surpassed the minimum requirement of using ICT for two credit hours per school year (Quynh, 44b; Lin, 41a) with some teachers using ICT in 50% of their teaching, according to a teacher at the District School (Nho, 10a). For others, the use of ICT in ELT is on the verge of replacing the traditional teaching method making it very difficult to think of teaching ELT without ICT (Ngoc, 17c; Quynh, 37a). What has been described above indicates how several ICT tools, such as computers, the Internet, interactive boards, smartphones, and games, have been used proactively by teachers to motivate students in learning and language awareness (Altun, 2015). Furthermore, proactivity not only accounts for using ICT tools to teach different language skills, but it also involves teachers proactively adopting new pedagogical approaches to differentiate their lessons and create innovative, interactive, and flexible learning environments (Qin and Shuo, 2011) that are in keeping with a Communicative Language Teaching (CLT) approach as described in the Literature Review.

The use of ICT in teaching illustrates the *Implementation* stage as found in both ECT and DoIT. As teachers are mainly responsible for the use of ICT in teaching, the *Implementation* stage reflects teachers' ICT competency. Conversely, school-owned equipment plays a minimal role as most ICT tools used in teaching are teacher-owned devices

despite higher authorities having tried to update and improve available tools by requesting additional funding (Hoa, 22a, 22b). For this reason, the principles of ECT and DoIT are used to explore solely the role of teachers. Other themes including *Policy* and *Technology* are omitted from this section.

Teachers, according to ECT, are grouped as an element of *Local Characteristics* which, in turn, is a factor of the *Implementation* stage. In the case of ICT integration at secondary schools in Ben Tre Province, English teachers have shown their proactivity in adopting ICT into their teaching because they are able to acquire the necessary ICT skills through resourcefulness as described in Section 6.2.2. Being ICT competent, English teachers are persuaded that ICT can improve teaching quality (Lan, 8a). This explains why some teachers have found that teaching well would be very difficult without ICT (Ngoc, 17c; Quynh, 37a). As a result, ICT is applied as much as possible during teaching. However, there are existing obstacles during the integration of technology in teaching due to the lack of existing facilities such as the degraded audiovisual lab (Lan, 19d). In the event of technical difficulties, English teachers have shown their dedication to troubleshooting problems either by themselves, by asking their colleagues, or by asking the technical support teams for help.

As can be seen from this discussion, it is impossible to be proactive without also being flexible. For this reason, it is quite clear to see that proactivity cannot occur if English teachers do not already possess a certain resourcefulness and flexibility. It might be concluded that resourcefulness is triggered by the requirement for teachers to use ICT in teaching. However, the data shows that making ICT mandatory is not a sufficient stimulus to boost the dedication needed to acquire new ICT skills amongst teachers. For instance, an interviewee stated that the requirement to use ICT alone could be a challenge rather than a motivation:

> "Some elder teachers may always find ICT [as] a challenge because they neither are not efficient in learning ICT nor do they consider ICT as a necessity for teaching. Besides, preparing lectures is not easy for teachers who do not have [an] Internet connection at home. Internet connectivity is not made available in most rural villages in the provinces" (Quynh, 46b, 46c, 46d).

On the contrary, the belief that ICT can improve learning for all students and particularly weak students is the main reason why English teachers dedicate themselves to enhancing their ICT skills:

> "It is my students who have provided me with the ambition to provide the best teaching quality possible. In return, I have realised that I cannot provide the best teaching quality without ICT" (Ngoc, 35a).

Consequently, it can be concluded that the ability to teach better teaching quality is what drives teachers' resourcefulness which, in turn, enables them to integrate ICT into their teaching. Through being resourceful teachers are able to enhance their ICT skills in several ways such as through ICT-training courses (Nho, 31b), with the help of colleagues (Lan, 27a), and through training provided by sponsors (An, 45b). These skills enable English teachers to be flexible in their teaching approach and adopt the most appropriate solutions to the obstacles that they face. As a result, English teachers are able to remain proactive in their teaching to help them achieve their ultimate goal that is of helping students. The ultimate goal of helping students is represented by the *Implementation* stage in which Teachers are an element of Local Characteristics plays a central role while Community, as the source of assistance (En, 24a), plays a secondary role.

By taking principles of ECT into consideration, it is clear to see that the dedication to deliver quality teaching encourages English teachers to be proactive in using ICT in teaching. ECT, however, cannot reflect the entire integration process because its principles only examine what has been adopted. For this reason, the principles of DoIT need to be taken into consideration because, unlike ECT, the *Implementation* stage of DoIT also contains Rejection besides Adoption. Investigating what has been rejected is also important because effective ICT tools may not be applicable if they are not suited to the students. This means that English teachers must have a core understanding of their students in order to decide what not to use.

In my opinion, knowing which ICT tools are suited to the students is even harder than learning ICT skills. Data shows that English teachers in Ben Tre Province are practiced at knowing what to reject. For instance, an interviewee explained why traditional teaching is still used:

> "ICT seems not to provide many benefits in grammar teaching because it often requires grammar structures to be written on a blackboard for students to practice over and over. When grammar rules are displayed on the screen, my students tend to lose their focuses on the teaching. This means I still prefer teaching grammar in the old-fashioned way" (Sao, 10a - 10c).

Likewise, another interviewee explained that the interactive board was not used regularly, despite its benefits, because it reduced the teaching pace as the interactive board could work with only one student at a time while four students could work on the ordinary blackboards (En, 6c). In addition, rejection also takes place because proceeding towards integrating ICT in all lessons is not practical due to,

> "it is not being possible at the present time because it creates problems not only for teachers and students, but also parents. Not every parent can afford to equip their children with all the required ICT devices" (En, 33a, 33b).

Considering both what is rejected and what is accepted reveals how DoIT can help explore processes of change in education. By using principles from both ECT and DoIT as proposed in the theoretical frameworks, teacher's proactivity may be analysed and discussed. Specifically, proactivity in delivering effective results is achieved as a result of the flexibility and resourcefulness displayed by teachers in overcoming existing challenges. In fact, it is teachers' positive attitudes which fuel their dedication to successfully integrating ICT (Hew and Brush, 2007; Keengwe, Onchwari, and Wachira, 2008). Without such dedication, it is extremely difficult, if not impossible, for English teachers to overcome the several existing obstacles described in the next section.

6.3 Obstacles that Impede the Effective Use of ICT in ELT at Secondary Schools in Ben Tre Province

In the previous section, teachers have been shown to be capable of integrating ICT in ELT effectively by being flexible, resourceful and proactive. However, teachers are unable to solve all recognised obstacles successfully because some of them are beyond their control. Instead, these obstacles require the involvement of higher authorities or external agencies. In particular, teachers are unable to influence administrators concerning policymaking. They are also unable to prevent the frequent blackouts. In this section, the discussion will explore obstacles experienced by the interviewees under the following headings: policy, technology, and people.

6.3.1 Policy

The use of ICT or the integration of technology requires a whole system support of all government levels (British Council, 2015); however, policies which dictate the implementation of training courses on ICT for English teachers have caused several difficulties as stated by one interviewee:

> "It [the training course] causes a burden not only for the teacher who receives the training, but it also affects the teachers who take over classes in the absence of the participating trainee. Teaching schedules, thus, have to change entirely" (Tha, 36a, 36b).

The reason why training schedules have to change is because they are held during the school year instead of during the summer break (Hoa, 30c; Thu, 30d; Nho, 22a). This means that the remaining teachers at schools need to cover classes taught by those who are attending the training courses (Thu, 30b). As a result, "all teachers are overworked when one is attending a training course" (Hoa, 30d). The inappropriate scheduling of training is even more difficult for older teachers because:

> "It is about the inappropriate time [of which] training is given, which conflicts with my teaching. I have to provide extra teaching hours to compensate during my absence while participating in the training courses. It would be much more appropriate if the training courses only took place in [the] summer time. In fact, all teachers have to overwork after attending the training courses. It was quite challenging for myself due to my age" (Hoa, 30a - 30e).

If teachers are overloaded with work, it is very hard for them to guarantee the same teaching quality as they are usually able to offer. For older teachers, fatigue seems unavoidable.

At first glance, the inappropriate training time could be the fault of administrators for not hosting all training courses during the summer break as suggested by English teachers (Hoa, 30c; Thu, 30a). However, it is important to acknowledge how local characteristics influence administrators' decision making at the Education and Training Service in Ben Tre Province. Specifically, the presence of educational institutions and the availability of budgets are two major reasons why ICT training courses cannot be held during the summer breaks. Unlike other provinces in the Mekong Delta, Ben Tre is the only province without a university. It is much easier for administrators in Ben Tre Province to recruit ICT experts from universities in the surrounding provinces to act as instructors during school terms. This

is because the costs of recruiting university professors from other provinces to work during their holidays are much higher. As a result, administrators at the Education and Training Service in Ben Tre Province are unable to alter the schedule of the training courses even if they know that it would be advantageous for the teachers because funding is always an obstacle (Ngoc, 25a).

Obstacles created by external factors as described above are consistent with the literature review presented in Chapter Two. Obstacles created by administrative structures and infrastructure are highlighted by Li and Walsh (2011) amongst others. As teachers have no ability to change these structures, the responsibility of overcoming them rests with the Government. Having a national policy that dictates and supports the integration of ICT in ELT is beneficial because proactive policies at a national level encourage educational institutions to change (Peeraer and Van Petegem, 2011). With a national policy in effect, known as *Decision No. 1400/QĐ-TTg* issued by MOET in 2008, the Education and Training Service in Ben Tre has tirelessly worked to enforce the use of ICT despite numerous obstacles related to the technology available and lack of funding or infrastructure.

The *Initiation Decisions*, according to ECT, in hosting the training courses during the school year is associated with the *Policy – Funds* factor. In particular, the shortage of public funding as described in Section 6.2.1 prevents the ICT-training courses in being held during the summer as suggested by English teachers. As a result, teachers are overloaded with extra work after attending the training courses (Hoa, 30d). Obviously, the *Initiation Decisions* in terms of policymaking is not supported by the *Teacher Advocacy* factor as proposed by Fullan (2015) in his ECT. The inappropriate training time also affects the *Complexity* which is an element of *Characteristics of Change* in the *Implementation* stage because teaching activities are in disorders. For example, remaining teachers at schools have to cover classes left by those who are on-leave for training (Thu, 30b). According to an interviewee, the ICT-training course is an obstacle (Phung, 27a). Thus, the *Quality/Practicality* element in *Characteristics of Change* is not satisfactorily met.

On the other hand, administrators at the Education and Training Service in Ben Tre Province seem to have no other option due to what is known as *Socio Economic Characteristics* in the first stage of DoIT. Ben Tre Province, as described in Chapter One, is

dubbed as “the oasis” of the Mekong Delta. Revenues are mainly generated from farming and fishing activities which explains why Ben Tre is amongst the poorest provinces in Vietnam according to table 1.1. Available funding for education, therefore, are insufficient to fully support the training needed to effectively integrate ICT in teaching. The extracted data shows that integration cannot be done throughout the province at once. Instead, the process has been developed gradually with technical devices being gradually upgraded to meet current standards (Ngoc, 61e). Moreover, the shortage of funding has prevented administrators from scheduling training courses at a time that is convenient for teachers and from allowing all teachers to participate in the training courses at once (Diem, 13a).

Examining the ICT-training policy under the perspectives of ECT helps identify funding as the obstacle while DoIT, under the Socio-Economic factor, helps explain why the available budgets are insufficient. As a result, funding is the major issue which impacts the entire policymaking process in which administrators cannot make any change to improve the training policy.

6.3.2 Technology

Techology-related obstacles, or digital divide (Warschauer and Matuchniak, 2010), concerning the quality and availability of the technology needed to successfully integrate ICT in ELT exist as externally imposed factors and as internally imposed factors due to the local characteristics of the province and to the effectiveness of administrative boards. Thorne and Black (2007) believe that digital divide can influence the whole process of ICT integration.

Obstacles created by external factors are principally connected to the different infrastructures available within Ben Tre Province. For instance, blackouts are a major issue (Tha, 47a; Lin, 28a) which makes it difficult for teachers to carry out ICT based lessons. According to a teacher in the village area, teachers are afraid of using ICT because “power outages happen very often” (Ngoc, 19c). It is obvious that most essential ICT tools require electricity to operate, frequent blackouts or power outages have caused many ICT tools to become impractical and unreliable due to the lack of generators (Lan, 47a). For this reason, teachers are always ready to adopt a more traditional teaching method in the event of a blackout (Lan, 46a; Tha, 48a). Consequently, blackouts affect the whole teaching experience

because a traditional teaching method is less suited to helping students learn to communicate effectively in authentic situations (Ibrahim, 2010) as interactive features brought by pictures, and videos cannot be used. Blackouts, thus, create a substantial obstacle in moving towards a CLT approach to English teaching. This disadvantages students and especially weaker students as quoted by Sao, "pictures should be used in accordance with new words to help weak students to understand better and easier" (35d). The event of blackouts, therefore, forces the majority of teaching activities to be converted to the traditional methods which are based heavily on grammar competence (Xiaotong, 2014) while oral proficiency is often ignored (Chhabra, 2012). Students' motivation to learn English can be severely affected because authentic materials are more easily produced via the use of technology (Larsen-Freeman and Anderson, 2011).

If frequent blackouts are the result of a lack of appropriate infrastructure at a local level, then Internet connectivity is related to both this lack of infrastructure and a lack of budget. This is reflected in Ghavifekr and Rosdy's (2015, p. 176) research that indicates that, "lack of adequate ICT equipment and internet access is one of the key problems that schools specifically in rural areas are facing now". According to the extracted data, "Internet connectivity is not yet available in the village" (Tuan, 8c). This means any technology which requires an Internet connection is likely to be impossible to use in rural areas where most of the population lives as shown in Figure 1.2. In other words, the Internet is only accessible to a fraction of residents who live in urban areas such as the city and district centres.

Unfortunately, very often it is not even possible for teachers working within urban areas to reliably access the Internet because it is either lacking (Lan, 11d; Hoa, 21c), or unstable (Lan, 21b; Hoa, 20c) due to improper equipment. Hoa, a City School teacher, suggested that "a new Wi-Fi network with stronger signal should be installed to cover all classrooms" (36b). En, a District School teacher, shared a similar scenario in which Wi-Fi coverage was available but "the signal is not strong enough for every classroom" (4a). Wi-Fi signal, moreover, was available throughout the Village School but "the signal is unstable for which teachers are afraid of using the network" (Ngoc, 19b). As a result, teachers are unable to use any online-based application in their teaching as described by a teacher at the city school "This is because of a lack of a Wi-Fi network at this school. [Computer] programs, therefore, must be computer-based" (An, 34a, 34b).

Unstable Internet connection in urban locations and complete lack of Internet in rural areas have caused an incompatibility between training and practice. Such a dilemma is described below by another interviewee:

> "I once attended an ICT training session. Some contents [which I studied] are suitable for ICT tools at my school. However, most applications are not compatible. This is because what I studied was online applications, but the network and the Internet at this school are very limited" (Tan, 28a - 28d).

The lack of a reliable Wi-Fi system has made the training courses inadequate with teaching practice (Hoa, 23a). To a greater extent, there is a conflict between *Initiation* and *Implementation*, according to principles of ECT (Fullan, 2018).

Even though it is possible to adopt a communicative approach without the use of ICT "it took a great deal of time and effort to prepare teaching materials such as pictures and posters" (Quynh, 11b). Obviously, "ICT has saved a lot of effort because the Internet has provided much easier ways to create digital content" (Quynh, 11c). Moreover, "it was hard to keep students from writing on the poster because the poster had to be intact for repeated uses" (Tuan, 21c). Most interviewees believe that ICT improved their teaching (Lan, 8a) because it permited students to access additional materials to those that they provided (Ibrahim, 2010; Apawu, 2011; Davies and Hewer, 2009; and Ghavifekr and Rosdy; 2015 Gilakjani, 2017). In addition, ICT changed their approach to teaching from teacher-centred to one that promoted interaction and collaboration between teacher and students (Ibrahim, 2010). This is in keeping with Cetto's research:

> "Conceptualising the role of technology in teaching is essential to its effectiveness. In my experience, technology has broadened the spectrum of interactions while empowering the students' learning process by providing better opportunities for language usage. It provides possibilities for engagement otherwise not possible. Most importantly, the synchronous chat helped me shift the way I perceived my students. By expanding the opportunities for interaction, I observed their communicative potential moving from learners to communicators who actively conversed for meaningful purposes" (2010, p.121).

ICT has the ability to transform students from learners to communicators is by facilitating a CLT approach. It is clear to see that blackouts and the Internet are "the most serious obstacles because they are totally out of control" (Ngoc, 34a). Although teachers can use their smartphones as "the source of high-speed Internet connection" (An, 1c), smartphones are

only useful for audio while displaying contents on-screen requires larger displays such as monitors and televisions. Any large display may not always be practical in areas where blackouts do occur quite regularly. For this reason, it is very difficult for teachers to use ICT as a means of offering "challenging and authentic content that will engage the student in the learning process" (Yeboah-Fofie, 2015, p.200).

Overcrowded classrooms also present teachers with a severe obstacle to the successful integration of ICT in ELT (Lan, 34a; Sao, 18b). The observation data, as illustrated in Table 5.1 in the previous chapter, confirms a large number of students present within classrooms in Ben Tre Province. The average number of students per classroom, according to the above table, is 39.6225 students. The lowest classroom capacity is 35, as found in Observation En and Observation Tuan, while the highest capacity is 46, as found in Observation Thu, which was carried out at the city centre school. Overcrowded classrooms have deterred teachers from applying some important tools in teaching. For example, a teacher stated that spell-checker was only used in the evaluated sessions while it would not be the right choice to use this tool daily to correct each student in an overcrowded classroom (Thu, 8c). In addition, an overcrowded classroom creates a challenge for students in notetaking as a teacher in one interviewee mentioned:

> "In the meantime, all classrooms are occupied with forty students on average. It is very difficult to teach forty students at once. Besides, notetaking is extremely challenging for my students. For instance, I am unable to delay my PowerPoint slides during a 45-minutes session, while [some] students are unable to take all the notes" (Sao, 18d - 18f).

In the above example, the teacher at the District School referred to the requirement that teaching sections should be thoroughly covered during a 45-minute session (Tuan, 32b). Therefore, students might struggle to keep up with the teaching pace, particularly in notetaking. Some students might even find the teaching pace much harder because "average and below-average students do not have the speed to take all the notes as required" (Hoa, 16g). Overall, overcrowded classrooms create obstacles not only for teachers in providing quality teaching and integrating ICT but also for students.

While teachers believe the capacity should be reduced to "about twenty students per class" (Sao, 18c), it is hard to achieve this desired goal because most schools do not have the

space available for new classrooms. Besides, constructing new classrooms would require additional ICT tools to be purchased to ensure all classrooms are ICT ready. Furthermore, adding new equipment requires more maintenance, meaning that the volume of technical support would be dramatically increased. This would increase the strain on an already overstretched service. According to most interviewees, maintenance and technical support are both inadequate as it is. Currently, equipment is not managed by a dedicated staff but by the English teachers (Lan, 19a). In another instance, ICT is managed by a literature teacher (Tuan, 10a). As a result of poor maintenance and technical support, equipment in a dedicated lab has been abandoned (Lan, 19d). In addition:

> "Even though the lab is mainly equipped with devices for language learning, it is accessible by all teachers. Thus, it is hard to keep the lab in its pristine order. Due to the amount of damage, the lab is no longer workable for English teachers" (Lan, 18a, 18b).

