Using Technology-Enhanced Language Learning Environments to Influence the Communicative Potential of Adult Learners of English as a Foreign Language in Vietnam

Cuong Duc Le

Institute of Sustainable Industries & Liveable Cities (ISILC)

VU Research – Victoria University

Submitted in fulfilment of the requirement for the degree of

Doctor of Philosophy

August 2021

ABSTRACT

To respond to the rapid development of industrialisation, modernisation and development of a knowledge-based-economy, Vietnamese citizens are encouraged to engage in lifelong learning to adapt to work and life changes (Hossain, 2016, MOET, 2017, 2020a). With the aim of fulfilling the nation's education goals in the early 2000s, the Vietnamese government proclaimed the English language a compulsory foreign language for all learners throughout the nation, stating that Vietnamese citizens must master English-language skills to access a wide range of professions, compete in new labour markets and advanced technologies, and engage in nation-building and global community integration (Bui & Nguyen, 2016). Also, the Vietnamese government continues to encourage the use of technology in education, specifically for teaching and learning of foreign languages (MOET, 2020c; Prime Minister of Vietnam, 2017). One of the most important policies issued by the government is a favourable framework that supports the application of information and communications technology (ICT) to education and language learning (MOET, 2007, 2008a, 2008b, 2008c, 2016). Supported by these government policies, the introduction of ICT in education in Vietnam has been increasing, but still faces challenges in different contexts and institutions (Pham, Tan, & Lee, 2019).

While a wide range of studies has examined language learning using technology in Western countries and in the Asia-Pacific Region, studies in Vietnam are still limited. This study explored learners' EFL learning experiences in gaining communicative competence, including (but not limited to) grammatical, sociolinguistic, discourse and strategic competencies within technology-enhanced language learning (TELL) environments. This study also aimed to discover how these learners' learning experiences, in their lifelong learning contexts, influenced not only their ability to communicate in English, but their professional knowledge and practice as well. The study's findings showed that learners had little to no chance to experience foreign-language learning using technology in their previous education settings. As they began learning English using technology, they acknowledged the convenience and effectiveness of learning in TELL environments and showed improvement in their communicative capacity in English for their professional purposes. Although they faced challenges regarding time, support, and learning strategies, they showed a strong desire to learn, and to belong to particular imagined communities.

The study adds to the existing literature by using a narrative approach underpinned by a social constructivist worldview to interpret the lifelong learning context of Vietnamese adult learners. Understanding these learning experiences helps contribute to assisting Vietnamese learners in their lifelong learning journey, supporting their learning approaches to enhance their communicative capability and contributing to their quest to access high-quality and robust

learning resources. Also, this study has the capacity to add to the broader understanding of the use of technology in learning, assisting Vietnamese educators and educational institutions in updating and building relevant curricula for language learners, particularly adult learners. Thus, this study holds the potential to support and contribute to the achievement of governmental and local goals for language education in the current Vietnamese context. This narrative inquiry was grounded in a qualitative study (Mirhosseini, 2020) using language-learning histories, learners' diaries and semi-structured interviews as data-collection methods (Barkhuizen, Benson, & Chik, 2013).

DECLARATION

I, Cuong Duc Le, declare that the PhD thesis entitled 'Using Technology-Enhanced Language Learning Environments to Influence the Communicative Potential of Adult Learners of English as a Foreign Language in Vietnam' is no more than 80,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

I have conducted my research in alignment with the Australian Code for the Responsible Conduct of Research and Victoria University's Higher Degree by Research policy and Procedures.

All research procedures reported in the thesis were approved by the Victoria University Human Research Ethics Committee, Approval Number: HRE18-076.

Signature: Cuong Duc Le Date: 2 August 2021

ACKNOWLEDGMENTS

This research journey has been the most challenging part of my life. It would have been much more difficult for me to reach the end of this process without the ongoing support and encouragement of many people.

I would like to express my deepest and sincerest gratitude to my supervisors, Dr. Martin Andrew and Dr. Oksana Razoumova, for their dedicated supervision, invaluable guidance, detailed comments, practical suggestions, continuous feedback and encouragement. Words fail to convey my sincere thanks to them for their generous assistance, invaluable encouragement and scholarly advice.