It is obvious to see that even in a major city centre school the dedicated lab is very poorly maintained because "some bad students destroyed equipment there" (Lan, 17e). The lack of regulation for using the lab (Lan, 18a) combined with an improper maintenance team has caused such extensive damage that the school was forced to create a new ICT approach and install "equipment in classrooms instead of having a dedicated lab" (Lan, 19d). Whilst the lab can contribute some significant features to English teaching by allowing students to learn either by themselves, in groups, or interacting with their teachers (Harmer, 2008), operating a dedicated audiovisual lab seems to be too difficult for public schools due to the inability to maintain equipment and provide support.

At a school where a dedicated technician is assigned to maintain the equipment (Sao, 14a) he or she is overloaded with work because their job covers the management and maintenance of devices whilst providing technical support. Therefore, "the managing staff mainly maintain devices rather than providing instructions" (Sao, 14c). For this reason, teachers often solve problems by themselves (An, 26b; Thu, 20c; Tha, 19a; Tan, 29a) as it is hard for teachers to get instant support from experts who "may be reached via phone" (Tha, 19b). In other cases, the expert is unavailable because "he has to respond to all requests made by all teachers at the school" (Diem, 12d). With many unexpected problems which need immediate attention occurring quite regularly (Diem, 18b; Tuan, 19b) such as losing connection from laptops to monitors (Tuan, 19c; Observation Tan) or inaudible speakers

(Lin, 28b), it is common for teachers to find themselves in situations where they cannot successfully solve technical problems (Lan, 14d). A City School teacher provided an example in which "if a Bluetooth speaker does not work, for example, I can either use the speakers on my laptop or switch to the traditional method (An, 54a)"

Technical issues and blackouts appear to be some of the greatest obstacles for ICT integration (Lin, 19d) because they "occur very often" (Tuan, 19b) and appear to be "totally out of control" (Ngoc, 34a). However, schools have not been able to resolve these issues by installing a backup generator (Lan, 47a) or employing a dedicated support team (An, 26a). The use of ICT in ELT in Ben Tre Province, therefore, coexists with many affecting factors as mentioned in other studies explored in Chapter Two. However, existing studies mainly identify affecting factors as standalone issues. For instance, there are research studies that focus on administrative failings and infrastructure (Li and Walsh, 2011), policies related to ICT use (Groves and Zemel, 2000), and technical support (Basak and Govender, 2015). In this research study, affecting factors are not regarded as standalone issues, but they are brought together and analysed to identify common aspects and causes.

Problems caused by administrative inadequacies, a lack of infrastructure (Ngoc, 34a), overcrowded classroom, and technical support (An, 54a) all indicate that the *Initiation Decisions* in ECT is hindered by the *Existence and Quality of Innovations* due to their being a limited *Access to Innovation*. This means teachers cannot access invaluable sources of materials on the Internet such as images, animation, audio and video clips, presentations, and online exercises (Jayanthi and Kumar, 2016). At the same time, the *External Change Agents* do not permit any delay in ICT integration because MOET, in the role of the highest educational authority, has enforced the *Policy – Funds* element which dictates the use of ICT as a national policy. *Existence and Quality of Innovations* and *Access to Innovation*, then, contribute to the *Characteristics of Change* factor in the *Implementation* stage of ECT. Specifically, *Complexity* and *Quality/Practicality* are two affected elements due to existing obstacles. Blackouts and the lack of technical support, for instance, have always forced teachers to be ready to revert to a more traditional teaching approach (An, 54b). Therefore, they increase the level of *Complexity* because teachers have to place the traditional teaching tools on standby at all time. Switching from digital-based to traditional teaching also affects

the *Quality/Practicality* element due to the traditional teaching method not being able to deliver the level of quality that ICT based teaching can offer (Cetto, 2010).

Issues identified as falling under the categories of *Complexity* and *Quality/Practicality* in ECT are similar to those described by Rogers as the *Relative Advantage* in his DoIT. In particular, the integration of ICT, in terms of technology, has a low *Relative Advantage* due to obstacles created by local characteristics which, in turn, affect the *Compatibility* of integrating ICT. On the other hand, obstacles provoke English teachers to find alternative methods using an iterative process described by Rogers as *Trialability*. In fact, the flexibility and resourcefulness of English teachers as described in Sections 6.2.1 and 6.2.2 has resulted in *Observability* being achieved because teachers have found effective ways of overcoming technical issues. Thus, *Observability* contributes a persuasive outcome for English teachers in terms of flexibility, resourcefulness, and proactivity concerning the adoption of ICT in teaching as described in Section 6.2.1, 6.2.2, and 6.2.3.

While many studies pay more attention to the investigation of infrastructure or technology (Dinh, 2009; Dang, 2011; Peeraer and Van Petegem, 2011), human-related factors have also been shown to be critical because teachers play a decisive role in ensuring the effective use of ICT in teaching (Voogt, 2004; Law, 2008). Besides, the previous section in this chapter has shown that English teachers are able to integrate ICT very effectively into teaching despite having several obstacles. For this reason, it is important to explore the human-related factors in the process of ICT integration in ELT.

6.3.3 People

Even though existing studies believe that aging is not a factor concerning ICT integration in language teaching (Mahdi and Al-Dera, 2013; Muslem, Yusuf, and Juliana, 2018), prejudice and even discrimination in terms of ageism in the workforce do exist. This has prompted the UK Government to enact the 2010 Equality Act to prevent discrimination of all kinds including ageism (Ashtiany, 2011). In this research study, negative views about older teachers were seen to exist. An older interviewee for instance, Thu (23b), perceived her contemporaries as lacking the energy needed to learn new things due to their age, while Hoa (20g) and Tha (32a) described how they thought older teachers could forget ICT skills very easily if they did not have the opportunity to use such skills regularly. Lan (25b) suggested

that most older teachers "find ICT is not appealing because digital technology is simply too much for them" and Quynh (46b) expressed her opinion that older teachers were "not efficient in learning ICT" and that they do not find it "necessary for teaching." As Lan (23b) went on to add, some older teachers, in fact, still "prefer the traditional method with no ICT at all."

While Tha believed that older teachers could learn and use ICT slower than their younger counterpart (Tha, 32a) and Nho believed that older teachers may be able to learn and master many different ICT skills and tools (Nho, 17d), data indicates that some older teachers even outperformed younger teachers. For example, Tan, who was a teacher at the District School had applied ICT into teaching all topics while Ngoc explained that ICT was not used in writing teaching only because "the writing lessons in textbooks basically provide information for students to perform their writing assignments" (Ngoc, 11a). The findings, furthermore, could not show any sign of resistance made by older teachers. On the other hand, a younger teacher named Nho believed that "some older teachers are experts in ICT" (Nho, 17d). This same teacher added that the effective use of ICT requires sufficient knowledge rather than relying on ages (Nho, 17b). Therefore, aging would not be a factor; instead, intentions should focus on the lack of time in teaching, insufficient tools, the unreliable Internet, and limitation in training (Muslem, Yusuf, and Juliana, 2018).

Concurrently, encouragement and support for older teachers should be strengthened because the learning pace among all older teachers was not perceived as being equal to that of younger teachers. An older teacher described her difficulties thus:

> "I feel that my age is a disadvantage in using ICT because my acquisition is much slower than younger people. However, I have got encouragement from other people, and I have to try to get as many skills in ICT as young teachers" (Tan, 21a - 21c).

In the previous sections, teachers have been shown to possess positive attitudes towards ICT integration that are evidenced in their flexibility, resourcefulness, and proactivity. This section, in addition, shows that aging as an affecting factor is largely a matter of prejudice as the findings cannot direct to any single case in which older teachers can prevent the adoption of ICT in ELT. Therefore, the Teacher element in the *Local Characteristics* as Fullan (2015) proposes in his ECT is seen within this study to encompass positive attitudes and ICT skills

in keeping with Bordbar's (2010) research that argues that the integration of ICT in teaching can be predicted by teachers' ICT competence.

Section 5.5.2 in the previous chapter has provided clues that ICT is well integrated in ELT while Section 6.2.1 and 6.2.2 have shown the effectiveness of English teachers through flexibility, resourcefulness, and proactivity. However, there are negative attitudes to ICT integration caused by inadequate training, a lack of professional support, and a lack of familiarity and dedication to using new technologies (Li and Wash, 2010). Negative attitudes, moreover, can impact those with positive attitudes. According to Burns and Kurtoglu-Hooton (2016, p. 20), one teacher reported the feeling of "swimming against a tide of teachers" which these researchers interpreted as demonstrating how negative attitudes can affect others psychologically. Such negative attitudes are what Rogers (2003) considers as the *Socio Economic Characteristics* attributes because most people in Ben Tre have limited experience with modern technology as described in Chapter One. In one particular observation, the combination of inadequate training and a lack of professional support impacted on Tan who was unable to troubleshoot an emerging problem when she was unable to connect her laptop to the projector (Observation Tan). As a result, she surrendered the use of modern teaching through the use of ICT and converted to the traditional method. This teacher lacked the drive to persevere which she claimed was the result of her age and this obstructed her use of ICT in ELT. The observations also showed another teacher at the District School who operated a hybrid-mode of ICT and blackboard in which ICT was only integrated for topics where the teacher had the skill to use the digital tools (Observation En). This is another example of where the skill of the teacher obstructed the use of ICT in ELT. It is also an example of how ICT is being used to still teach in a highly traditional manner. The observation data, moreover, illustrated that a teacher in a Village School used a laptop solely for personal preferences. Teaching was still blackboard based with no interactive teaching at all (Observation Ngoc). This teacher commented that "it is quite complicated to operate this new equipment" (2b), and in this way his lack of interest, or his lack of confidence in developing his skills acted as an obstacle to the use of ICT in ELT. These observations indicated that participants themselves had obstructed the use of ICT in ELT for a range of reasons.

On the other hand, the findings in Section 5.5.2 in the previous chapter have shown that most teachers have integrated ICT in ELT to a certain degree for which it can show

positive attitudes among English teachers for which, in my opinion, English teachers in Ben Tre province could improve their ICT competence gradually over the time to resolve the issue of inapplicable of English in practice as criticised by Ha (2010), Anh (2018), and Huynh (2018). According to Yeboah-Fofie:

> "If teachers' attitudes are positive toward the use of educational technology, then they can easily provide useful insight about the adoption and integration of ICT into teaching and learning processes" (2015, p.200).

The first reason which helps establish positive attitudes comes from the *Personal Variables* attribute as teachers believed that ICT should improve teaching through the training courses. Quynh, who was a young teacher at the Village School, gave some insights, "this school sent me to ICT training courses, in which I was amazed by what ICT could offer. I was attracted at that point." For another teacher, the inspiration came from within the school community in which:

> "It is my students who have provided me with the ambition to provide the best teaching quality possible. In return, I have realised that I cannot provide the best teaching quality without ICT. I believe this correlated effect has supported me in enhancing my capability in using ICT. Another supporting factor comes from administrators: they are very supportive" (Ngoc, 35a – 35c).

Proving better, if not the best, teaching in this instance has shaped the *Personal Variables* attribute in seeking better tools for teaching. In addition, the motivation brought by students was considered as a mission, according to a teacher at the District School who said "students are the motivation for me in spending more time preparing my ICT lessons. They make me feel happy" (Phung, 28a). Besides, the *Personal Variables* attribute may also be found in the *Principal*, and somewhat, the *District* factors of ECT through encouragement and support to teachers as found in the City School (Hoa, 29a; Tha, 35b), District School (En, 30a; Nho, 10b), and Village School (Phung, 26a). Encouragement and support from administrators, in turn, have shaped the third attribute of DoIT, known as *Communication Behaviours* to consolidate the belief that ICT is important in ELT. The *Communication Behaviours* attribute, furthermore, can be examined through a peer-to-peer network in which teachers at the same school to learn and share knowledge to and from each other (Nho, 10e; Ngoc, 27a).

In this regard, the peer-to-peer network may be considered as a *Community* under the *Local Characteristics*, or Group B, of ECT as described in Chapter Three. This practice is particularly useful for those who have not participated in the training courses to learn ICT knowledge from ICT trained teachers as found in the City School (Lan, 22b; Thu, 26c), District School (En, 7b; Sao 17b; Nho, 10e), and Village School (Ngoc, 27a; Lin, 40a). It is understandable that there is not any peer-to-peer activity at the Remote Village School because this school has only one English teacher (Tuan, 1a). The *Community* is therefore one of the major sources for teachers in being resourceful to integrate ICT in ELT as described in Section 6.2.2 earlier in this chapter. The *Community* of teachers also functions as a technical team as teachers in a team can help each other to troubleshoot problems (An, 47a; Tan 29d). It enhances the Second phase of DoIT and is known as *Persuasion* because the peer-to-peer network through knowledge sharing leverage the *Compatibility* attribute because ICT approaches between teachers at the same school are supported by all teachers. The assistance in troubleshooting, also performed in the form peer-to-peer, helps reduce the level of *Complexity* as all teachers are acquainted with similar obstacles. As a result, *Relative Advantage* holds an advantage because the *Community* supports the whole innovation of integrating ICT in ELT. The Relative *Advantage* attribute, moreover, has been benefited by a national policy which dictates the use of ICT in teaching, known as *Decision No. 1400/QĐ-TTg on Approving of the Project "Foreign Language Learning and Teaching in the National Education System period 2008 and 2020* (MOET, 2008b). The *Relative Advantage* boosted by *Compatibility*, then, benefits the *Trialability* and *Observability* attributes as the *Community* can put their new ideas, as a team, into trials to enhance what is effective for which *Observability* can be reached. The way the *Community* functions, finally, offers the opportunity for CALL applications to be optimised in which students can construct and even take ownership of their knowledge (Ellis *et al*., 2005), also known as the way to produce authentic learning materials (Larsen-Freeman and Anderson, 2011). The way teachers have formed their support each other leverage the whole persuasive phase toward the adoption of innovation for which it benefits the Characteristics of Change of ECT (Fullan, 2015) in the scopes of *Need, Clarity*, and *Quality/Practicality*.

Starting with the investigation of the argument that aging could be a factor affecting the use of ICT in ELT, this section has not only showed that older teachers can use ICT as effectively as their younger colleagues, but that teachers regardless of their age can make a

significant contribution to the implementation of ICT in ELT as Cohen (1987) highlighted the teachers' perspectives on the curriculum and pedagogical practices as crucial factors that determine how technology is used.

6.3.4 Summary

This whole section, in brief, illustrates that affecting factors can be found in all three main proposed themes which are *Policy, Technology,* and *People*. In addition, local characteristics in terms of funding, infrastructure, and lifestyle are major contributors to the use of ICT in ELT. These external influences, on the one hand, seem hard to overcome because most of them are totally out of the control of administrators and teachers who unable to influence funding and existing infrastructures within Ben Tre Province. However, teachers are able to use ICT effectively under such circumstances as described in Section 6.2 in this chapter due to their flexibility, resourcefulness, and proactivity. Internal factors, on the other hand, seem to be controllable because teachers have contributed several supporting factors in adopting ICT in teaching. However, administrators at the Education and Training Service Ben Tre have faced many obstacles mainly brought by local characteristics in the province alongside the personal attributes of these administrators. Since obstacles are still scattered throughout this chapter, the investigation will look into the relationship between factors affecting the use of ICT as described next.

6.4 The Relationship between the Factors Affecting the Use of ICT at Secondary Schools in Ben Tre Province

A common assumption is that it is very unlikely for ICT to be successfully integrated into teaching if budgets are insufficient to invest in necessary ICT tools and the required infrastructures (Malcolm and Godwyl, 2008). However, research shows that providing enough equipment does not mean ICT is used extensively in classrooms (Mulkeen, 2003). In the Netherlands, Drent and Meelissen (2008) found that computers are used mainly for administrative tasks rather than for teaching even though most classrooms are fully equipped with ICT tools. This example points to other factors playing a role in "how and why it [ICT] is applied and integrated" (Salehi and Salehi, 2012, p. 215). For this reason, a deeper investigation into the relationship between factors

is necessary to identify how the relationship between factors affects the integration of ICT in ELT.

The following subsections explore the relationship between the four main themes identified within this study under the following headings: *People* and *Policy*, *People* and *Technology*, and *Policy* and *Technology*. The fourth theme, local characteristics, has not been included within this matrix because it has been shown to affect all of the other factors at all times and therefore will be examined where applicable. Each section will end with a diagram that illustrates the relationship between the two factors. These diagrams will then be brought together within a final diagram that connects all the themes and sets out the relationship between the different factors affecting ICT integration in ELT in Ben Tre Province.

6.4.1 People and Policy

The relationship between *People* and *Policy* is organised according to a hierarchal structure in which the higher-level elements influence the lower level subsidiaries. In particular, administrators at the Education and Training Service decide on the provincial ICT policies. At first glance, people influence policies in the *People* and *Policy* relationship. However, provincial administrators cannot draft their ICT policies freely because local characteristics constrain what is possible. For example, the lack of an educational institution combined with a shortage of funding does not permit ICT-training courses to be held during the summer break (Hoa, 30c; Thu, 30a) which causes difficulties for the teachers that the administrators cannot resolve (Tha, 36a).

ICT policies affect public schools throughout the province because these policies are mandatory province-wide. As a result, “three teachers [per school] will be drafted for ICT training every year” (Tha, 14c) as mandated by the *ICT Training Policy* (Ben Tre Educational Service, 2016a). In addition, ICT integration is required by the *ICT Integration Policy* (Ben Tre Educational Service, 2016b). For this reason, all public schools must adopt ICT into teaching regardless of their readiness for ICT integration. However, this policy does not specify how this must be done. Therefore, schools have had the liberty in developing their own ICT approaches. Some schools have placed their efforts in the construction of the dedicated lab as the teaching aids in which students can practice on their own or work

interactively in pairs as well as with their teachers (Harmer, 2008). Other schools have equipped each classroom with basic ICT tools such as televisions and speakers. In other words, public schools have met policy requirements in their own way, deciding on how they will develop facilities, purchase equipment, and set up dedicated maintenance and support teams.

Concerning the relationship between *People* and *Policy*, people with the highest authority in education administration determine these ICT policies. This means administrators at the Education and Training Service in Ben Tre, theoretically, are in charge of creating ICT policies. However, these provincial administrators only have a direct influence on providing ICT training through the establishment of the *ICT Training Policy* (Ben Tre Educational Service, 2016a). On the other hand, their influence on how ICT is integrated within each particular school is limited because the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) does not set any specification of whether ICT should be developed through the dedicated labs or in classrooms. There are no guidelines from the highest authority as to whether technical support teams should be established. Furthermore, the minimum quota for ICT to be used in teaching is so low that individual schools have set their own targets.

Public schools, therefore, have become the ICT regulators which are responsible for equipping and managing ICT tools funded by provincial administrators. This means public schools and administrators at the Education and Training Service in Ben Tre Province both contribute to the creation and implementation of ICT in ELT. Teachers, in turn, are driven by all policies issued by provincial administrators as well as regulations generated by the boards of administrators at their schools. The relationship between *People* and *Policy* is shown in the diagram below:

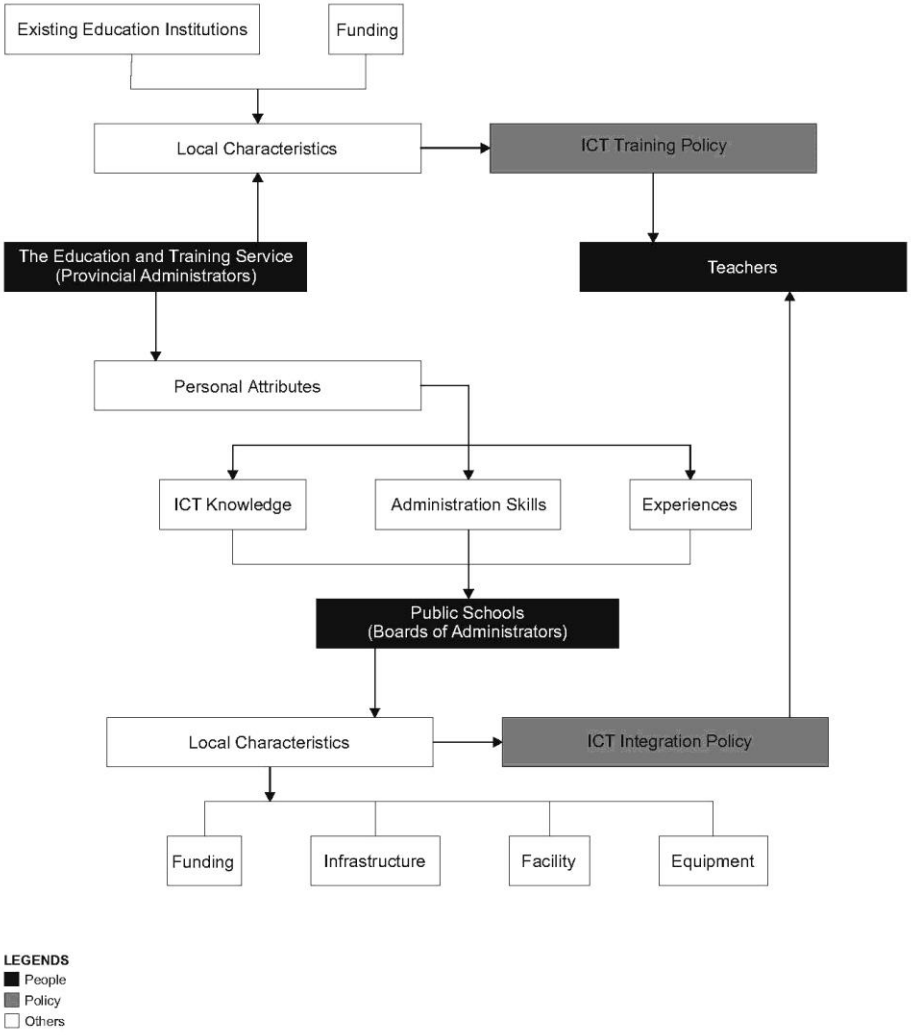

Figure 6.3 The relationship between People and Policy

According to the diagram, as shown above, it is clear to see that the Education and Training Service in Ben Tre Province has a direct effect only on the ICT-training courses. Their ability to decide on these is constrained by the local characteristics of funding and existing education institutions which play a major role for provincial administrators in drafting the contents of the *ICT Training Policy* (Ben Tre Educational Service, 2016a) in providing ICT-training courses. At the same time, personal attributes among provincial administrators explain why each public school has the authority to regulate the integration and use of ICT differently from each other. The Education and Training Service in Ben Tre Province, as the highest

authority, seems unable to dictate what school should do, not only in ICT implementation, but the entire administration. In other words, the *ICT Integration Policy* (Ben Tre Educational Service, 2016b), which enforces the integration of ICT in teaching, has passed the authority of deciding how ICT is integrated from a provincial level to that of the individual public school. The integration process is then influenced by existing local characteristics including funding, infrastructure, facilities, and equipment. Therefore, it is quite safe to conclude that the outcomes of the implementation are the responsibility of the Boards of the Administrators including all achievements as well as mishaps.

The way authority in ICT integration has been transferred from the Education and Training Service in Ben Tre Province to public schools reflects the transition from *External Factors* to *Local Characteristics*, according to the principles of ECT (Fullan, 2015) because the *Principal* element under *Local Characteristics* in terms of funding, infrastructure, facility, and equipment has complete control over the process. The *Teacher* element, on the other hand, is at the receiving end of the ICT integration issued by the *Principal* element as well as the ICT-training courses which are managed by *External Factors.*

At the same time, the transition in authority also reflects the Education and Training Service regarding the knowledge in policymaking. *Knowledge*, according to DoIT (Rogers, 2003), is the first stage of the innovation process in which there are two important elements, *Personality Variables* and *Communication Behaviours*. The lack of specification for integration as found in the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) demonstrates the lack of administrative skills, ICT knowledge, and experiences. These limitations reflect the *Personal Variables* attribute, according to Rogers (2003) administrators at the Education and Training Service in Ben Tre Province have created a policy that forfeits most of their power to public schools. The creation of all ICT policies which lack clear rights and responsibilities for public schools could suggest that these policies have been drafted without the consultation experts. One probable explanation for this lack of clarity during the policymaking process could be the lack of a university with experts and scholars that might be able to provide support to administrators. Acquiring expert advice, thus, would require the hiring experts from other regions. However, funding requests can take a very long time to be approved prior to the release of the funding. Even though there is

no solid data to support this assumption, the lack of experts and scholars alongside the delay in funding contribution could be one of the reasons why policies are lacking in detail.

Obstacles found in the *Knowledge* phase, especially the lack of specifications in the *ICT Integration Policy* (Ben Tre Educational Service, 2016b), impact on the *Complexity* attribute in the Persuasion stage of DoIT as each school has its unique way of integrating ICT in teaching. Some schools pay attention to developing a dedicated lab while some others enhance the availability of basic ICT tools in every classroom as described in Section 5.4. Technical support and ICT quotas for teachers also vary between schools. For this reason, it is extremely difficult for the Education and Training Service in Ben Tre Province to evaluate the effectiveness of the whole integration process as each school has its own *Trialability* version. In fact, the *Trialability* attribute cannot provide a solid conclusion on whether the dedicated lab is effective in teaching. The switch from the dedicated lab to installing basic ICT tools in every classroom is solely associated with the shortage of funding. Moreover, the lack of reliable technical support prevents administrators at all levels from gathering data to support *Observability* because "technical problems are often bypassed as teachers do not report them" (Diem, 12f). In my opinion, the only sustainable reason for the ICT integration process to be implemented is the importance of a national policy issued by MOET in 2008, known as *Decision No. 1400/QĐ-TTg*. For this reason, having a national policy is beneficial as proactive policies at the national level encourage education institutions to greatly improve the use of ICT (Peeraer and Van Petegem, 2011).

In this section, the relationship between *People* and *Policy* has been identified in which people at the upper level generate policies which, in turn, affect the subordinate levels. In particular, provincial administrators have the full authority in making all ICT policies which influence the boards of administrators at public schools who, then, create regulations for teachers. In the next section, the investigation will shift from *People* and *Policy* to an investigation of the relationship between *People* and *Technology*.

6.4.2 People and Technology

As mentioned in Chapter Three, the *People* theme contains three distinctive groups namely administrators, teachers, and students and their parents. Administrators, in turn, are divided into provincial administrators at the Education and Training Service and boards of

administrators at public schools throughout Ben Tre Province. The investigation, for this reason, needs to examine all these groups of people in terms of their relationship to the technology used in ELT. Therefore, this section will describe the relationship between technology and provincial administrators, the Board of Administrators, teachers, students and their parents, respectively.

Provincial administrators hold the key to initiating applicable technologies into teaching for two reasons. Firstly, the Education and Training Service in Ben Tre opens the gateway to introducing technology to teachers through the ICT-training courses. As the data shows, "some teachers do not know how to operate a computer at all" when participating in the training courses (Tuan, 24a). Hence, whatever is taught in the training courses surely becomes the technology of choice for these teachers when ICT is integrated and it defines the chosen technologies in the classroom environment. In addition, the ICT-training courses provide the opportunity for teachers to have access to modern devices such as the interactive board which bring benefits to teaching (En, 6d) as the interactive board can display a computer's desktop for the whole class to see and interact with (Chhabra, 2012). An interviewee confidently stated that "any teacher who has received the ICT training courses can operate the interactive board." Moreover, the training courses help teachers in accessing education-oriented software and general applications. E-learning, for instance, is a computer application dedicated to English teaching (Diem, 27g) which can outperform Microsoft PowerPoint because E-learning contains "many useful interactive features" (Diem, 27h). Secondly, the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) proposes a new teaching pedagogy in which the integration of ICT is not only preferred but also required. As a result, public schools have no alternative but to ensure that ICT is used in teaching. Thus, provincial administrators have had the highest influence on technology overall.

Boards of Administrators at public schools are at liberty to determine ICT approaches which may vary between schools. At some schools, ICT is integrated by the development of dedicated audiovisual lab and learning rooms (Tha, 14f; Tan, 4a; Quynh, 14a) in which dedicated devices are available (Lan, 17d). Constructing a dedicated lab requires more funding in order to equip it with modern devices such as interactive boards (Tha, 14f; Sao, 12e; Diem, 9a), projectors (Tan, 4a; Sao, 12e), visualisers (Tan, 11e; Sao,

1c), and computer servers (Thu, 17a). However, teaching in a dedicated lab has reduced the opportunities for teachers to integrate ICT in ELT as regularly because many teachers need to share the lab (Hoa, 6a). Also, teaching in the dedicated lab often causes a session to be cut short from having to switching classrooms (Vu, 23d). Furthermore, schools need a substantial amount of money to update such dedicated equipment in the lab. Extracted data shows that keeping devices up to date is extremely difficult. For instance, an interviewee stated that the dedicated lab is completely abandoned as the Board of Administrators had failed to keep devices from being damaged (Lan, 19c). The same interviewee also suggested that "equipment should be installed in classrooms instead of having a dedicated lab" (Lan, 19d). In fact, equipping basic ICT tools in classrooms is the choice made by boards of administrators at many schools because developing the dedicated lab is unaffordable. Compared to the dedicated lab with many sophisticated and expensive tools, having televisions (Tha, 14g) and speakers (Tha, 21b) installed in every classroom is a less expensive approach. This less expensive approach also helps save money in maintaining devices as boards of administrators are no longer required to manage sophisticated tools such as interactive boards, control panels, and visualisers. The extracted data also confirms that transitioning from the dedicated lab to having basic ICT tools is the current trend at many schools.

Even though Boards of Administrators from different schools may have different perceptions about ICT approaches, ICT has been fully integrated at all schools participating in this research study. Boards of Administrators at public school, nonetheless, have shown their influence in providing different types of ICT-based learning environments. In other words, Boards of Administrators are responsible for equipment and facilities in the relation between *People and Technology*.

Teachers are the most important factor in the relationship between *People* and *Technology* because it is ultimately the teachers who need to adopt modern technology into their teaching. The extracted data shows that some teachers, especially older teachers, do not recognise ICT as a necessity in teaching at all (Lan, 23a; Quynh, 46b). For this reason, the use of ICT in ELT can only be considered as effective if teachers advocate for new technology. The reality, according to the data, proves that most teachers are passionate to

learn more (Lan, 12d) because they believe ICT is important in teaching (Thu, 11a; Tha, 10a; Tan, 13a; Diem, 6a; Tuan, 6a).

Data shows that the benefits brought about by ICT are hard to resist. One interviewee even mentioned that it is hard to teach without ICT being used nowadays (Ngoc, 17c). As a result, teachers are eager to learn more about ICT by themselves (Lan, 22a) because official ICT training is only at a basic level (Lan, 13b). Besides, not all teachers have participated in the training course because the existing policy permits only three teachers per school to attend the ICT-training courses at a time. Data from interviews confirms that some untrained teachers (En, 48b; Diem, 13; Ngoc, 37a; Lin, 21a) have already applied ICT to the very best of their knowledge in teaching, including Sao, who is "one out of the remaining four teachers who have not been trained" (Sao, 17a). Untrained teachers can improve ICT skills through self-learning as well as by asking other teachers (Sao, 17b; En, 8c). Self-learning may take a lot of time to master the basic skills (Lin, 25b), but it is suitable for applying ICT in teaching (Lin, 25a).

Moreover, teachers have shown their dedication to using ICT in ELT by using their own devices (Lan, 20a) to compensate for all technological disadvantages at school. For instance, teachers prefer to use their own laptops because "school-owned laptops are shared by many teachers" (Lin, 20b). Bluetooth speakers and smartphones are other teacher-owned essential tools (Lan, 1d) for teaching which are not distributed by schools. As teacher-owned laptops and smartphones are permitted, teachers have had the liberty of selecting computer software and mobile apps. This option, in fact, provides a lot of advantages for untrained teachers who may simply learn whatever is necessary for their teaching tasks. Using personal equipment also gives teachers the freedom to often apply ICT because laptops, speakers, and smartphones are sufficient for most teaching tasks. As a result, an interviewee believes that the existing "[ICT] quota is very low" (Quynh, 45b) because they use ICT very regularly.

The role of teachers in regard to technology is not limited to devices and software, but includes new pedagogies developed during the integration of ICT. Teachers do not only know about all the benefits, but also about the disadvantages of using ICT. For example, teachers have realised that ICT can make some weak students get even weaker (Lan, 45b;

Diem, 7c). Having a core understanding of how ICT may influence weak students negatively, teachers have created new ICT-based pedagogies to support weaker students. Teachers show their attention to the details by rearranging sitting positions in which a weak student sits next to an excellent one (En, 50a; Nho, 30a). In this arrangement, good and excellent students can help their weaker classmates during learning and exercises as teachers do not have the time to focus on each weak student during a forty-five-minute session (Lan, 45a). Most importantly, teachers know what ICT tools should not be used because such tools are not helpful for students. For instance, teachers are aware that ICT should not be used in writing because weak students cannot follow and understand (Tan, 15e). By positioning students at the centre, teachers have shown their capabilities to use technology-based pedagogies to provide the best teaching quality for all students.

Lastly, technology can be driven by students and their parents even though their involvements are not always obvious. First and foremost, family backgrounds affect how ICT is used in teaching because students who live in urban zones are familiar with many ICT tools (Phung, 23d) while "it is hard for students who live in villages to use ICT" (Phung, 23e). This explains the reason why advanced ICT tools are often used at schools located in cities and district centres while smaller schools in villages and remote areas are not equipped with tools as modern as larger schools in urban zones (Sao, 1d).

In regard to family backgrounds, parental influence is not always visible. However, parents who live in urban zones can provide a better chance for their children in accessing the latest technology available. Conversely, those who live in rural zones are often at a disadvantage because technology is still a very foreign concept in areas dominated mainly by agriculture and fishing. Besides, household income is a contributing factor (Hoa, 25d). Students "who are from low-income families do not have much opportunity to learn ICT" (Hoa, 25e) outside school. In contrast, "those who live in higher-income families are often better at using ICT than those who live below the poverty line" (Diem, 7e). Student's familiarity with technology outside of the classroom affects the way technology is used in teaching because students who are unfamiliar with technology need a different set of ICT tools to learn. For example, the use of hints and clues is not necessary for good and excellent students (Tan, 12c); however, "poor-performing students are unable to catch up if these clues and hints are omitted" (Diem, 28c). Similarly, teachers cannot omit basic teaching contents

(Diem, 28c) while presentations are done at a slower pace for weaker students to follow (Nho, 30c). For this reason, weak and excellent students have affected how technology is integrated into teaching. Enhanced presentations (Diem, 28f) including the use of pictures, video clips, and games are used in teaching to maintain attention in weak students (Lin, 49b). On the other hand, advanced content is applied for good and excellent students (Ngoc, 59b) because ICT does not only maximise the learning ability, but it also helps develop their knowledge at the same time (Sao, 11c).

Concerning the relationship between *People* and *Technology*, each distinctive group of people uniquely affects technology. Provincial administrators determine whether technology can be applied in teaching. The Boards of Administrators, at a narrower scale, influence technology in terms of equipment and facilities. Teachers decide the most appropriate ICT tools to yield the highest teaching quality. Lastly, students and their parents influence how teachers adjust the teaching pedagogies to ensure that ICT can improve the learning ability for not only good and excellent students, but for all students. The relationship between *People* and *Technology* is illustrated in the diagram below:

Figure 6.4 The Relationship between People and Technology

In the diagram above, teaching pedagogies reflect the relationship between *People* and *Technology* in which teachers take into account the affluence and familiarity with the technology of their students to select the most appropriate ICT tools to be used in teaching. In other words, teaching pedagogies function as a central hub in which the themes of *People* and *Technology* are connected. Teaching pedagogies, hence, reflect the *Quality/Practicality* element in the *Implementation* stage of ECT. The ability for English teachers to overcome obstacles brought about by the lack of equipment and training is evidence of the important role of the human factor concerning the ICT integration in teaching in Ben Tre Province. In other words, the *Teacher* element has held the determining attribute out of all elements in the

Local Characteristics factor as Fullan (2015) proses. This ability, under the perspectives of DoIT (Rogers, 2003), is achieved by the *Personal Variables* element in the *Knowledge* phase. In particular, the dedication in self-learning alongside the choice of ICT tools explains the positive attitudes among English teachers. Moreover, the solid understanding in introducing the most appropriate teaching pedagogies to different students whose learning abilities vary is rooted in the *Personal Variables* element which builds a unique degree of *Knowledge* for teachers to adopt ICT in teaching successfully.

This subsection has shown that teachers have had the final choice of technology in the *People* and *Technology* relationship while administrators have had the highest authority in policymaking as described in the previous subsection. *People*, thus, are the most influential theme in determining the integration of ICT in ELT. The next subsection will investigate the relationship between *Policy* and *Technology* to determine which is the least dominating theme in regard to the integration of ICT in ELT in Ben Tre Province.

6.4.3 Policy and Technology

ICT policies dictate the use of technology in teaching. Without them, the use of ICT in teaching would be simply an option for which innovation would be unlikely to take shape. In this research study, the use of technology is driven by two distinctive ICT policies. The first policy, known as the *ICT Training Policy* (Ben Tre Educational Service, 2016a), provides ICT-training courses for English teachers. The second policy, the *ICT Integration Policy* (Ben Tre Educational Service, 2016b), is created to enforce the use of ICT in teaching at public schools.

The ICT-training courses are held by the Education and Training Service in Ben Tre Province to introduce digital technology to teachers (An, 45a; En, 24b) to provide "the concepts, methods, and applications involved ICT are constantly evolving on an almost daily basis" (Zuppo, 2012). ICT, in addition, is referred to as "a collection of tools which allows processing and managing information in digital form" (Blurton, 1999). According to teachers who have participated in the training courses, they are helpful, exciting, and effective (Hoa, 34d; Quynh, 22a) because teachers can apply several aspects from the training courses into their teaching (Vu, 19a) such as creating games and online exercises (Tan, 18a). The training courses also help teachers in working with multimedia for presentations (Quynh, 23a)

including the ability to combine several audio files into one single audio clip (Vu, 19b). Another advanced feature known as text-to-speech has been widely used in teaching (An, 32c) in which teachers can easily covert text-based documents into dialogs. Besides, the training courses help teachers with operating advanced ICT tools such as the interactive board. Even though "the interactive board is quite complicated to operate" (En, 6b), any teacher who has received the training courses "can surely use this tool" (Phung, 2a). The contents of training courses, according to the data, cover most of the ICT required in teaching. In the field of education, ICT refers to tools such as computer applications, internet, videos, software and hardware, and other devices which are used for communicating, sending and gathering information (Al-Harbi, 2014). For this reason, the ICT-training courses offer a gateway for teachers to access the technology created to generate, communicate, and administer information (Yunus, Nordin, Salehi, Sun and Embi, 2013).