I am deeply grateful to the College of Arts and Education, the Institute for Sustainable Industries and Liveable Cities, and VU Research for their continuous support during my study.

My special thanks go to the Vietnamese Ministry of Education and Training and Victoria University, as their cooperation created this opportunity for me to be on a scholarship with financial support during my PhD candidature.

My warmest and sincerest thanks go the participants in this study, without whom I would have no story to tell.

I would like to express my deep gratitude to Dr. Laura E. Goodin for being a wonderful editor who helped proofread, edit and improve this thesis.

I am especially thankful to Haiphong Community College, its leaders and my colleagues there for their continuous assistance.

I would like to acknowledge the companionship and support of my Vietnamese and international friends who made this journey easier.

Finally, my gratitude goes to my family, especially my daughters, who accompanied me throughout this journey, and my wife for her endless care, support and encouragement remotely from overseas. Although my father is not alive, he is always in my heart and I felt his presence by my side to support me invisibly during the thesis writing.

Without the support of these people, this thesis would never have been completed.

TABLE OF CONTENTS

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

BBC	British Broadcasting Corporation
CALL	Computer Assisted Language Learning
CLT	Communicative Language Teaching
CMC	Computer Mediated Communication
EFL	English as a Foreign Language
ELT	English Language Teaching
ESL	English as a Second Language
ESP	English for Specific Purposes
ICT	Information and Communications Technology
IT	Information Technology
LLH	Language Learning History
LLL	Lifelong Learning
LD	Learner's Diary
L1	First Language
L2	Second Language
MOET	Ministry of Education and Training
P/PP	Page/Pages
SLA	Second Language Acquisition
SCT	Sociocultural Theory
TOEIC	Test of English for International Communication
TESOL	Teaching English to Speakers of Other Languages
TELL	Technology Enhanced Language Learning
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VU	Victoria University
VOA	Voice of America
WTO	World Trade Organisation
ZPD	Zone of Proximal Development

CHAPTER 1: INTRODUCTION

This chapter provides an overview of the research, starting with the background of the study**.** The overview covers the factors that affect English language learning, the use of information communications and technology (ICT) and lifelong learning in Vietnam. It then moves **on** to describe the research rationale and the objectives of the study. Next, the chapter introduces the research focus, methodology and the significance of the study. Finally, it outlines the thesis structure and summarises the chapter.

1.1. Background

This section briefly introduces the economic and social context of Vietnam and their effect on the demand for English-language learning, ICT use and lifelong learning. The background discussion also considers the challenges in these areas and suggests an innovation.

1.1.1. Economy and education in the new era

An economy in transition

Beginning in 1986, the Vietnamese economy continues to experience a comprehensive shift towards a market economy (London, 2006). Although this shift has been mainly economic, it has also focused on education. The Vietnamese government has called for active participation in education and training to facilitate the economic and educational transformation of the country (Dang, 2014; MOET, 2020b). As part of the *Doi Moi* policy implementation, the Vietnamese government has established strong ties with other nations, especially the Western countries (Ngo, 2016; Thu, 2013). The need to engage deeply with other economies became more urgent in the early 2000s, particularly when Vietnam became a full member of the World Trade Organization (WTO) in 2007 (Thanh & Duong, 2009). The Vietnamese leadership viewed the development of the country's education as the solution for this global integration (Ngo, 2016).

Toward a learning society

In the context of the constant development of science and technology, the need for learning as a means to enhance understanding, develop a career, enrich personal life and increase opportunities for exchanges and integration into the world is becoming increasingly urgent (Phung, 2018). Therefore, education and training need to change comprehensively to meet people's emerging learning needs (Central Executive Committee, 2013; MOET, 2017, 2020a). Education is no longer for only a part of the world, but for every citizen: learning has become a real human need.

Facing these new demands on the country's education sector, Vietnam is implementing a process of fundamental and comprehensive renovation of education and training (Central Executive

Committee, 2013; MOET, 2020b). For the renovation to occur successfully, it needs to take advantage of the opportunities presented by globalisation, adapting to the strong development of science and technology, economics and society (Prime Minister of Vietnam, 2008a, 2017). To do this, Vietnam needs, as other education-focused cultures have, to become a learning society.