On the one hand, providing ICT training is a way of introducing technology to teachers. On the other hand, the existing ICT-training policy contains some issues in its content which this particular policy cannot introduce technology as desired because not all teachers have had the opportunity to participate in the training courses (En, 7a). In particular, "a maximum of three teachers per school" is permitted to participate in the training courses annually (Tha, 14c). The matter gets even worse as there is no policy or guidance for drafting candidates (Tuan, 33a). Each school simply drafts some participants to receive the training (Tuan, 35b). As a result, some teachers have not been able to participate in any training course (Sao, 17a; En, 48b; Diem, 13f; Ngoc, 37a; Lin, 21a) due to there being many teachers on the waiting list (Diem, 14c). Conversely, teachers at schools with only a few teachers may have received the training repeatedly. In one instance, an interviewee "participated in three different training courses" (Vu, 18a). The lack of prequalification due to the missing guidance when selecting participants has added more issues to the training courses. The issue with existing training courses was commented by an interviewee as follows:

> "Contents of the training courses are designed for those who know how to use a computer at a basic level. However, some teachers do not know how to operate a computer at all. For this reason, I think it would be more appropriate to have a prerequisite for participating in the ICT training courses. Schools should offer their own training courses at a basic level to their teachers before allowing them to participate in ICT training courses, which are supposed to train teachers in how to use educational applications. I believe teachers with equivalent knowledge may make the training courses more

> effective than they currently are because instructors often have to provide basic knowledge to those who cannot use a computer. As a result, contents in the training courses have been shortened unnecessarily" (Tuan, 24a - 24d).

Shortened training sessions have resulted in teachers being unable to master any specific skill at all as an interviewee stated "current training makes it impossible for teachers to use any application fluently" (Tuan, 26d). The same interviewee also suggested that "the training courses should concentrate on one specific topic or one application, instead of training a lot of applications at the very basic level" (Tuan, 26a).

As a result, the ICT-training courses are unable to deliver technology to teachers for two reasons. One, many teachers have not had the chance to receive training. Two, those who have received training are unable to apply the content in the training courses to teach effectively because the courses cover too many topics without going in any in any depth. As a result, the training courses may lead to the possibility that teachers are unable to integrate ICT into most lessons due to the lack of training (Mulhim, 2013). Fortunately, teachers have been successful at seeking other ways of learning about ICT. Most teachers have developed ICT skills through self-learning (Lan, 12c; An, 44b; Nho, 31a; Lin, 24a; Tuan, 35d). Teachers are also able to participate in other non-official training courses held by sponsors, especially by book publishers (An, 45b). In fact, it is teachers' resourcefulness rather than policies that help ICT to be integrated into teaching because technology is not only restrained by the training courses, but the policy which enforces the use of ICT also creates the problem.

The *ICT Integration Policy* (Ben Tre Educational Service, 2016b) is created to enhance the adoption of ICT throughout public schools. This policy, however, does not indicate or clarify how ICT should be adopted. Thus, the Boards of Administrators at public schools have had the liberty to launch their own ICT campaigns. In other words, the administration of ICT has been shifted from the provincial level to a school. This has meant that there are discrepancies between what is taught at the training course and what is possible within the school. For instance, the Boards of Administrators do not focus on the necessity of a reliable Wi-Fi network which has led to unreliable Internet connections in many schools or a complete lack of Internet connectivity (Lan, 21a; Hoa, 21c; Quynh, 29a; Tuan, 8c). As a result, online-based applications become unusable in class (An, 34a; Tan, 28d). As Internet

connectivity is a major obstacle to integrate ICT in teaching and learning (Mereku *et al.,* 2009), it is clear to see there is a conflict between the training courses and ICT integration (Phung, 19a; Ngoc, 44d).

To a large extent, conflicts do not only occur in relation to Internet connectivity, but they also come from existing regulations. For instance, mobile apps which teachers have been trained to use are not applicable for teaching because students are not allowed to use mobile devices (Phung, 18a). Thus, the regulation which bans the use of mobile phones is an affecting factor (Thu, 21e) because teachers cannot choose to use mobile apps for teaching (Thu, 21h). In particular this is a major drawback when teaching speaking skills because mobile apps have been shown to be very affective at supporting the development of this skill (Gromik, 2012). The lack of a reliable Internet connection alongside a ban on mobile phones has made computer-based applications the only option (Hoa, 20c; Thu, 21j). Furthermore, computer-based applications are not always available because teachers are required to purchase software at their own expense (Hoa, 23c). Even though some teachers may be willing to invest in software, their inexperience of online transactions, or e-commerce, has caused issues for those who intend to purchase computer applications out of their own pockets (Hoa, 23e).

In short, existing policies seem to be incompatible with reality (Phung, 27b). This means that teachers need to rely mainly on themselves and their community to learn the necessary ICT skills and they need to equip themselves with devices and software at their own expense. Consequently, the relationship between *Policy* and *Technology* is a major obstacle to the successful integration of ICT because current policy obstructs teachers access to technology and training. This might be due to the limited ability of administrators in drafting effective ICT policies. The relationship between *Policy* and *Technology* is illustrated in the diagram below:

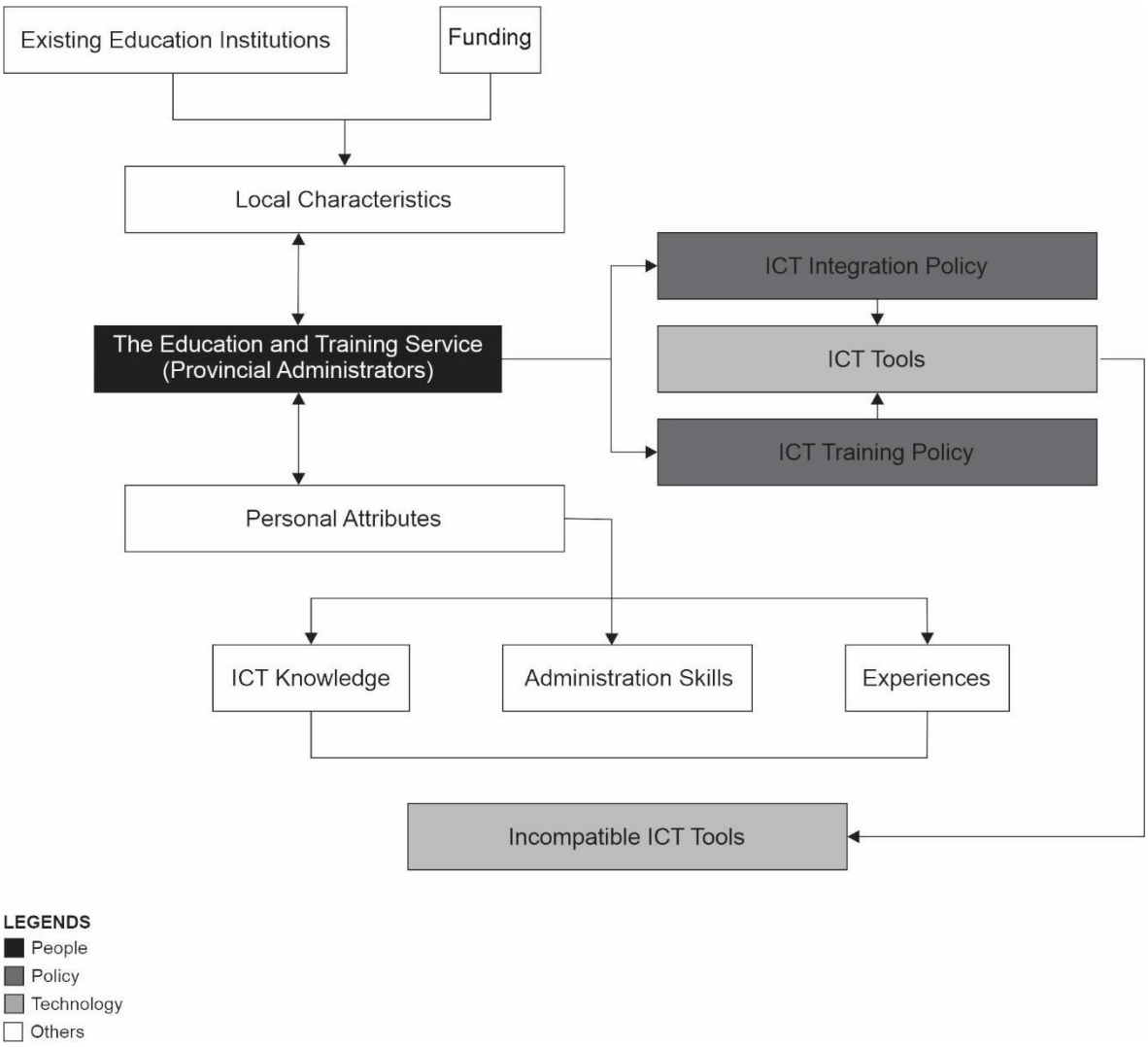

Figure 6.5 The Relationship between Policy and Technology

In the above diagram, the *People* theme influences the policymaking process. In particular, administrators at the Education and Training Service are responsible for all policy-related activities. Regarding the integration process in Ben Tre Province, the policy which requires ICT to be taught in class, known as the *Correspondence 2782/SGD&DT-KTQLCLGD&CNTT*, holds the *Characteristics of Change* as teaching is converted from Grammar-Translation Method and Audio-Lingual Method (Xiaotong, 2014) in the traditional teaching to a digital-based model which places students at the centre (Hidayati, 2016). The creation of this particular policy, however, may not be practical if English teachers are not prepared and trained to adopt modern technology. Therefore, the policy which offers official training for English teachers, known as the *ICT Training Policy* (Ben Tre Educational

Service, 2016a), represents the *Need* element to ensure that ICT can be used practically and effectively. The objective of the training courses is to establish the ICT competence for English teachers because the integration of ICT in teaching is dependent on teachers' ICT competence (Bordbar, 2010). Similarly, another research study believes that teachers often use technology in teaching if they are competent (Sipilä, 2014).

While the *Need* element is reasonable and obvious, the *Clarity* element is not quite clear. While there are many untrained teachers, the extracted data shows that one particular teacher has already "participated in three different training courses". (Vu, 18a) The training courses also lack a prequalification for participation where the learning ability is not equal among teachers. Most participants, on the one hand, are able to operate the computer at a basic level. However, some participants are unable to operate the computer at all (Tuan, 24a). The drawbacks in the *Clarity* element, then, affect other elements in the *Characteristics of Change*. The negative impacts caused by the *Clarity* element are obvious when examining the *Complexity* element. As teachers are only able to use computer applications at a very basic level, ICT integration in teaching is carried out at a very basic level as well. The *Quality/Practicality* element, as a result, suffers dramatically.

Moreover, the training courses do not seem very practical as they may not be applicable in classroom environments because existing regulations in schools do not facilitate the effectiveness of ICT. For instance, the ban on mobile phones has completely disabled all training for using mobile apps. As a result, some assignments cannot be carried out because students are not permitted to use their mobile phones (Phung, 16b). In contrast, students could receive more benefits if the ban on mobile phones is lifted (Thu, 21f). On top of this, there exists another regulation which prevents skills learned from ICT training to be applied in teaching. According to an interviewee:

> "Effective teaching often comes with noise, as students proactively participate. However, management considers a noisy class as an out-of-order class. For this reason, most teachers prefer to keep their class as quiet as possible, which means students cannot participate much" (Thu, 27d).

The ban on mobile phones along with the consideration of formal quiet classroom context indicates how administrators are driven by traditional, orthodox, and Confucius-inspired standards during the policymaking process. Such traditional characteristics, in particular, are

associated with what is known as the *Personalities Variables* element in the *Knowledge* phase of DoIT. Information, as given by different interviewees, suggests that administrators at all levels are more suited to managing the traditional teaching than the modern counterpart. For example, the limitation in capacity for generating the ICT integration policy for which public schools have been granted with the authority as the "ICT regulators" highlights the inefficiency in administration. Education administrators, as a matter of fact, are all senior teachers who are experts in the field of teaching. In contrast, the investigation of the ICT integration policy shows that these educational experts have not established the required ability in management and administration. Even though it is arguable that these administrators can seek expert advice elsewhere, the outcomes from the investigation disprove the existence of external helps. The absence of expert advice also illustrates the limitation in another element, known as *Communication Behaviours*.

Local characteristics, or the *Socio Economic Characteristics* element, prevent administrators from establishing an effective communication channel due to the lack of a university as administrators are unable to receive step-by-step consultation during the policymaking process. Furthermore, the *Communication Behaviours* element can also be found internally as provincial administrators and the Boards of Administrators do not collaborate very well. This is because ICT tools equipped by public schools are not optimised for the ICT training courses hosted by the Education and Training Service (Ngoc, 44d) as there is an inadequate compatibility between ICT training courses and existing ICT tools at schools (Tha, 28a). For this reason, the *Communication Behaviours* element has negatively impacted the integration due to the conflict of ICT tools. As a result, teachers tend to forget many topics in the ICT-training courses (Hoa, 33d).

Examining administrators' knowledge in policymaking decisions under the scope of *Knowledge* in DoIT signifies the limitation is directly connected to the *Personal Variables* element as no administrators are able to deliver effective policies. In addition, the situation is exacerbated due to the lack of the *Communication Behaviours* element as administrators cannot communicate effectively between each other as well as experts from other fields. The *Knowledge* phase, therefore, affects the *Persuasion* stage as the *Personal Variables* element in the *Knowledge* phase inhibits the existence of the *Relative Advantages* element. Similarly, the *Communication Behaviours* element which presents the conflict between training and

practice creates issues for the *Compatibility* element. The *Complexity* element, for this reason, has an opportunity to grow because *Relative Advantage* and *Compatibility* are low.

In this section, existing policies both in training and integration have prevented ICT from being used effectively in teaching. The lack of administrative skills has taken away the ability to monitor the whole ICT integration process because equipping ICT tools in teaching is fully in the control of public schools, whilst the communication channel prevents higher authorities from receiving reports from their subordinates. The lack of effective communication, as demonstrated by the *Communication Behaviours* element, creates conflict between training and practice as devices and regulations at public schools are not harmonised with ICT-training courses. Existing policies, thus, can be considered ineffective overall (Lan, 31a). Technology, as a result, has not been optimised as numerous policy-related reasons have restrained ICT from taking full effects.

6.5 The Causes of All Affecting Factors

Section 6.4, as described above, investigates the relationship between affecting factors through thematic approaches in which each of the proposed themes of this research study is paired with another theme to explore their relationships. By placing themes into pairs, the relationship between each pair is identifiable. In addition, the use of the extracted data along with the principles of ECT and DoIT as proposed in the theoretical framework help identify and explain all affecting factors. The relationships explored through the thematic approach shows that the *People* theme triggers the *Policy* theme as all policies are made by administrators. Then, the *Policy* theme helps create the *Technology* theme as the application of technology needs to align with policies. Mapping the affecting factor using a theme-to-theme relationship, however, cannot reveal the roots of all problems because affecting factors in the *People* and *Policy* relationship may well occur in *Policy* and *Technology*. For this reason, this section intends to provide a link between all affecting factors to demonstrate probable causes of major obstacles.

According to Figure 6.3, the provincial administrators at the Education and Training Service in Ben Tre Province are influenced by the local characteristic of *Existing Educational Institutions* and *Funds* for which they are unable to seek expert advice to assist their understanding of *ICT Knowledge*, *Administrative Skills*, and *Experiences*. The shortage of

Funds affects the training courses while the lack of *Existing Educational Institutions* combined with the limitations in *ICT Knowledge*, *Administration Skills*, and *Experiences* have influenced the policy writing process that discharges the Education and Training Service in Ben Tre Province from the role of deciding how ICT should be integrated by passing the authority to make decisions onto schools. The authority to decide how to integrate ICT in teaching is bestowed upon the Boards of Administrators at public schools as described in Section 6.4.1. The Board of Administrators, however, cannot integrate ICT successfully due to the influences of local characteristics such as funding, infrastructure, facilities, and equipment, as described in Section 6.3 and due to similar limitations found in the provincial administrators, such as *ICT Knowledge*, *Administrative Skills*, and *Experiences*, as described in Section 6.4.2. The difficulties experienced by the Boards of Administrators is effectively providing appropriate facilities for successfully integrating ICT, permit teachers to use their own devices besides school-contributed equipment.

For the above reasons, it is clear to see that local characteristics are the main obstacles to ICT integration in which a shortage of funding prevents provincial administrators from seeking better solutions in the policymaking process and Boards of Administrators in schools in providing the essential ICT tools, or equipment. The shortage of funding also restricts public schools from expanding their facilities to minimise overcrowding in classrooms. Lastly, obstacles are also caused by the existing infrastructure which leads to frequent blackouts and a lack of Internet connectivity.

As a result of ineffective policies and a lack of equipment due to local characteristics, English teachers have no alternative but to adopt ICT in teaching with whatever they have at their disposal because they cannot postpone the use of ICT due to the existence of ICT quotas. This means that teachers are forced to rely on their own equipment and to improve their ICT skills through independent study or through peer-to-peer mentoring in order develop the most appropriate pedagogies to help students make good progress in learning. Consequently, local characteristics may be seen to create obstacles that lead to failures of policy and technology provision as a district and school level. However, local characteristics also permit teachers the liberty of using all tools and technologies available to them to enhance their teaching pedagogies to help students progress. Local characteristics, thus, are the causes whereas the

effects reside in teaching pedagogies. The whole relationship between affecting factors is illustrated in the diagram below:

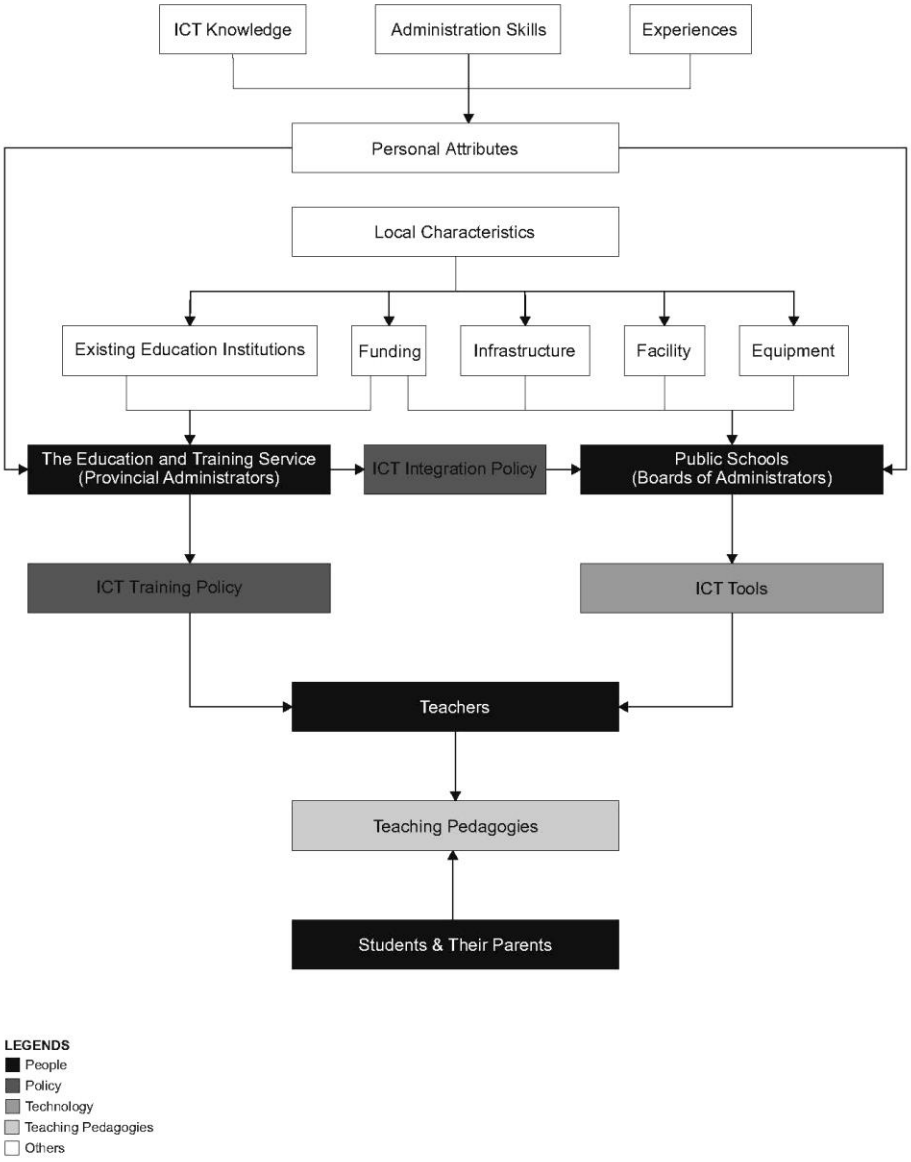

Figure 6.6 The Causes of All Affecting Factors

6.6 Summary

This chapter has provided answers to the three research questions concerning the process of ICT integration at secondary schools in Ben Tre Province. The findings in this chapter are crucial in making this research study quintessential because no research study has

used the principles of ECT and DoIT to explore the relationship between *policy, technology, people, and* local *characteristics*. In regards to the first research question, existing studies tend to focus on obstacles created by individuals, including teachers, in the adoption of ICT in ELT; however, this chapter demonstrates that English teachers at secondary schools in Ben Tre Province have not only used ICT in ELT effectively due to the flexibility, resourcefulness, and proactivity they have demonstrated. Next, this chapter has explored obstacles to the integration of ICT in ELT which are unique to Ben Tre Province; existing studies have not investigated the issues caused by a combination of several factors including the traditional lifestyle influenced by Confucian ideology, a shortage of funding, limited infrastructure, and the family backgrounds of students. Lastly, this chapter has looked into the relationship between affecting factors related to the use of ICT in which local characteristics in combination with personal preferences impact on the relationship between *People* and *Policy*, *People* and *Technology*, and well as *Policy* and *Technology*.

This chapter has shown that the dedication of teachers is the most important factor for ICT to be used effectively in ELT because dedication is the source of all inspiration for English teachers to develop a flexible, resourceful and proactive approach to optimising the use of ICT in a situation that contains several obstacles.

Chapter 7

CONCLUSION

This chapter will conclude the results of this research study, set out recommendations for future practice in accordance with the proposed research themes (*policy, technology, people,* and *local characteristics*), and suggest areas of limitations as well as contributions to further research. Finally, a model that analyses and evaluates the factors affecting the use of ICT by secondary school English teachers in Ben Tre Province will be set out. This model is offered in response to the third research question and is designed to be shared with teachers, teacher trainers, educational administrators, policymakers, and curriculum developers.

7.1 Results

This section brings together results and discussions from the previous two chapters to highlight the original contribution to scholarship made by this research project. It found that clear and effective national policies and widespread uptake of the innovation on behalf of the teaching body are the two significant factors that affect the integration of ICT in ELT. A national policy is beneficial because proactive policies at the national level encourage education institutions and greatly improve the use of ICT (Peeraer and Van Petegem, 2011). However, national policy cannot explain the positive attitudes toward the adoption of ICT in ELT found among teachers. Instead, obvious benefits brought by ICT in helping students make good progress have persuaded teachers to integrate ICT in ELT. In particular, the findings regarding the teachers' positive attitudes are evidenced in the flexibility, resourcefulness, and proactivity interviewees showed in tackling existing obstacles to the successful integration of ICT in ELT. The findings of this research study, help answer the following three research questions:

(1) How has ICT been used effectively in ELT at secondary schools in Ben Tre Province?

(2) What obstacles impede the effective use of ICT in ELT at secondary schools in Ben Tre Province?

(3) What is the relationship between the factors affecting the use of ICT at secondary schools in Ben Tre Province?

Results from the study set out that, alongside obstacles to effectively integrating ICT in ELT, there exists a network of factors which have enabled teachers to effectively integrate ICT into their teaching.

Research Question 1 is strongly associated with positive factors which explain not only what English teachers have done to use ICT effectively in ELT but the underlying reasons for their positive attitudes. Research Question 2 describes how negative factors have impacted on the use of ICT in ELT. Even though English teachers have been able to tackle some of these issues, there are remaining obstacles which require the attention of other agencies such as electricity and Internet providers. These remaining obstacles are outlined in response to Research Question 3 that sets out the relationship between the affecting factors to find the root causes for the obstacles affecting ICT integration. Outcomes from Research Question 3 will be helpful for future improvements in integrating ICT in ELT not only in Ben Tre Province but also anywhere around the world where local characteristics are equivalent and/or comparable. The conclusion for each research question will be described in detail as follows.

7.1.1 Research Question 1

In Chapter Six, English teachers at secondary schools in Ben Tre Province have shown that effective integration of ICT in ELT is possible through their flexible, resourceful, and proactive approach. The effective use of ICT can be explained by using the combined theoretical frameworks developed by ECT (Fullan, 2015) and DoIT (Rogers, 2003). English teachers' effective use of ICT is triggered by the teacher's resourcefulness in responding to *Local Characteristics* and *External Factors* as set out by ECT. ECT, however, is unable to explain how English teachers, especially those who are untrained, can develop the required knowledge to integrate ICT into their teaching. For this reason, it is necessary to draw on the principles of DoIT. According to DoIT, the *Knowledge* phase contains an important attribute known as *Personal Variables* which helps account for the positive attitudes toward the adoption of ICT. It was found that the teachers positive attitudes influenced their *Communication Behaviours* and most English teachers were able to learn and improve their ICT skills through peer-to-peer mentoring and assistance (Lan, 22b; En, 24a). This means that positive attitudes and passion to learn are core elements for strengthening the *Persuasion*

phase, according to DoIT. The resourcefulness in learning ICT from each other enables teachers to be flexible in their use of ICT tools, effectively employing different tools to suit the situation. The dedication to integrating ICT in teaching, identified as a *Persuasion* factor, can also be found through the use of personal tools such as laptops and Bluetooth speakers (Lan, 1d) to supplement the lack of essential ICT tools at schools. As a result, English teachers can adopt ICT proactively in teaching to take the most advantages of what ICT can offer.

The coordination between ECT and DoIT in the theoretical framework helps organise data in a logical and methodological way to achieve the research goals. ECT, through the *Teacher* attribute in the *Local Characteristics* during the *Implementation* stage, set the specific scope for the data analysis in the *People* theme which contains administrators, teachers, and students as well as their parents. ECT, however, cannot explain the positive attitudes of English teachers even though ECT does propose the *Characteristics of Change*. Therefore, it is crucial to combine DoIT with ECT to fully understand the whole story. The *Knowledge* and *Persuasion* phases of DoIT supplement what ECT lacks. These principles can fully identify and explain the positive attitudes of English teachers through flexibility, resourcefulness, and proactivity as described in Section 6.2. Thus, the human-factor determines the effective use of ICT in keeping with findings from Hashemi's (2013) study which states "if teachers' attitudes are positive toward the use of educational technology, then they can easily provide useful insight about the adoption and integration of ICT into teaching and learning processes." (p. 62).

7.1.2 Research Question 2

Affecting factors, or obstacles, were found across all themes identified within this research study as described in Section 6.3. These themes are *Policy*, *Technology*, *People*, and the underlying theme known as *Local Characteristics*. However, obstacles tended to be tied more closely to local characteristics, for example, the lack of funding, infrastructure, and/or geographical isolation, but they are rendered more extreme through human error or mismanagement.

The findings show how local characteristics have affected administrators' policymaking. Firstly, the ICT training courses guided by the *ICT Training Policy* (Ben Tre

Educational Service, 2016a) appear to be an obstacle for all English teachers because they are held during term time instead of during the summer break. This means that rescheduling needs to occur within the school in order for the teacher to be able to attend the training course. This puts additional stress on other teachers within the same school who need to cover lessons. In fact, the effect of attending a training course is summarised by an interviewee as follows:

> "It [the training course] causes a burden not only for the teacher who receives the training, but it also affects the teachers who take over classes in the absence of the participating trainee. Teaching schedules, Thus, have to change entirely" (Tha, 36a, 36b).

As a result, teachers are overloaded with additional work due to the training courses. However, administrators at the Education and Training Service in Ben Tre Province seem unable to change the training course to the summertime as desired by many interviewees (Hoa, 30c; Thu, 30a) due to the lack of funding alongside the lack of an existing university as described in Section 6.3.1. Moreover, the prerequisites for attending an ICT training course demonstrate a lack of administrative skills on behalf of administrators at the provincial level. For instance, no prerequisite for ICT competence has been set for enrolling on the course meaning that the efficiency of courses is severely hampered by individuals who lack basic computer skills (Tuan, 24a - 24d).

The lack of specifications not only exist with the training policy, but within the policy which enforces the use of ICT in teaching, known as the *ICT Integration Policy* (Ben Tre Educational Service, 2016b). This lack of specifications results in public schools becoming the "ICT regulators" for ICT integration as described in Section 6.4.1. ICT integration, maintenance, and evaluation have become matters on which the individual school decides. The Education and Training Service in Ben Tre Province, as the highest authority, is only responsible for contributing funding. This makes it extremely difficult for these provincial administrators to know whether ICT at any particular school has been integrated effectively.

The lack of specification in policymaking is evidence of the educational administrators' inexperience. The role of the human factor in *People - Policy* relationship as illustrated in Figure 6.3 shows how local characteristics and personal attributes act as contributing elements. Local characteristics in terms of funding and existing educational

institutions affect the scheduling of ICT training courses while personal attributes have given schools the ability to fully decide upon how ICT is to be integrated within their institution. As a result, this practice makes it impossible for provincial administrators to evaluate what Fullan (2015) refers to as the *Quality/Practicality* factor during the *Implementation* stage in ECT. Similarly, the Boards of Administrators at public schools cannot issue effective regulations due to restraint from local characteristics and their personal attributes. For instance, local characteristics in terms of funding shortages have prevented ICT from being integrated across the school at full scale. Instead, the equipment has been developed gradually as mentioned in Chapter Five and Chapter Six. The lack of funding has also affected the size of classes that are overwhelmingly overcrowded. Concurrently, personal attributes in knowledge and experiences explain why the boards of administrators have overlooked the importance of establishing the maintenance and technical support teams.

Local characteristics of Ben Tre Province cannot be fully explained by ECT even though Fullan (2015) devotes an entire section to describe *Local Characteristics* during the *Implementation* stage. ECT is unable to point out what has caused administrators in producing the lack of specifications regarding ICT policies and regulations. Therefore, the principles of DoIT have been applied when analysing the role of administrators. Specifically, the *Knowledge* phase of DoIT can provide valuable answers. The *Personal Variables*, *Communication Behaviours*, and *Socio Economic* attributes can provide detailed information concerning the role of administrators during the policymaking process in which *Personal Variables* and *Communication Behaviours* are driven by the *Socio Economic* attribute in terms of culture and funding. The lack of funding has prevented training courses from being held during summer breaks. The lack of funding has also obstructed administrators in establishing the *Communication Behaviours* because there is no university in Ben Tre Province for administrators to seek expert advice from during the policymaking process.

On the other hand, the *Socio* portion in the *Socio Economic* attribute provides clues regarding the cultural aspect which influences the *Personal Variables* attribute. Section 6.3 has clearly shown that administrators as well as people in Ben Tre Province in general are familiar with traditional concepts rather than modern technology. For this reason, it is quite a challenge for these traditional-oriented people to deal with technology for the first time. Findings under the *Knowledge* phase of DoIT, then, can be applied to the *Characteristics of*

Change during the *Implementation* stage of ECT in understanding the *Quality/Practicality* of policies during the whole ICT integration process. In my opinion, the *Knowledge* phase of DoIT is extremely important when investigating existing policies because culture and funding in the underlying theme of *Local Characteristics* could be completely overlooked if ECT was the only theoretical framework used. The *Knowledge* phase in DoIT, once again, shows that the human factor holds the determining key, not only in terms of policymaking, but also in relation to technology as discussed below.

The availability of technology is affected by both external and internal obstacles. External obstacles are caused by factors outside of the educational field while internal obstacles are associated with the Education and Training Service and public schools in Ben Tre Province. External obstacles are out of the control of administrators and teachers. For example, the frequent blackouts caused by electricity outage (Ngoc, 19c) forced teachers to change from teaching one topic to another. In the worst-case scenario, blackouts have disabled the use of ICT entirely so teachers must revert to the traditional teaching methods (Lan, 46a; Tha, 48a). Besides, Internet connectivity another obstacle brought about by external factors is that the Internet is not available in some villages (Tuan, 8c) making the use of online applications impossible. The lack of Internet is a major issue because the majority of the population in Ben Tre lives in rural locations as described in Chapter One, making online-based and cloud-based applications only available to a fraction of people in city and district centres. In urban zones where the Internet is accessible, internal factors associated with a lack of funding account for the unreliability of internet connections (En, 4a; Ngoc, 19b). The lack of Internet connectivity also explains the limited use of smartphones in teaching (Thu, 2b). Even though smartphones are used for Internet access (An, 1c), it is hard for English teachers to rely on mobile data all the time because the data plan is paid for by the teachers out of their own money. Internet connectivity, as a result, is a major obstacle to integrating ICT into teaching (Mereku *et al.,* 2009).

Furthermore, the Boards of Administrators have a direct impact on the availability of technology through their approach to purchasing, installing and maintaining it within their school. In the previous chapter, the *Discussion* has shown that there are two ICT approaches in which schools with larger budgets develop audiovisual labs, while schools with tighter budgets prefer to equip classrooms with basic ICT tools such as televisions and speakers.

Different ICT approaches have resulted in different dilemmas. For example, the audiovisual lab introduces more advanced technologies than basic audio and video essentials. In the lab, students are able to experience sophisticated tools such as the interactive board (Tha, 14f; Diem, 9a), visualiser (Sao, 1c), and computer server (Thu, 17b; Diem, 9e). On the other hand, basic ICT tools can only contribute to whatever is stored in laptops and smartphones. Creating such interactive and authentic learning environment with just basic tools, thus, relies on the ICT-competence of English teachers and, very often, on the availability of their personal equipment. However, experience has shown that equipping each classroom with basic equipment is a more effective approach to ICT integration because schools cannot afford to maintain the costly audiovisual lab (Lan, 19d). Constructing the audiovisual lab could be an unfortunate mishap, but it also reveals the limitation of the boards of administrators in anticipating upcoming scenarios. The failure to maintain the audiovisual lab is evidence of the boards of administrators' lack of foresight.

Regarding obstacles to the effective integration of ICT, it is clear to see that the local characteristics have an influence on the availability of technology. Externally, the existing infrastructure limits teachers' access to technology. Internally, funding is the main obstacle which has influenced the boards of administrators at many public schools in equipping teachers with adequate ICT tools. More importantly, personal attributes in terms of knowledge, administrative skills, and experiences of the boards of administrators exacerbated existing obstacles making it more difficult to integrate ICT into ELT. In brief, administrators at all levels in Ben Tre Province have been able to put in place policies that support ICT in being integrated successfully. To some extent, local characteristics such as funding and infrastructure have created obstacles to the ICT integration process. However, these obstacles have been worsened by administrators' decisions.

Research Question 2 has clearly stated that the underlying themes of local characteristics and human factors are the two affecting factors to the use of ICT in ELT. However, it is unclear whether local characteristics or human factors are dominant. Therefore, it is necessary to have the third research question to investigate the relationship between affecting factors as described next.

7.1.3 Research Question 3

This section will first summarise the answer to Research Question 3 in terms of the relationship between themes in which the *People* theme appears to be dominant under the influence of the *Local Characteristics* theme. Then, a constructed model will be developed to display how teachers and administrators have been influenced by local characteristics differently. Such differences, finally, will determine the implementation of ICT integration which, in turn, influences the teaching pedagogy which enables the integration of ICT on a daily basis.

7.1.3.1 Relationship between the themes

All proposed themes are grouped in pairs in the previous chapter to explore the relationship between themes. Specifically, *People* and *Policy, People* and *Technology,* and *Policy* and *Technology* are the three pairs used for discussion. The outcomes show that the *People* theme is dominant because the *Policy* and *Technology* and the *People* and *Policy* relationships are dominated by human factors. The Education and Training Service and the boards of administrators at public schools, who belong to the *People* theme, have total control over the *Policy* theme which contains the *ICT Integration Policy* (Ben Tre Educational Service, 2016b) and *ICT Training Policy* (Ben Tre Educational Service, 2016a). Besides, human factors also determine the outcomes in the *Policy* and *Technology* relationships as the *Technology* theme is driven by the *Policy* theme which is in total control by administrators in the *People* theme. On the one hand, the boards of administrators at public schools have had the final decisions in integrating technology. On the other hand, teachers also have had the liberty in buying and selecting their own equipment – at personal cost – because facilities and ICT tools at schools are insufficient. However, the *People* theme does not fully control the *Technology* theme in the *People* and *Technology* relationship due to the underlying influences of *Local Characteristics* including geographical features, infrastructures and socio economic structures.

As mentioned earlier, the underlying *Local Characteristics* theme contains many elements include funding, education, culture, facility, infrastructure, and equipment. Regarding administrators, the *Local Characteristics* in terms of funding, education, and culture play a crucial role in the policymaking process. The shortage of funding has prevented

administrators from the Education and Training Service in Ben Tre Province from seeking expert advice from professionals in other provinces while local scholars are unable to fulfil tasks which require the expertise of professionals from universities and research institutes. The lack of existing institutions and the shortage of funding have pushed educational administrators to create their in-house version of ICT policies which contain several limitations as described in Chapter Six.

The limitation in policymaking has transferred the role of ICT regulators from the provincial level to public schools. At the school level, the Boards of Administrators have faced similar challenges to their superiors. In particular, the shortage in funding has had an impact on all other areas. For example, the lack of funding has stopped public schools from providing sufficient ICT tools for teachers. In addition, a lack of infrastructure has added another layer of difficulty for the Boards of Administrators when dealing with the frequent blackouts and lack of Internet connection. The situation has been exacerbated by investing in dedicated labs that cannot be maintained. Besides, it is worth noting the importance of administrators' personal preferences during the policymaking process. At a glance, personal attributes could be solely viewed as individual characteristics. Instead, culture may play a part in shaping the mindsets among people in Ben Tre Province. In Section 1.5.3, Ben Tre Province is identified as an isolated area in which residents engaged in the traditional lifestyles of farming and fishing. Consequently, technology is often a very foreign concept for educational administrators that they need to adapt to. Therefore, it is quite safe to conclude that culture and funding are the two major factors which have influenced administrators at all levels in Ben Tre Province.