Building a learning society is an inevitable direction for Vietnam's education (MOET, 2020a; Phạm, 2013) as the nation aims to catch up with developed countries in the region and the world in promoting individual learners' internal resources by self-learning, self-training, self-employment and societal development (Prime Minister of Vietnam, 2008b). This will contribute to Vietnam's continuing industrialisation and modernisation, and support the mobilisation of the nation's resources, promoting its tradition of studiousness and respect in both a societal and religious context. Building a learning society is also a realisation of the Vietnamese educational socialisation policy regarding educational objectives, contents and methods that considers the characteristics of regions and individual learners (MOET, 2017, 2020a).

1.1.2. Demand for English learning, ICT applications and lifelong learning

As the English language has long been regarded as a force for globalisation and modernisation (Kirkpatrick, 2014), the teaching and learning of English in Vietnam has become increasingly important. According to Denham (1992), English is viewed as the most important language to develop economic, social and education, and is perceived as a key to accessing business, science and technology (Ngo, 2016). To enhance the status of English and to achieve the aims of country's development, Vietnam's Ministry of Education and Training (MOET) officially introduced English as a Foreign Language (EFL) to the national educational system at both school and tertiary levels (Ngo, 2016). Since the late 1980s and early 1990s, English has become one of the main subjects at schools (Denham, 1992). It has been formalised as one of the compulsory subjects for the national final exams since 2007 (Hoa & Tuan, 2007).

Like other active members of the Association of Southeast Asian Nations (ASEAN), Vietnam views English as the key factor that helps it engage with the outside world (Kirkpatrick, 2014). With the aim of comprehensively redesigning foreign-language education by implementing new foreign-language teaching and learning programs at all levels, Vietnam launched the National Foreign Language Project 2020 (Prime Minister of Vietnam, 2008a). Specifically, the project aims to improve learners' capacity to use foreign languages (albeit the main focus is on English) for learning and working needs, providing the country's human resources with the confidence and the ability to communicate in English, and thus contribute to Vietnam's industrialisation and modernisation (Article 1, Clause 1, Decision No. 1400/QD-TTg, Prime Minister of Vietnam, 2008a).

In addition to improving foreign-language skills, the project emphasises the importance of applying advanced technology and promoting lifelong learning to strengthen the competitiveness of Vietnam's human resources (MOET, 2016). One of the highlighted tasks of the project is promoting/encouraging the use of ICT in foreign-language teaching and learning (Article 1, Clause 2-3, Decision No. 1400/QD-TTg) (Prime Minister of Vietnam, 2008a). Also, in an important approach to facilitating continuing education and lifelong learning, the project develops and replicates the model of self-study and self-improvement for foreign-language skills; strengthens the construction of foreign-language learning environments; prioritises career-oriented activities; supports job needs and employment connectivity; launches movements of learning; and uses foreign languages at a highly competent level (Prime Minister of Vietnam, 2017; Article 1, Clause 3, Section 4-5, Decision No. 2080/QD-TTg of the Prime Minister on the approval of the Revised National Foreign Language Project, with adjustment and supplementation for the period of 2017-2025) (Prime Minister of Vietnam, 2017).

1.1.3. Challenges for English learning, the use of ICT and lifelong learning

The importance of English in national development and modernisation has encouraged many Asian countries, including Vietnam, to prioritise investment in the goal of improving their citizens' English ability to create competitive advantages in science, technology and economics. However, few successful lessons have been recorded in these countries, and solutions to improve the quality of English teaching and learning continue to be sought (Canh & Ngoc, 2017).

In Vietnam, foreign-language teaching and learning still face many challenges. According to Long (2011a), Vietnamese education in general and English-language education in particular satisfy neither initial work requirements nor ongoing professional demands for graduates in the multi-national employment market. One of the main causes of this inability is the lack of communicative competence in English (Bui & Nguyen, 2016).