However, administrators at every level have minimised their role in the integration of ICT in teaching. The Education and Training Service in Ben Tre Province has only been involved with funding contributions because they have left it to schools to decide how to invest these funding in ICT resources. Meanwhile, schools have granted their teachers complete freedom to select ICT tools for teaching. Consequently, the successful integration of ICT in ELT rests of teachers working to overcome the obstacles imposed on them. This has means that teachers have been forced to select their own equipment – at personal expense – to supplement the limited supply of equipment in school to deliver the most effective ICT-based lessons. In doing so, they have taken into consideration the

constraints under which they need to work and the needs of their students. Eventually, teachers have been able to prove that ICT can be used effectively in ELT through their flexibility, resourcefulness, and proactivity, as described in Section 6.2. This means the success of ICT integration is determined mainly by the human factor rather than technology, infrastructure, or funding.

The argument which states it is very unlikely for ICT to take shape if budgets are insufficient to invest in necessary ICT tools and the required infrastructure (Malcolm and Godwyl, 2008) has been discounted in the particular case at secondary schools in Ben Tre Province. This is because teachers play a significant role in the effectiveness of ICT (Voogt, 2004) and their positive attitudes are the most important element in terms of innovative change in teaching. In addition, it has been shown that the role of national policy is crucial for the adoption of ICT as identified by Peeraer and Van Petegem (2011) because policy at the national level encourages education institutions and greatly improves the use of ICT. Finally, this research has shown that Local Characteristics influences the policymaking process as well as the integration of ICT.

As influences of the *Local Characteristic* theme to the *People* theme contain both negative and positive factors, a constructed model will be developed to illustrate the role different people play in the process of ICT integration, as described in the section below.

7.1.3.2 The Constructed Model

How local characteristics and personal attributes have influenced administrators and teachers in implementing ICT in ELT is illustrated in the diagram below:

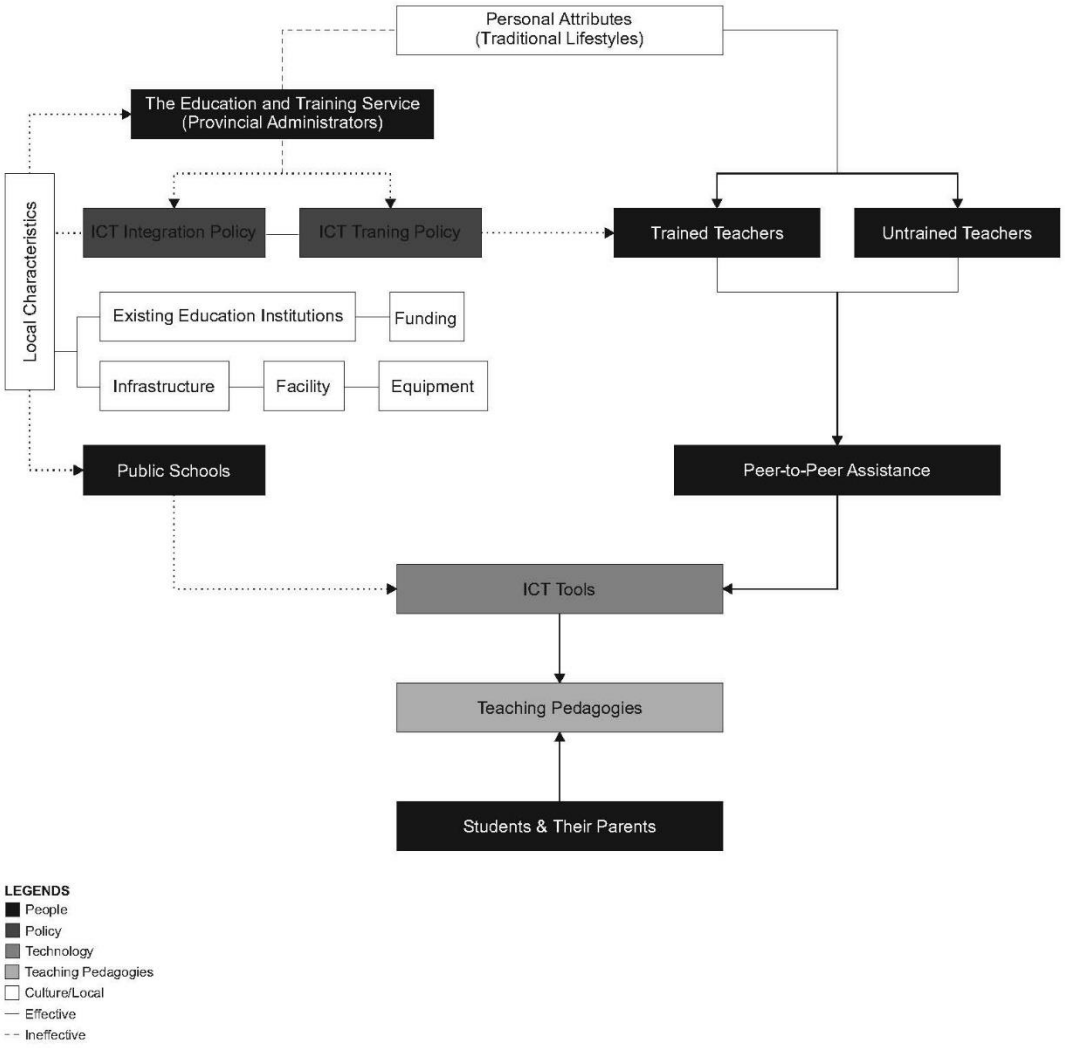

Figure 7.1 Thematic Relationship

The above diagram displays the influences of positive and negative factors. The contribution of negative factors is shown in the dotted lines occupying the top-left of the chart. Positive factors are represented with solid lines that occupy the remainder of the diagram. The diagram begins with the *Personal Attributes* element which reflects different personal characteristics including the personalities and lifestyles of administrators and teachers. On the one hand, *Personal Attributes* help ICT-trained and untrained teachers to develop positive attitudes toward the use of ICT and form peer-to-peer support networks if they are flexible, resourceful, and proactive as described in the previous chapter. On the other hand, the *Personal Attributes* element alongside *Local Characteristics* affects administrators during the decision-making and implementation

process due to their lack of ICT knowledge, administrative skills, and experience which leads increasing obstacles.

The constructed model shows that human factors are crucial to the ICT integration process. In particular, the constructed model is able to indicate that the personal attributes of English teachers are crucial in ensuring the success of ICT integration. It also supports the argument that claims that the success of ICT integration can be predicted by examining the teachers' ICT competence (Bordbar, 2010) as teachers will use technology in their teaching more often if they are competent (Sipilä, 2014). In contrast, the constructed model shows that the lack of ICT knowledge, administrative skills, and experience combined with external factors including existing educational institutions, funding, infrastructure, facility, and equipment require further improvements.

The process of ICT integration in ELT at secondary schools in Ben Tre Province can be facilitated if administrators and teachers would consider recommendations to prevent obstacles while enhancing the use of ICT as described in the next section.

7.2 Recommendations

The ICT integration process contains both positive and negative factors. Positive factors are associated with English teachers using ICT in ELT effectively. On the contrary, negative factors are associated with the policy making (in relation to facilities, equipment, maintenance and support) of provincial administrators at the Education and Training Service and boards of administrators at public schools in Ben Tre Province. For this reason, recommendations are organised into two categories: preventing and enhancing. Recommendations associated with preventing are mainly concerned with helping administrators to reduce negative impact that local characteristics have on the use of ICT. On the contrary, recommendation associated with enhancing are mainly concerned with maximising the positive impact that teachers have on the effective use of ICT in teaching. These recommendations are summarised in the table below:

Recommendations

	Themes
Enhancing	
ICT Tools	
Resolve Connectivity Issues between Devices	Technology
Invest in Writing Gadgets	Technology
ICT Apps	
Use Open-source Software	Technology
Create Learning Platforms	Technology
Online Classrooms	Technology
Preventing	
ICT Integration	
Centralised Computer Labs	Policy, Technology
Basic Trouble Shooting Guidelines	Policy
ICT Training	
ICT Training	Policy
ICT Tools and Apps	
Investing in Equipment	Technology
Mobile Emulator	Technology
Management	
Unreasonable Expenses	Policy, Local Characteristics
Tackling Infrastructure Issues	Local Characteristics
Pedagogy	
Plagiarism	People

Table 7.1 Recommendations for Enhancing and Preventing

Recommendations for enhancing the use of ICT, according to interviews and observations, are based on current practices under existing limitations such as budgets, blackouts, Internet connectivity, and overcrowded classrooms. The data also indicates that most teachers prefer to use their laptops alongside smartphones and Bluetooth speakers in teaching regularly. For

this reason, recommendations will aim at the enhancing the use of ICT through personal equipment in the order as shown in Table 7.1 above.

7.2.1 Recommendations to enhance existing practice

The data collected reveals that teachers struggle to successfully resolve the issues that occur when connecting laptops to the televisions provided by the school (An, 33a; Thu 19c; Tuan, 19c). However, connecting issues can be fixed quite simply to ensure seamless connectivity in many ways. If Smart televisions are provided within the classroom, laptops can be connected to the televisions wirelessly to display content on a larger screen (Toeman, 2010). In the event that it is not possible to equip classrooms with Smart televisions, an investment in a casting device such as Amazon Stick or Chrome Cast could be helpful as it can covert a typical television to a Smart television. In addition, schools should invest in a collection of adapters if the Wi-Fi network is not reliable for wireless connecting. The practice of using adapters, in particular, has been trailed by many teachers; however, the problem continues to exist due to the incompatibility between different adapters required to connect to different ports on different televisions. On the other hand, teachers could be encouraged to look for laptops with a universal multi-display adapter that allows connection between different makes and models of laptops and televisions.

Next, the teaching experience would be enhanced if writing gadgets were strategically invested in by schools. For example, a SmartPen can record and store handwritten texts which allows for them to be onto portable devices such as laptops, tablets, and smartphones, and manipulated or shared later. This tool is extremely useful when notes are needed for instant display. Another top-notch gadget is a Scan Marker which is a handheld scanner that scans printed materials line by line. The scanned information can then be converted into editable texts on laptops and smartphones for further revisions. Scan Markers also comes with another useful feature that allows for texts to be read aloud while scanning in real-time. This is quite a time-saving feature for teachers as submissions from students can be examined and scanned at the same time. Teachers, moreover, can use Scan Markers instead of visualisers to display sample texts for the whole class.

It is also recommended that teachers are encouraged to diversify their computer software arsenal by using free applications because licensed-software is expensive. The data shows that teachers have had to purchase many applications at their own expense (Tha 27a). This is an unsustainable practice and should be discouraged where possible. Switching to the open-source software, also known as freeware, is an easy way to minimise this. Most licensed software has free alternatives as summarised in the table below:

Freeware	**Platform**	**Used for**	**Replaced for**
Audacity	Off-line	Audio Editing	Adobe Audition
Audio Cutter	Off-line	Audio Editing	Adobe Audition
Blender	Off-line	Animation	Adobe After Effects
Lightworks	Off-line	Video Editing	Adobe Premiere
Shotcut	Off-line	Video Editing	Adobe Premiere
Google's Docs	Cloud-based	Word Processing	Microsoft Word
OpenOffice Writer	Off-line	Word Processing	Microsoft Word
Google's Slides	Cloud-based	Presentation	Microsoft PowerPoint
OpenOffice Impress	Off-line	Presentation	Microsoft PowerPoint
Google's Sheets	Cloud-based	Spreadsheet	Microsoft Excel
OpenOffice Calc	Off-line	Spreadsheet	Microsoft Excel
OpenOffice Base	Off-line	Database Management	Microsoft Access
Panopreter	Off-line	Text-to-Speech	Dragon Speech Recognition

Table 7.2 Freeware for Teaching Tasks

Any application marked as "Off-line" in the tables can operate on a stand-alone computer while "Cloud-based" means an Internet connection is required. The column labelled as "Used for" describes the usage for each software while "Replaced for" shows the equivalent freeware to the licensed software. Consequently, it is incumbent on administrators at the local and school level to ensure that teachers are aware of open-source software and encouraged to learn and master these free applications rather than investing in licensed software. For instance, Panopreter could be used as a substitute for any licensed text-to-speech software to convert writings to listening and speaking exercises. Provincial administrators, furthermore,

should consider introducing some of these free computer programs in the training courses as a way of reducing expenses. For example, the training courses should switch from training teachers to use Microsoft Office to training them to use the Google Suite equivalent.

To a greater extent, the Education and Training Service in Ben Tre Province should establish a teaching platform to create a central hub for all the teaching and training materials they provide. The interview data indicated that teachers have used a platform known as "School Connect" as an online library for Lesson Plans (Nho, 24a). However, there are even more powerful platforms which should be adopted. For instance, Moodle would be a strong candidate to host a range of resources related to the best ICT-based practice. With Moodle, teachers could upload their Lesson Plans for other teachers to review and use. The platform also features many useful tools for teaching and learning such as video-based lectures, assignments submission points, learning goal settings, and learning progress tracking. Besides, Moodle would not only be beneficial for English teaching but also for other subjects. According to Moodle, a Vietnamese version is available. This means the introduction of this learning platform for the use of teachers who cannot speak English would not be an issue. Once deployed, several repetitive tasks such as the creation of Lesson Plans and other teaching resources would be minimised. Administrating one learning platform across the province would help reduce costs in maintenance while strengthening security measures. A central platform, if managed by the Educational and Training Service in Ben Tre Province, would also help to standardise teaching activities. In this case, students could experience a seamless and smooth transition when learning with different teachers because teaching materials and computer applications are in keeping with each other.

Lastly and most importantly, the use of a central learning platform would be critical in helping schools function in extreme situations such as the recent COVID-19 pandemic. A data map as posted on the World Health Organisation (WHO) shows that the deadly virus exists in every continent (WHO, 2020). As of 20 April, 2020, over two million cases of COVID-19 were confirmed and death tolls were reported as having reached 160,000 lives. Governments in many countries have been in various stages of lockdown. In the UK, the first lockdown was set on 23 March, 2020 and lasted for three weeks, on 16 April, 2020 (Davies, 2020). The second lockdown has been set as of the final revision of this thesis in which officials expect to shut down non-essential businesses for four weeks, from 5 November to 2 December, 2020

(Pocklington, 2020). Similarly, the Vietnamese government practiced social distancing for two weeks since 1 April, 2020 (Ha, 2020). However, social distancing remained until the end of April (Vietnam Ministry of Health, 2020). Schools, as a result, were forced to online teaching and teachers and students communicated via online meeting platforms such as Zoom or Microsoft Teams. This is the first time that most schools have had to tackle online learning at a full scale. Instead of relying on online meeting platforms for lectures, it would be much more effective if a centralised learning platform had already been in place. For this reason, the use of an educational platform, such as Moodle, is crucial. The use of a centralised learning platform would be even more important in Ben Tre Province because of the monsoon season when hurricanes regularly disrupt infrastructure by creating traffic collisions and road blockages (Vietnam Ministry of Transportation, 2019). Distance learning, thus, would be critical for both teachers and students to carry on learning throughout the academic year.

This section has covered basic recommendations for enhancing existing practice which include troubleshooting connection issues, the choice of free computer applications, and the importance of having a centralised learning platform. The next section looks at recommendations aimed at preventing the formation of obstacles.

7.2.2 Preventing obstacles

The most important aspect of ICT integration that needs to be revised for preventing obstacles from forming is the ICT integration policy. In particular, this policy contains some sections which should be revised while some other things should be added for ICT to be integrated much more effectively. For example, this ICT integration policy emphasises the use of the Internet in teaching, which overlooks the reality that the Internet is not available in some villages (Tuan, 8c). Consequently, this should be revised and additional instructions for public schools in such regions should be provided that support them in meeting the guidelines set out by the policy document. For instance, the Education and Training Service in Ben Tre Province should permit public schools to opt-out of the implementation of the Internet as a teaching tool in rural regions where the Internet is not available. Alternatively, schools could subsidise teachers' subscriptions to high-speed mobile data. This should be done in rural regions where the Internet is not available and at other locations where the Wi-Fi systems are unreliable as described in Chapter Five.

In addition, the recommended ratio of sixteen students per computer, as set out by Section 2 in the ICT Integration Policy (Ben Tre Educational Service, 2016b), seems unrealistic because only two students in a classroom with around forty students as shown in Chapter Five can practice on the computer at any given time. Therefore, it is recommended that this computer-per-student ratio should be revised to ensure each student has one computer to study in the lab during a forty-five-minute session. Concurrently, the extracted data has shown that schools have failed to manage their lab properly. For this reason, the policy recommendation to establish a computer lab per school should be reconsidered.

One alternative could be to establish centralised computer labs with sufficient facilities and experts to maintain them that are shared between schools. This would be particularly useful in areas where the Internet is not readily available. With this approach, major schools could be considered as the computer centres for students at adjacent schools in the same regions to experiment with ICT-based learning as well as learning different computer skills. This approach, moreover, would make the practice of having a computer lab per school become optional easing the problem caused by the infrastructure in rural locations. To a greater extent, some schools in rural regions could consider adopting the mobile option if accessing a centralised computer labs is unrealistic due to having to travel long distances along waterways. The use of smartphones, in this case, could eliminate obstacles caused by no Internet connection and frequent blackouts while mobile apps could offer alternative solutions for the use of ICT in teaching. The use of smartphones, furthermore, would be an affordable solution for teachers and could be subsidised by schools. For instance, an affordable Galaxy A01 with a price tag around $130 could deliver most requirements for a smartphone, including the functionality as the gateway to access the Internet.

Security-related tasks should also be clarified because the existing policy instruction is unclear due to it simply stating that staff and students need to recognise security threats and prevent security breaches when operating ICT tools such as computers, tablets, and smartphones. However, there is no clear instruction regarding how to recognise such threats and what to do in the event of a security breach. For this reason, additional details should be appended to this section that include clear guidelines for teachers and students. For example, the Education and Training Service in Ben Tre Province should propose a list of approved anti-virus applications which can be installed in the schools' computers and other devices. Likewise,

a checklist written by computer experts for troubleshooting in case of a security breach should be made available for teachers and students. A sample checklist is represented as follows:

Basic Troubleshooting Guideline (for teachers)	
Step 1	Close all open applications.
Step 2	Run the installed anti-virus software.
Step 3	Restart the computer.
(If the problem is not fixed, contact the Technical Support Team at 0800123456 for further assistance.)	

Table 7.3 Basic Troubleshooting Sample

The list presented above is a sample for basic troubleshooting in the event of virus-affection. Teachers and students must be introduced to the basic steps during orientation at the lab and a printed copy should also be made available in the lab manual.

Written checklists, like the example given in Table 7.3, should be uniform across the province; otherwise, each central computer hub runs the risk of having different instructions which would make it difficult for staff or students to transition between labs. Moreover, equipping each computer lab independently could become more expensive due to the fact that each computer lab could be equipped with a different set of computer applications. On the contrary, the cost could be reduced if software, such as the computer operating system like Windows and anti-virus software, is purchased in volume. In other words, it would be less expensive if the Education and Training Service in Ben Tre Province were to purchase multiple licenses for the same set of computer applications. In contrast, the costs would be increased dramatically if the software were purchased by the schools which host the computer lab. The direct involvement of provincial administrators insures the standardisation of ICT provision from equipment to applications, as well as instructional manuals and training programs. The direct involvement, furthermore, helps reduce the shortage of funding issue which Ben Tre Province has been dealt with for many years.