The limitations in English-language teaching and learning in Vietnam can be attributed to three main factors. First, the policy-makers at the macro level have not attended adequately to the specific socio-cultural characteristics of Vietnam (Canh & Ngoc, 2017); nor have educational institutions put foreign-language learning activities at the centre of innovation. As a result, teaching and learning methods are mainly teacher-centred teaching and based on rote learning, and the curriculum is exam-oriented (Canh & Barnard, 2009a). Second, educators and researchers rarely report failures in teaching and learning programs, but often publish success stories of innovative teaching methods that mention high student learning outcomes, teachers dedicated to innovation, and highly effective communication programs (Alderson, 2009); thus, policy-makers lack the basis to build and innovate programs, and learners have little chance of making corrections. Third, Vietnamese people, like those in most Asian countries, learn and use English

as a foreign language, and due to the lack of the necessary language environment, learners cannot immediately apply what they learn to develop communicative competence in English, driving down their motivation and, consequently, their investment of time and effort (Long, 2011a).

The application of technology to teaching and learning foreign languages and to the realisation of lifelong learning also faces difficulties. In addition to the above factors that directly limit the development of English-language communicative competence for learners, a decisive issue that affects English education in Vietnam in general – and, in particular, ICT use in education and lifelong learning – is that the activities of learning (English) outside the school or at learners' homes or workplaces have not been fully considered. As well, the study and use of ICT within and outside schools have not been adequately researched. As a result, they limit the success of education and discourage lifelong learning to improve the quality of labour resources to support innovation.

According to Canh and Ngoc (2017), the guidelines for building a foreign-language learning community in Vietnam are vague. Moreover, the policy of applying ICT in education and in foreign-language teaching and learning lacks grounding in scientific evidence, leading to a waste of resources (MOET, 2016). Canh and Ngoc (2017) state that "because we do not yet understand how learners learn foreign languages "outside the classroom, concepts such as applying technology in teaching and learning foreign languages or learning combining traditional methods with technology learning (blended learning) are still topical terms" (p. 20). Therefore, only when it is understood how learners learn foreign languages outside the classroom do these concepts manifest their effects.

For Canh and Ngoc (2017), "the problem is not trying to apply the latest technology in foreign language teaching and learning," but the question should be asked: "What problems need to be solved by which technology?" (p. 20). The answer to this question will provide a broader picture of how to deal with the current situation. At the time of writing, research on Vietnamese educators' technological responses to the COVID-19 pandemic are starting to emerge. These answers will be particularly useful for the contexts of adult education and lifelong learning, where many people, especially those at their mid-career or in the countryside, are not familiar with advanced technology and do not have the time or other resources necessary to access regular or further classes. In this regard, new insights into how language learners in Vietnam learn outside school, in their lifelong learning contexts, and which forms of technology help solve their problems of learning EFL are needed. This would help to put foreign language learning activities in general, not just teaching, at the centre of innovation where a focus on how learners understand learning is needed. Such an approach will also help in future considerations of the difference in individual learners' learning conditions.

The Vietnamese economy and its education and training were in transition even prior to COVID-19; thus, the demands for English learning, ICT application and lifelong learning are especially high. However, there remain many challenges for learning English, using ICT and promoting lifelong learning. In this situation, the exploration of adults' language learning in their lifelong learning contexts contributes to an understanding of what and how people are learning. Such knowledge, I contend, has the potential to contribute to the development of English-language skills, ICT use and, in particular, the promotion of lifelong learning.

Data for this study had been gathered prior to the COVID-19 pandemic; however, I believe that this study's exploration of language-learning technology as a component of lifelong learning remains pertinent, perhaps pointedly so.

1.2. Rationale for the study

Into the 2020s, the Vietnamese government continues to encourage the use of technology in education, specifically for foreign-language teaching and learning to support social and economic integration. While numerous studies have examined technology use for language learning in Western countries and in the Asia-Pacific region, studies that specifically examine experiences in Vietnam remain limited**.** Further, although Vietnamese government policies have emphasised the importance of learning being lifelong to help the country achieve its socio-economic development, there is little research concerning lifelong learning in Vietnamese contexts. In this study, I conduct an in-depth exploration of Vietnamese adult language learners' experiences with technology-enhanced language learning (TELL) environments in their lifelong learning contexts.

In relation to professional development, scholars have emphasised the importance of understanding teachers and learners as individuals, and how their lived experiences influence their practice, which ultimately affects teaching and learning contexts (Flores & Day, 2006; Thomas & Beauchamp, 2011). Drawing on these assumptions as a language teacher in my own professional practice, I am expected to be the one who implements research on certain teaching and learning strategies so that my learners can successfully acquire the target language (Varghese, Morgan, Johnston, & Johnson, 2005). Thus, I became increasingly interested in researching language learning in Vietnamese contexts, especially looking at adult learners' experiences in TELL environments. This study allows a better understanding of how language learners are responding to the government's initiatives to promote language learning, the use of ICT and lifelong learning.

Finally, while there has been a variety of studies around TELL, most of the studies have been conducted in Western and other developed countries. Further, existing foreign findings do not necessarily translate to the Vietnamese context.

1.3. Objectives of the study

My study aims to explore how Vietnamese adult English as a Foreign Language (EFL) learners experience the trajectory of enhancing their English communicative capacity in TELL environments in their lifelong learning contexts. The study also aims to discover how these learning experiences influence the development of learners' capacity to communicate in English, based on the "communicative competence" model of Canale and Swain (1980), as well as how these experiences affect learners' professional experience and practice. The research will not test a hypothesis; rather, it will explore interpretations from participants in depth. In other words, it will examine the real learning environment, the learners' experiences and the influence of these experiences on the learners' professional knowledge and capacity development. The research questions will emerge in light of the new literature to help achieve these objectives.

1.4. Research focus and research methodology

The concept of lifelong learning continues to be relevant in Vietnam (Phạm, 2013), and has been emphasised in Vietnamese government policies in recent years (Hossain, 2016). However, there is little research concerning lifelong learning in Vietnamese contexts. This study explores the learning experiences of adult language learners in their professional settings to improve communicative competence.

To develop an in-depth exploration of Vietnamese adult language learners' experiences in TELL contexts in their lifelong learning trajectories, this research uses a narrative methodology to interpret data and to explain the phenomena manifest in TELL learning environments. Working in other contexts, researchers have widely employed social constructivist theory (Alborno & Gaad, 2012; Barak, 2017; Blaj-Ward, 2017). However, social constructivist interpretations of adult learners' experiential narratives in TELL-based lifelong language learning contexts are new in Vietnam, particularly in the context of developing learners' capacity to communicate in English.

As Chapter Three details, this study employed an interpretative qualitative approach. I used a narrative methodology, underpinned by a social constructivist worldview, to gain a richer understanding of learners' EFL learning experiences in TELL learning environments. I achieved this through interpreting the lifelong learning contexts of Vietnamese adult learners who have been working in different sectors. Working with seven adult learner participants, this narrative inquiry used language-learning histories, learners' diaries and semi-structured interviews as data-collection methods, and SCT and experiential learning pedagogy as aspects of the theoretical framework.

1.5. Significance of the study

This study is significant at national level since it contributes to the implementation of government policies on education particularly foreign-language teaching and learning. It contributes to meeting the aims of the National Foreign Language Project (Prime Minister of Vietnam, 2008a, 2017). The study helps improve the understanding of the state of learning to improve learners' capacity to communicate in English for the current high-demand labour market in Vietnam. The study contributes to the implementation of the government and MOET policies on ICT use in language education (MOET, 2007, 2008a, 2008b, 2008c).

This study assists Vietnamese educational institutions in renovating the curricula and in (re)building English-language teaching blends for adult education and lifelong learning. The research on technology and adult language learning supports the Vietnamese Regulations for Colleges in delivering flexible learning programs and curricula and meeting the community's diverse study needs. It has the potential to support Vietnamese colleges, community colleges and universities that cater to the learning needs of adult learners. By providing a picture of learners' experiences in current TELL environments, it **assists** policy-makers and stakeholders as they update their decision-making in the field.