The provision of centralisation of computer hubs and standardised guidelines as outlined above could also be helpful in improving the *ICT Training Policy* (Ben Tre Educational Service, 2016a). Well-stocked and functioning computer hubs that are managed by trained personnel could be used to host ICT training courses all year round. Shorter

training sessions could take place in the evening and over the weekends during the school year while longer sessions could be provided centrally during summer breaks. This practice could eliminate obstacles caused by the existing training courses that have led to teachers being overworked (Hoa, 30d). In addition, schedules and contents of training courses should be made available for all teachers in advance either on the school's websites, emails, or prints. A sample may look similar to the table below:

Course Contents			
	Start Date	End Date	Schedule
Introduction to Computer	09/01	09/21	Mon – Wed (7 p.m – 9 p.m) Tue – Thu (7 p.m – 9 p.m) Sat (8 a m – 12 p m;)
Mobile Computing	09/01	09/21	Sun (8 a m – 12 p.m; 1 p.m – 5 p.m)
Microsoft PowerPoint	10/01	10/30	Mon – Wed (7 p.m – 9 p.m) Sat (8 a m – 12 p m)
Microsoft Word	10/01/	10/30	Tue – Thu (7 p.m – 9 p.m) Sun (8 a m – 12 p.m)
Audio Basic	11/01	11/21	Mon – Wed (7 p.m – 9 p.m) Tue – Thu (7 p.m – 9 p.m) Sat (8 a m – 12 p m)
Video Basic	12/01	12/31	Mon – Wed (7 p.m – 9 p.m) Tue – Thu (7 p.m – 9 p.m) Sat (8 a m – 12 p m)
Internet Basic: Search Engine	12/01	12/15	Sun (8 a m – 12 p.m)
Internet Advanced: Keywords	12/15	12/30	Sun (8 a m – 12 p.m)

Table 7.4 Sample Training Courses Schedules

Displayed above is a three-month sample schedule for the training courses which should be posted in advance for teachers. This practice provides teachers with the necessary information to pick appropriate courses for them that run at convenient times. Besides, the training courses at central computer hubs should be identical to each other. Through this approach, teachers could easily switch from one centre to another without it affecting their learning. By the same token, training courses should extend to students to supplement the ICT skills they learn in school. This would support some weak students in improving their

learning skills in ELT as the findings show that knowing how to use ICT helps students make progress in ELT (Tha, 33b).

Besides providing training to teachers at these central hubs, ICT experts can also function as the tier-one level of technical support to assist teachers at other schools via telephone, email, and chat. Technical support teams at public schools, then, could function as the second tier of support that focused on device maintenance and basic quick support. Finally, a central hub that provides opportunities for collective and collegial training and development would return the highest level of excellences for all teachers regarding the ICT integration process from initiation to implementation, from protocol regulations to operations, and from budget management to purchase decisions. However, this central hub will have a subsidiarity function; it will offer services that cannot be undertaken at the local level and will function to bring together best practices.

The establishment of computer labs at major schools across Ben Tre Province could solve many existing obstacles while improving the integration of ICT in ELT and the training for teachers. In addition, preventative measures should be considered at the school level as well to maximise ICT benefits with minimum expenses. Boards of administrators at different schools should weigh up the pros and cons of various options in the short and long-term. For example, if students are expected to use the schools' Wi-Fi network in the near future, upgrading Wi-Fi coverage should be made a priority because most current Wi-Fi networks in schools were found to be either unstable or out of range. If this is not possible, then the school should consider installing Internet cables as a means of temporarily improving Internet connectivity. What is important is that minor details such as these should be considered carefully and expert advice should be sought in order to ensure that the right approach is taken. This is because taking an incorrect approach could have an adverse effect on future activities. For example, a lack of Internet makes it impossible for teachers to use a wide range of software that could be critical to the pedagogical approach they wish to take. Improving existing conditions by focusing on minor details could help the boards of administrators avoid misspending excessive state funding on larger projects such as equipping each classroom with basic yet essential ICT tools such as televisions and speakers.

Obstacles could be further prevented if schools were better at advocating for the use of various applications that can act as substitutes to expensive tools such as the interactive boards and visualisers. The interactive board, also known as a Smartboard, allows for "anything your computer is able to do, you can do it in front of your classroom" (Davis, 2007). The interactive board is very useful in teaching; however, it is not strictly necessary to invest in one because most useful functions of the interactive board can be achieved by using stimulator on laptops. A software called OpenBoard, available at https://openboard.ch/, can deliver all interactive features from a typical computer free of charge. Equivalent mobile apps also offer features of the interactive boards for smartphone users. A website, known as Zapier, lists eleven different online whiteboard applications for mobile devices. The list can be retrieved from: https://zapier.com/blog/best-online-whiteboard. Similarly, teachers could use a variety of free mobile apps, such as Adobe Scan or CamScanner, to turn students' handwriting into digital files for which corrections could be displayed in front of the classroom. These apps replicate the features of a visualiser and save schools the cost of buying one. Connecting laptops and smartphones to a television for display could be a challenge as teachers would have to constantly switch devices depending on whether they wanted to use open source software installed on their computers or apps installed on their phones. Hence, it would be more effective if teachers could display both from their laptops. Fortunately, there are applications known as emulators which allow mobile apps to be installed on a computer. Android users could install mobile apps on Google Play to a computer via an Android emulator such as Bluestacks, available at www.bluestacks.com, or Nox, available at www.bignox.com. Emulators are also available for iPhone users. Applications such as iPhone Simulator, available at: www.tucows.com/preview/1294647/Iphone-Simulator, permits iOS apps to operate on a computer seamlessly.

From the above, it is clear that technology could be optimised to perform a greater variety of functions even if dedicated tools are not purchased or out of order. A typical laptop with essential applications paired with a television and, presumably, a pair of speakers could deliver the functionalities of a dedicated lab. The only challenge which remains is how to ensure a stable connection between a laptop and television. In other words, technical faults should be reduced to the minimum to ensure ICT can deliver to its maximum effect. Teachers, as a result, should be trained to connect different devices to a television installed in the

classroom. The technical support staff, for this reason, should be established as a source for instant support targeted at achieving this. Therefore, public schools and the Education and Training Service in Ben Tre Province should draft guidelines to provide training as well as operational protocols for technical support teams to manage and support ICT-related tasks at the basic level while complicated issues should be passed to tier-one level support at the central computer hubs.

Recommendations proposed for prevention, so far, have been developed to minimise expenses while maximising the effect of what administrators could accomplish through adapting existing policies. Other aspects of the local characteristics, however, are totally out of hand because the Education and Training Service in Ben Tre Province as well as public schools cannot influence funding and infrastructure. For instance, available funding for education is driven by economic growth in Ben Tre Province so educational administrators have no alternative but to accept such limited budgets. Similarly, the Education and Training Service in Ben Tre have no control over regional or national decisions to improve the electricity grid. Hence, recommendations are drafted under the awareness that resources in terms of funding, expert advice, and infrastructure are insufficient.

According to the data, infrastructure has brought two major issues which are frequent blackouts (Tha, 29a; Ngoc, 19c) and unreliable or non-existent Internet connection (Lan, 21a). Regarding the frequent blackouts, installing generators could be a solution if the available budget allows. On the other hand, solar panels are the more expensive option. Besides, installing solar panels would require a space as large as a half of a football field to house these panels. Thus, it would be more costly to maintain these panels and prevent vandalism or robbery. Moreover, the frequent blackouts could also be prevented with the use of battery powered laptops and smartphones as most of the computing and mobile devices nowadays operate several hours without recharging. Furthermore, the portable battery, or power bank, could add another layer of power supply in the event of battery drainage. This last option appears to be the most cost effective one and teachers should be encouraged to adopt it by switching to battery powered devices rather than text books in the event of a blackout (Lan, 46b).

On the other hand, the unreliable or non-existent Internet connection needs more consideration (Lan, 21b; Ngoc, 19b) because it is the result of faulty facilities within the

school and a lack of infrastructure within the province. The solution to these problems could sound easy at first because schools should improve existing Wi-Fi coverage and use mobile data in areas where the Internet is not available. However, it is important to remember that funding is always an obstacle for any technological investment. Hence, public schools should consider prioritising either the Wi-Fi network or mobile data because improving both aspects at the same time would be unaffordable for some public schools. In my opinion, focusing on mobile data would be more effective and less expensive than the improvement of the Wi-Fi system. For example, supporting teachers in subscribing to mobile data would ensure that the Internet is available for all teachers. Besides, the data has revealed that the Education and Training Service in Ben Tre Province has worked with different mobile carriers for educational discounts (Ngoc, 41a). In the event of unsettled negation for discounts, the Education and Training Service in Ben Tre could consider reimbursement in which the difference between a basic phone plan and the unlimited data plan would be added in teachers' monthly salaries. Compared to improving the Wi-Fi system, using mobile data would cost much less because the Wi-Fi system would require the purchase of several Wi-Fi routers at once. Furthermore, a Wi-Fi system would need configurations and settings alongside the concern about security risks. As a result, improving the Wi-Fi system would be considered a future innovation whilst the mobile data subscription could be implemented almost immediately.

Finally, teachers should be able to prevent foul-play at schools, especially with regards to plagiarism by exercising their own judgement (Diem, 19i and 19j) or by using tools that have been developed to spot content infringement for free. Plagiarisma is a very helpful tool for plagiarism checking. Teachers can simply paste the original writing to the website to look for duplicated content on the Internet. Also, Plagiarisma allows teachers to upload files from Google Drive for duplicated content validation. Even though it could be challenging for teachers to upload content because most student's submissions are handwritten, the use of mobile apps such as Adobe Scan or CamScanner can convert manuscripts to digital contents in a matter of seconds.

This section has covered a wide range of recommendations to prevent existing obstacles in the implementation of ICT in ELT in Ben Tre Province. Due to a lack of available public funding, recommendations are proposed in the spirit of "maximum effects through

minimum expenses". In the next section, the discussion will focus on the limitations of the research process and the significance of the findings.

7.3 Reflections on the Research Process

Using ECT and DoIT as the theoretical framework to guide the Thematic Coding Analysis for qualitative research resulted in a set of significant results alongside some limitations. While the significance of this research study is such that it can contribute to research and professional communities.

7.3.1 Limitations of the Research

Adopting a qualitative research approach that used semi-structured interviews along with observations resulted in some limitations. For example, interviewing and observing teachers meant that the perspectives of administrators, students or parents were not taken into account. On the other hand, given the richness and wealth of data collected, it would be more appropriate to investigate the perspectives of administrators, students and parents as independent entities. For instance, this research study could not establish a core understanding of how students perceived ICT in learning. It also bypassed the challenges students' parents experienced in supporting the use of ICT and the challenges administrators might face in policy writing or implementation. However, rather than being missing parts of this research project these topics are considered to be topics that should be researched independently.

Furthermore, a limitation exists in the selection of researching sites. In this research study, sites were chosen according to the administrative levels of city, district, village, and remote village. In particular, one reputable school at each administrative level was selected as the researching site. Even though interviews and observations involved up to five participants with different genders, teaching experiences, and ICT competences at each school, their contributions could not represent the entire administrative level. For instance, the interviewee at the school in the remote village said that the Internet was not available in his village. However, this does not necessarily mean the Internet is unavailable in other remote villages. Therefore, the quintessential characteristics of other remote villages as well as other regions across the province could have been overlooked.

Finally, due to the fieldwork for this research being conducted in 2018 it is possible that current practice has changed in Ben Tre Province. English teachers might have devised some solutions to tackle problems that are not mentioned in the recommendation section. Likewise, administrators could have developed some better policies to enhance the use of ICT in ELT. Consequently, the reader must take this into account when reviewing the recommendations made within the Conclusion. On the other hand, the significant outcomes of this research study which place English teachers at the central role are reliable as many studies are showing that teachers play a significant role in the effectiveness of ICT use in teaching and learning (Voogt, 2004; Law, 2008).

7.3.2 Significance of the Research

The findings of this research study have a practical application. The recommendations made within the conclusion are helpful for administrators in revising ICT integration policies and providing more effective training programs. They are also useful for boards of administrators at public schools because they support them in investing in cost-efficient equipment with high durability and minimum maintenance. Finally, they are useful to English teachers working in Ben Tre province because they recognise the outstanding work these individuals are doing and enable them to enhance their practice through three key actions. Moreover, the constructed model proposed by this research study is not only limited to secondary schools in Ben Tre Province, but it can be applied to change at any level of education in any province throughout Vietnam. To a broader extent, outcomes in this research study are applicable to all regions worldwide where existing circumstances are similar to Ben Tre Province.

Besides, the significance this research study has for professionals working in Ben Tre Province and further afield, it contributes to the research field. Regionally, this research study is among the very first that focuses on the use of ICT in Ben Tre Province. At a national level, this research study is one of the very few which investigates the use of ICT in secondary schools. As such it is able to contribute a unique perspective on the process of ICT integration in education. The findings from this research study also provide an authentic source for researchers around the world to compare the similarities and differences of ICT integration in education.

Reflecting on this research study, it is possible to see ways in which further research studies might build on its results. On the one hand, this research study has only examined the role of teachers. On the other hand, other elements in the *People* theme including administrators, students, and students' parents have not fully studied. Therefore, future studies should explore other aspects of the *People* theme to provide a complete picture concerning the human factor in taking any innovative change. To a greater extent, the outcomes of this research study are shaped by the methodological approach taken and it would be worth exploring different methodological approaches to investigate aspects of it in more detail. In particular, a quantitative approach might yield results that are more generalisable. For example, comparing the average grades of students who learn with and without ICT would be a reliable approach to confirm whether ICT is useful.

Besides, the influences of local characteristics to the integration of ICT in ELT could be an interesting topic for future research because the lack of funding is not unique to Ben Tre Province, but is also an issue in many other provinces in the Mekong Delta as well as other regions in Vietnam. Future research could contribute to how funding issues can be tackled nationwide. For example, traditional lifestyles in the Central Highlands and the Mountainous Northwest areas are significantly different because the majority of the population is not ethnically Vietnamese (Lan, 2013). Instead, these regions are home to several of the fifty-four ethnic groups in Vietnam. Researching other regions, as a result, could help compare the variance in ICT adoption for which the whole picture of ICT integration in Vietnam could be more reliably constructed.

Finally, this research study could be an inspiration for other researchers around the world to investigate the use of ICT in their countries. For example, the funding issue is quite common in many underdeveloped and developing countries (Stanton, 2007) for which it is hard to equip ICT tools effectively as found as the fundamental problem in Ghanaian secondary schools due to the high price of computers alongside the un-readiness in infrastructure for ICT integration (Malcolm and Godwyl, 2008). Not only this, but resisting the adoption of modern technologies is a common characteristic in many underdeveloped and developing countries as people in these agriculture-based countries still favour the traditional methods, including teaching. At the same time, the digital age in which we are

living waits for no nation and this research study may be viewed as an example for researchers and educational administrators around the world to use as a reference.

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APPENDICES

Appendix 1

HEADMASTER CONSENT LETTER

Francis Close Hall Campus
Swindon Road
Cheltenham GL50 4AZ
United Kingdom
10 February, 2018

Dear Sir/ Madam,

My name is Vu Hung Le, who is a PhD student at the University of Gloucestershire in the United Kingdom. As part of my degree I am completing a dissertation which focuses upon *Investigating Teachers' Use of Information and Communication Technology in English Language Teaching in Secondary Schools in Ben Tre Province, Vietnam.*

The purpose of this research is to examine how ICT has been used effectively in ELT as well as identifying impeding factors concerning the use of ICT by Secondary English teachers in teaching to explore the relationships between these affecting factors to pinpoint the exact causes to all problems. The outcomes will be used to improve English teaching quality in Ben Tre Province, and, possibly, the whole country.

The purpose of this letter is to ask for your permission to allow me to access to English teachers at your school. All information will be treated according to the University's Code of Ethical Conduct, which ensures anonymity and confidentiality of the setting and participants at all stages of the research process. The final report of the research will be submitted as part of the degree requirements and afterwards may be available in the library for other students to read.

Thank you for taking the time to read this letter. I hope that you will be willing to support my study and I thank you in advance for your cooperation.

Yours truly,

Vu Hung Le

Research into Investigating Teachers' Use of Information and Communication Technology in English Language Teaching in Secondary Schools in Ben Tre Province, Vietnam conducted by Vu Hung Le as part of his PhD degree.

I, ……., give my consent for the identified participants to be approached to take part in the above detailed study.

Signed: ……

Print name:……..

Date:……

Please return to Vu Hung Le ( )

Appendix 2

PARTICIPANT CONSENT LETTER

Francis Close Hall Campus
Swindon Road
Cheltenham GL50 4AZ
United Kingdom
10 February, 2018

Dear Sir/Madam,

My name is Vu Hung Le, who is a PhD student at the University of Gloucestershire in the United Kingdom. I would like to invite for your participation in a research project which is on the Investigating Teachers' Use of Information and Communication Technology (ICT) in English Language Teaching in Secondary Schools in Ben Tre Province, Vietnam.

What is the purpose of the project?

This research study is conducted to examine how ICT has been used effectively in ELT. The project also aims to identify factors affecting Secondary English teachers' use of ICT in the classroom in Ben Tre Province, as well as to explore the relationships between these factors. The final outcomes will be used to improve English teaching quality in Ben Tre Province, and possibly, the whole country.

Do I have to take part?

Participation in this research is voluntarily with no obligation. Participants may have the liberty to leave at any stage without the requirement to explain. Prior to research activities, the PhD student will explain all purposes and benefits of this project.

What will taking part involve?

In the event that you would like to participate, the process will first begin with an interview about ICT use in English Language Teaching. Also, the PhD student will observe one period to record how you integrate ICT into teaching English; then you are asked to participate in the second interview one week later. These research activities will take place from the beginning of September to the end of December 2018. Specific dates and times for the activities will be negotiated and set to ensure convenience for you. All data collected for this

research will be treated in secured and confidential manner in which they will not be used outside of the scope of this research.

I would be most grateful if you would complete and return the attached consent form. Many thanks for your help.

Yours sincerely,

Vu Hung Le

PARTICIPANT CONSENT FORM

Investigating Teachers' Use of Information and Communication Technology in English Language Teaching in Secondary Schools in Ben Tre Province, Vietnam.

Please initial box

1. I confirm that I have read and understood the information sheet for the above project and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐

3. I agree to take part in the above project. ☐

_____	_____	_____
Name of Participant	Date	Signature

Appendix 3

INTERVIEW QUESTIONS

❖ **The 1st Interview (in person)**

1. Please describe your current use of ICT in English teaching?
   Sub-questions:
   a. *How ICT is used in listening/speaking/reading/writing?*
   b. *Have you got any method/pedagogy to use ICT in the teaching of grammar/vocabulary/pronunciation?*
2. In what ways does ICT assist your teaching?
   Sub-questions:
   a. *Could you tell me in what ways using ICT in ELT is important or not? Why?*
3. Is there any innovation in ICT at your school? If yes, what innovations in ICT have taken place?
4. What infrastructure does your school have to support ICT integration?
   Sub-questions:
   a. *Are there enough tools (computer/hardware/software) for your teaching tasks?*
   b. *How ICT is managed at your school?*
   c. *What is working well?*
   d. *What could be done to improve?*
5. In your working environment, is there any support for teachers wishing to use ICT in teaching? What kind of support, if any?
   Sub-questions:
   a. *Did you have to go through any training before using ICT?*
6. What factors do you think influence your ICT use?
   Sub-questions:
   a. *What are the encouraging factors for you to use ICT in teaching?*
   b. *What are the limitations or obstacles of integrating ICT tools?*
   c. *What is the most influential factor? Why?*
7. What kind of support do you need or are you interested in?
8. How was ELT taught in your school before the integration of ICT?
9. Have you noticed any progress in your students' performance since the use of ICT?
10. Do you have any suggestions to make concerning ICT use in ELT?
    Sub-questions:

a. What is your comment/suggestion about ICT at the administrative level?