The application of TELL facilitates educational reforms and the transition to online and distance education (Kern, 2006). As well, the study contributes to strengthening foreign-language learning environments that involve career-oriented activities, thus serving job needs and supporting employment connectivity (Article 1, Clause 3, Section 4-5, Decision No. 2080/QD-TTg by the Prime Minister on the approval of the Revised National Foreign Language Project, with adjustment and supplementation for the period of 2017-2025; Prime Minister of Vietnam, 2017).

This research offers insights for teachers and educators in the field of adult language learning. The introduction of TELL has the potential to facilitate learning collaboration, promoting self-learning processes (Hafner & Miller, 2011; Lin, 2010), and to help learners improve their knowledge and skills (Golshan & Tafazoli, 2014; Kung, 2016; Levy, 2009; Lord & Lomicka, 2004; Muhammad Aslam, 2013); thus, it can maximise the learners' potential by building necessary technology literacy into language learning.

Research and innovation on TELL environments in an EFL context, as in Vietnam, afford opportunities for learners to interact with English speakers virtually through technology-enhanced learning environments. This would be particularly useful as learners, especially in rural areas, often lack exposure to English speakers. Research on adult learners in this context is crucial, but the topic remains under-researched in Vietnam; thus, it is necessary for studies to be conducted in this context.

1.6. Thesis organisation

Chapter One of this thesis has introduced the study, presenting background information and key ideas, constructs and theoretical structures underpinning the research. It also provides the rationale for the research, the research aims and focus, and the significance of the study.

Chapter Two reviews the relevant literature that informs the research. It first reviews education in Vietnam in general, and, more specifically, English-language education, including communicative language teaching and lifelong learning in Vietnam. It then describes computer-assisted language learning (CALL)/technology-enhanced language learning (TELL) and communicative competence concepts. It next describes the relevant CALL/TELL research including opportunities, challenges and the gaps in the literature. It details the theoretical framework of this study, outlines how the study applies the social constructivist paradigm, then describes the principles of sociocultural theory (SCT) and experiential learning pedagogy. It concludes by describing an intersection of the above theories that suggests a multi-faceted approach for the study.

Chapter Three outlines the approach to the methodology including the research aims, research questions and methodological approach. The chapter also includes the research design framework, data collection, analysis and representation. The participants for the research and ethical issues are covered as well at the end of the chapter.

Chapter Four presents the findings from the first research question. It overviews seven main themes regarding the learners' learning experiences in TELL learning environments in their professional and lifelong learning settings.

Chapter Five presents the findings from the second research question. It includes seven main themes in relation to the impacts of TELL on the learners' potential to communicate in English, as well as on their professional knowledge and practice.

Chapter Six discusses the findings from the first research question regarding the learners' learning experiences in TELL learning environments in their professional and lifelong learning settings.

Chapter Seven discusses the findings from the second research question. It centres around the impacts of TELL on the learners' potential to communicate in English as well as on their professional knowledge and practice.

Chapter Eight concludes the study, detailing its limitations and discussing its contribution to knowledge and implications, and proposing suggestions for future research.

1.7. Chapter summary

This chapter has provided an introduction to the study. It has also discussed the purposes of the research and the research focus that have guided the design and development of the research,

including the research approach and methodology, as well as the significance of the study. Finally, it has provided the organisation of the thesis.

The next chapter reviews the relevant literature that informs the research, including the intersecting contexts of the study and current issues in Vietnamese education, the use of ICT and lifelong learning in Vietnam.

CHAPTER 2: LITERATURE REVIEW

This chapter opens with a discussion of the state of education, language education and lifelong learning in Vietnam. It then describes concepts in CALL/TELL and communicative competence, introducing the stages of CALL. This part also introduces the components of communicative competence concerning second-language (L2) acquisition and models that apply to the pedagogy. Next, the chapter describes the relevant CALL/TELL research in intersecting contexts, covering research in the field of language learning using technology in international contexts as well as in Vietnam, including the opportunities and challenges in implementation, the gaps in the current literature and the need to contribute to scholarship in Vietnamese contexts. The chapter mentions the research on language learning using imitation and private speech as well as the research on informal, self-directed and lifelong learning using technology. The theoretical framework of the study is discussed at the end of the chapter.