11. What is your opinion about ICT policy overall?

Open-ended question for additional feedbacks:

Have you got any questions you would like to ask me? Anything else you would like to add?

❖ **The 2nd Interview (via telephone)**

1. What is your primary focus when integrating ICT in vocabulary teachings (form, meaning, or use)?
2. Have you ever combined ICT applications with real-life contexts in teaching to boost receptive skills (listening and reading) for your students? If yes, please name some applications you have been used?
3. Have you ever used ICT to improve accuracy and fluency in speaking for your students? If yes, please describe some applications and programmes you have used?
4. What is your primary focus when integrating ICT through the 3 phases of writing teaching? Is it in prewriting, drafting, or revising? What are your favourite ICT applications? And why?
5. Have you ever used ICT to teach 4 language skills simultaneously (Listening, Speaking, Reading, Writing)?
6. Is there any way to help students get better scores when you teach with ICT integration?
7. Do you have any ways to solve technical problems encountered when using ICT in teaching? What are they?
8. What are your students' favourites most out of listening, speaking, reading, writing, grammar, and vocabulary when ICT is used?
9. Are these ICT devices compatible with what you were trained for?

Appendix 4

SAMPLE FOR

TRANSCRIPT AND THEMATIC CODING OF INTERVIEW QUESTIONS

INTERVIEW TRANSCRIPTION AND THEMATIC CODING (BY COLORS) - INTERVIWEE Diem

- **1st interview (4/10/2018)**

1. VU: How do you use ICT in your teaching?

INTERVIEWEE: (1a). (1b). (1c). (1d).

2. VU: In regard to listening, speaking, reading, writing, and other subjects such as grammar, vocabulary, and pronunciation, how do you teach these skills? For example, how do you teach listening?

INTERVIEWEE: (2a), (2c). (2d).

3. VU: And how do you teach vocabulary?

INTERVIEWEE: In regard to vocabulary, ICT can be used as well. (3a). (3b).

4. VU: Do you use ICT for teaching pronunciation?

INTERVIEWEE: (Ahh) (4a). (4b). (4c). (4d). (4e).

5. VU: How does ICT support your teaching besides its displaying functions?

INTERVIEWEE: (Uhm)… I think ICT is very much helpful for students, besides being helpful for teachers through (5a). (5b). (5c). (5d). (5e). For this reason, I believe ICT is very helpful.

6. VU: Just to confirm, do you believe ICT is important?

INTERVIEWEE: (6a). (6b). (6c). (6d). (6e).

7. VU: Have you notice any progress in your students when learning with ICT?

INTERVIEWEE: (7a). (7b). (7c). (7d). (7e). (7f). (7g). (7h).

8. VU: Is there any ICT innovation at your school?

INTERVIEWEE: (8a). (8b). (8c). (8d). (8e). (8f). (8g).

9. VU: Which ICT technology and devices are installed at this school?

INTERVIEWEE: (9a). (9b). (9c). (9d). (9e). (9f). (9g). (9h). (9i). (9j). (9k). (9l). (9m).

10. VU: If improving is necessary for the audiovisual room, which way should it be?

INTERVIEWEE: (Ahh) (10a). (10b). (10c).

11. VU: What is the average number of students per class?

INTERVIEWEE: (11a). (11b). (11c). (11d).

12. VU: Is there any kind of support that you wish to receive?

INTERVIEWEE: (12a). (12b). (12c). (12d). (12e). (12f).

13. VU: Have you ever been on any ICT training course?

INTERVIEWEE: (13a). (13b).

some teachers may not be able to receive any training (13c). For those who do not receive any official training (13d). (13e). (13f).

14. VU: Would you like to participate as you have not received any training?

INTERVIEWEE: (14a). (14b). (14c).

15. VU: Which factors could support or obstruct the use of ICT?

INTERVIEWEE: (15a). (15b). (15c). (15d). (15e). (15f). (15g). (15h). (15i).

16. VU: This is the first time I have heard of salary as a factor, is it important?

INTERVIEWEE: (16a). (16b). (16c).

17. VU: Is there any contributing factor which may affect the use of ICT besides equipment, salary, and overcrowded classrooms?

INTERVIEWEE: (17a). (17b). (17c). (17d). (17e).

18. VU: Do you believe that your ability to use ICT may affect how ICT is used?

INTERVIEWEE: I think this is the major contributing factor (18a). For example, technical faults may occur in (18b). (18c). (18d). (18e). (18f). (18g).

19. VU: As you mentioned earlier that the English proficiency of your students is an affecting factor to the use of ICT, how about their proficiency in using ICT?

INTERVIEWEE: (19a). (19b). (19c). (19d). (19e). (19f). (19g). (19h). (19i). (19j).

20. VU: Among all contributing factors, which is the most affecting factor among teachers, students, equipment, policy?

INTERVIEWEE: (20a). (20b). (20c). (20d). (20e). (20f). (20g). (20h).

21. VU: Do you have any suggestion about the use of ICT in your teaching?

INTERVIEWEE: I think ICT should be applied as much as possible in English teaching (21a). First, facilities and (21b). (21c). (21d).

22. VU: Do you have any opinion about policies in regard to the use of ICT?

INTERVIEWEE: (22a). (22b). (22c). (22d). (22e). This is my opinion, other teachers may have different views about this topic.

VU: Thank you very much for your participation!

- **2nd Interview (14/10/2018)**

23. VU: What is your method in vocabulary teaching such as the way you teach your students about form, meaning, and use of new words?

INTERVIEWEE: (23a). (23b). (23c). (23d). (23e). (23f). (23g). (23h).

24. VU: Fact-using is one of the teaching methods in listening and speaking. Have you applied contexts in the reality which relates to student's backgrounds in your teaching?

INTERVIEWEE: (24a). For example, if the topic is about Halong Bay, I often search for short videoclips to use as an introduction. (24b). (24c).

appropriate length (24d). The source for these videoclips is limited because I do not know where to find it (24e).

25. VU: Have you used any ICT tool to support for accuracy and fluency in teaching speaking?

INTERVIEWEE: (25a). (25b). (25c). (25d).

26. VU: What is the name of the application used in practice speaking?

INTERVIEWEE: (26a). (26b). (26c).

27. VU: It is a common practice to combine skills together. For example, speaking and listening skills are combined with writing. Have you ever used this approach?

INTERVIEWEE: (27a). (27b). (27c). (27d). (27e). (27f). (27g). (27h). (27i). (27j). (27k).

28. VU: As you mentioned in the previous interview, ICT provides benefits to good and excellent students while those who are below average cannot follow up. Do you have any suggestion to help these poor-performing students?

INTERVIEWEE: This problem mainly depends on how teachers prepare their teaching materials (28a). For (28b). (28c). (28d). (28e). (28f). (28g).

29. VU: What would you normally do in the event of experiencing technical problems?

INTERVIEWEE: (29a). (29b). (29c). (29d). (29e). (29f).

VU: Thank you very much for your participation!

Appendix 5

TABLE TO SHOW THE REDUCTION OF DATA

(Theme: **Technology –** Subtheme: **ICT benefits)**

Item No.	Name	Question No.	Theme	Coded for	Topic
21	Lan	8a	Technology	ICT Benefits	ICT can improve teaching quality
22	Lan	9a	Technology	ICT Benefits	ICT improves listening and speaking skills
23	Lan	9b	Technology	ICT Benefits	ICT improves pronunciation in fluency and accuracy
24	Lan	9c	Technology	ICT Benefits	ICT has improved teaching quality
25	Lan	10a	Technology	ICT Benefits	ICT can create a dynamic atmosphere
27	Lan	10c	Technology	ICT Benefits	ICT helps students learn quicker and remember longer
28	Lan	11a	Technology	ICT Benefits	ICT reduces preparation time in class
49	Lan	16a	Technology	ICT Benefits	ICT may attract to students
183	Hoa	1e	Technology	ICT Benefits	Multimedia contents provides benefits if contents are well-prepared
199	Hoa	7c	Technology	ICT Benefits	Projectors provides effective way in writing
215	Hoa	12a	Technology	ICT Benefits	ICT provides a lot of benefits
217	Hoa	12c	Technology	ICT Benefits	ICT is very effective
218	Hoa	13a	Technology	ICT Benefits	ICT provides a lot of benefits
219	Hoa	13b	Technology	ICT Benefits	ICT allows lectures to be created just once
220	Hoa	13c	Technology	ICT Benefits	ICT allows lectures to be modified without redoing the whole lectures
221	Hoa	13d	Technology	ICT Benefits	ICT allows lectures to be modified into different versions for different students
224	Hoa	13g	Technology	ICT Benefits	ICT provides more options in shorter time
225	Hoa	14a	Technology	ICT Benefits	ICT provides excitement in learning for students
228	Hoa	15a	Technology	ICT Benefits	ICT is very important in English teaching
305	Hoa	34b	Technology	ICT Benefits	ICT helps create audioclips for listening exercises
306	Hoa	34c	Technology	ICT Benefits	ICT helps create videoclips and pictures
318	Hoa	37b	Technology	ICT Benefits	Grammar lessons are attracted to students with the use of colourful pictures
319	Hoa	37c	Technology	ICT Benefits	Reading lessons are available to help students develop their writing skills
320	Hoa	37d	Technology	ICT Benefits	The use of keywords in ICT provides benefits in reading
321	Hoa	38a	Technology	ICT Benefits	ICT help leverage teaching goals
345	An	13a	Technology	ICT Benefits	ICT is important in ELT
352	An	15a	Technology	ICT Benefits	ICT can improve teaching quality if teaching materials are well prepared in advance
353	An	15b	Technology	ICT Benefits	ICT can avoid the repetitive tasks of writing the same contents on the blackboard
355	An	16b	Technology	ICT Benefits	ICT with images and special effects appears to be more attractive
356	An	16c	Technology	ICT Benefits	ICT help create exciting atmosphere
357	An	17a	Technology	ICT Benefits	ICT improves learning ability as students concentrate more into the lessons
358	An	18a	Technology	ICT Benefits	ICT can improve the learning ability among all students

385	An	31b	Technology	ICT Benefits	ICT makes the teaching much easier
432	An	51a	Technology	ICT Benefits	ICT makes the word game becomes more attractive with sounds and lively pictures
433	An	51b	Technology	ICT Benefits	ICT, with its special effects, makes the traditional word game become more exciting to play
434	An	52a	Technology	ICT Benefits	Digital contents are easy to read and they appear to be more elegant than writing on blackboard
485	Thu	11a	Technology	ICT Benefits	ICT is very important in English teaching
486	Thu	12a	Technology	ICT Benefits	ICT helps save times
488	Thu	12c	Technology	ICT Benefits	ICT has provided a gateway for teachers to outsources information in generating lectures
489	Thu	12d	Technology	ICT Benefits	ICT provides tools for making better teaching materials
490	Thu	13a	Technology	ICT Benefits	ICT can create an exciting atmosphere if the facility is well equipped, e.g. the lab
492	Thu	14a	Technology	ICT Benefits	Students make a lot of progress when learning with ICT
493	Thu	14b	Technology	ICT Benefits	ICT does not only help students with exercises but also enlarging their general knowledge
628	Tha	8d	Technology	ICT Benefits	ICT makes vocabulary teaching much lively
633	Tha	10a	Technology	ICT Benefits	ICT is very important in English teaching
634	Tha	10b	Technology	ICT Benefits	ICT makes teaching more interesting
642	Tha	11b	Technology	ICT Benefits	ICT-based teaching materials can save a lot of time in teaching
643	Tha	11c	Technology	ICT Benefits	Teachers may not need textbooks when teaching with ICT
644	Tha	11d	Technology	ICT Benefits	ICT makes teaching very smoothly
645	Tha	12a	Technology	ICT Benefits	ICT helps students in making progress
646	Tha	12b	Technology	ICT Benefits	ICT helps students learn quicker and remember longer
647	Tha	13a	Technology	ICT Benefits	Not all students are benefited from ICT
650	Tha	13d	Technology	ICT Benefits	ICT maximises learning ability for good and excellent students
676	Tha	26c	Technology	ICT Benefits	ICT can convert a reading lesson into a listening exercise
739	Tan	3b	Technology	ICT Benefits	ICT improves listening and pronunciation skills for teachers
746	Tan	6b	Technology	ICT Benefits	ICT tools have helped teachers a lot
756	Tan	11c	Technology	ICT Benefits	ICT helps save times in reading teaching
764	Tan	13a	Technology	ICT Benefits	ICT has positive impact on English teaching
766	Tan	13c	Technology	ICT Benefits	ICT helps teachers save a lot of time
767	Tan	14a	Technology	ICT Benefits	ICT is very important in teaching
770	Tan	15c	Technology	ICT Benefits	ICT can deliver its benefits if teachers know how to use it
773	Tan	15f	Technology	ICT Benefits	ICT can be more effective for students who are good at English
800	Tan	25d	Technology	ICT Benefits	ICT is effective in all 3 parts of vocabulary teaching
810	Tan	27d	Technology	ICT Benefits	ICT helps students achieve results fluently
843	Sao	7f	Technology	ICT Benefits	Games create an exciting learning environment as students are very passionate
857	Sao	11a	Technology	ICT Benefits	ICT impact students in both positive and negative ways
899	Sao	22a	Technology	ICT Benefits	ICT triggers the desire to learn among all students
900	Sao	23a	Technology	ICT Benefits	ICT helps save a lot of times
901	Sao	23b	Technology	ICT Benefits	ICT helps create lively lectures
902	Sao	23c	Technology	ICT Benefits	Online contents are abundant. It is not hard to find pictures associated to the topics
914	Sao	28a	Technology	ICT Benefits	ICT helps create long-term memory in which students can remember meaning of new words longer

922	Sao	29e	Technology	ICT Benefits	Hiding words can be done easily with ICT while teachers need to erase words manually in the traditional teaching method
923	Sao	29f	Technology	ICT Benefits	Word games are great to practice exercises in multiple-choice questions
924	Sao	29g	Technology	ICT Benefits	The use of ICT makes vocabulary teaching becomes much more interesting for students
963	En	6d	Technology	ICT Benefits	The interactive board brings benefits into teaching
964	En	6e	Technology	ICT Benefits	Teachers can go back to previous contents for further explanations
980	En	14b	Technology	ICT Benefits	Overhead projectors eliminate the necessity of making sample writing on a poster
984	En	17a	Technology	ICT Benefits	ICT helps save a lot of times
988	En	18a	Technology	ICT Benefits	ICT creates an exciting learning atmosphere
989	En	19a	Technology	ICT Benefits	ICT stimulates the desire to learn
994	En	22a	Technology	ICT Benefits	ICT is important in ELT
1064	Nho	2a	Technology	ICT Benefits	ICT is much appropriate to display contents instead of writing on the blackboard
1067	Nho	2d	Technology	ICT Benefits	ICT creates an exciting learning atmosphere
1074	Nho	5a	Technology	ICT Benefits	ICT improves learning ability in some ways
1075	Nho	5b	Technology	ICT Benefits	ICT provides the desire to learn
1081	Nho	8a	Technology	ICT Benefits	ICT is very important in teaching
1176	Phung	8a	Technology	ICT Benefits	ICT is very supportive in teaching
1177	Phung	9a	Technology	ICT Benefits	ICT saves time
1178	Phung	9b	Technology	ICT Benefits	Students are excited to learn with ICT, especially animations
1179	Phung	10a	Technology	ICT Benefits	ICT helps students make progress in class
1180	Phung	11a	Technology	ICT Benefits	ICT helps good and excellent students make better progress than average and below-average students
1239	Phung	33f	Technology	ICT Benefits	ICT helps develop word memorisation while creating an exciting learning environment
1243	Phung	34d	Technology	ICT Benefits	ICT helps a lot in speaking teaching as videoclips can create an exciting learning environment along with real-life stories
1247	Phung	35b	Technology	ICT Benefits	ICT helps save times to create word games while students are highly concentrated
1248	Phung	35c	Technology	ICT Benefits	Word games help teachers in getting attentions from students intentionally
1249	Phung	35d	Technology	ICT Benefits	Word games help students of all grades make good progress
1250	Phung	36a	Technology	ICT Benefits	Televisions and monitors save times
1272	Vu	8a	Technology	ICT Benefits	It is easier for students to learn with ICT
1273	Vu	8b	Technology	ICT Benefits	ICT provides the opportunity for students to learn from native speakers
1274	Vu	9a	Technology	ICT Benefits	Online contents are "golden treasures" for teachers
1276	Vu	9c	Technology	ICT Benefits	Existing resources save a lot of times in preparing lectures
1355	Diem	5a	Technology	ICT Benefits	ICT is very helpful
1360	Diem	6a	Technology	ICT Benefits	ICT is very important in teaching
1364	Diem	6e	Technology	ICT Benefits	ICT is important for both teaching and learning
1490	Diem	27f	Technology	ICT Benefits	ICT has helped a lot in preparation of combined skills especially PowerPoint
1502	Diem	28g	Technology	ICT Benefits	PowerPoint is the most helpful tool in teaching
1534	Ngoc	16a	Technology	ICT Benefits	ICT saves time
1535	Ngoc	16b	Technology	ICT Benefits	ICT help organise teaching materials which were very difficult if using the traditional methods
1536	Ngoc	17a	Technology	ICT Benefits	ICT is important for teaching

1538	Ngoc	17c	Technology	ICT Benefits	Teaching could be very difficult without ICT
1539	Ngoc	18a	Technology	ICT Benefits	ICT helps students make progress
1540	Ngoc	18b	Technology	ICT Benefits	ICT improves students' pronunciation
1581	Ngoc	38a	Technology	ICT Benefits	ICT has helped teachers to reach the desired goals
1582	Ngoc	38b	Technology	ICT Benefits	ICT has eliminated the language barrier of Vietnamese teachers who often pronounce English words very poorly
1588	Ngoc	43a	Technology	ICT Benefits	ICT has helped teaching a lot
1628	Quynh	1b	Technology	ICT Benefits	ICT makes teaching materials become more lively and exciting
1629	Quynh	1c	Technology	ICT Benefits	ICT eliminates the boredom of the traditional teaching methods
1643	Quynh	11a	Technology	ICT Benefits	Teaching with ICT saves a lot of times in comparison to the traditional teaching methods
1645	Quynh	11c	Technology	ICT Benefits	ICT provides a way to access to a tremendous source of information and materials on the Internet
1647	Quynh	12a	Technology	ICT Benefits	ICT is very important
1650	Quynh	12d	Technology	ICT Benefits	ICT develops accuracy in pronunciation
1669	Quynh	25a	Technology	ICT Benefits	ICT create links to external references
1694	Quynh	37d	Technology	ICT Benefits	Online contents make students feel excited to learn more
1736	Lin	1d	Technology	ICT Benefits	ICT can create exciting learning environment
1754	Lin	14a	Technology	ICT Benefits	ICT helps students pay close attention to the lessons because contents are easier to understand when learning with ICT
1756	Lin	14c	Technology	ICT Benefits	ICT offers more options in preparing teaching contents
1757	Lin	14d	Technology	ICT Benefits	ICT saves time
1822	Lin	48c	Technology	ICT Benefits	Displaying content by using ICT saves time which gives teachers more time to provide additional teaching
1849	Tuan	6a	Technology	ICT Benefits	ICT is very important
1850	Tuan	6b	Technology	ICT Benefits	ICT stimulates the desire to learn
1881	Tuan	17a	Technology	ICT Benefits	ICT seems to only benefit good and excellent students
1884	Tuan	17d	Technology	ICT Benefits	ICT saves time