2.1. Education, language education and lifelong learning in Vietnam

This section opens out the historical and educational contexts of the study. It first provides the influence on Vietnam's history on its people. It then reviews education in Vietnam in general, and English-language education in particular, including English-language education policies and regard for communicative language teaching. Last, the chapter discusses the issue of lifelong learning and its place in Vietnam.

2.1.1. Education in Vietnam

While Vietnamese people are strong in their nationality, independence, unity and language preservation (Tuong, 2002), the impacts of internationalisation are evident. These influences can be seen on Confucianism, which retains a significant value in Vietnamese culture because Vietnam was colonised by the Chinese for thousands of years. This fusion of the Confucian and the indigenous is reflected in educational and social activities, in the Vietnamese people's ideology and in their evolving culture (Canh, 2007, 2011).

The current education system in Vietnam covers five levels: pre-school, primary, junior secondary, senior secondary and tertiary. Currently, primary education starts at age 6 and lasts five years, including grades 1-5; junior secondary lasts four years (grades 6-9) and senior secondary lasts three years (grades 10-12). Tertiary education normally takes four years (occasionally four and a half to five years for engineering programs and six years for medical curricula).

The features of Vietnamese education include a high power-distance between teachers and learners (Hofstede, 1986). For historical reasons, this is certainly affected by Confucianism. Even in the 2020s, the curriculum remains firmly textbook- and exam-driven, so that teaching and

learning often focus on theoretical information rather than practical knowledge. This pedagogical method strongly affects learners' and teachers' attitudes to preferred learning and teaching styles (Canh, 2011). This is also a key reason for learners preferring memorisation as a technique for learning, although this preference is changing at some institutions as the roles of learner autonomy and agency are better understood.

Although English is a compulsory subject for schools and most tertiary courses, it is not a compulsory subject for entrance examinations into senior secondary, college and university levels, particularly for groups such as groups A (Maths, Physics, Chemistry), B (Maths, Chemistry, Biology), C (Literature, History, Geography). It applies only to group D (Maths, Literature, Foreign Language), in which learners must take a foreign language as one of the three compulsory subjects for examination. In response to new policies, many positive changes have been implemented, and thus learners can take a combination of one English subject (from the former D01 group - Maths, Literature, English) and two electives from the remaining groups (A, B, C …), which in turn form new groups (for instance, A01, B08, D09, D10-15, D66, D84, D96 and many others). This indicates that English is now considered much more important than it had been in past decades.

2.1.2. English-language education in Vietnam

Overview

For the past 30 years, English has been the dominant foreign language in Vietnam, becoming a compulsory subject in school curricula throughout the country. Currently, children must learn English from year 3 (aged 8), instead of year 6 (aged 11), in the national educational system (Prime Minister of Vietnam, 2008a), making a total time of 10 years for learning English in schools.

Although the importance of English has been increasing and it has been recognised as an instrument for the development of the country and for international cooperation and globalisation, the pedagogical limitations of teaching and learning English remain unresolved. One of the biggest concerns is the quality of English education. Although students have a minimum of ten years of learning English (at least seven years of secondary education and three to four years of tertiary education), many graduates are still unable to communicate in English. The main reasons for this are: insufficient learning materials, poor learning facilities, traditional teaching methods and learners' passive learning styles, which are influenced by Confucianism (Canh & Barnard, 2009a; Canh, 2011). Exam-driven curricula and the context of English as a foreign language (EFL) offer insufficient encounters to use and practice English (Canh, 2007).

Teachers adhere to traditional modes: teacher-centred methods are the most common (Le, 2011; Tuan, 2017). Although there is some evidence of headway with communicative methodologies,

teachers mostly use audio-lingual approaches along with bilingual wordlists and a methodology that relies predominantly on grammar translation (Andrew, 2020a; Canh & Barnard, 2009b; Hoang, 2008). Teachers emphasise grammatical correctness and hasten to point out learners' errors (Canh, 2011). Even today, after communicative methods have long been promulgated in Vietnam, decontextualised rote learning is still dominant at many universities and colleges (Hoang, 2008; Nguyen, Warren, & Fehring, 2014, 2015). Many students only speak to classmates in their mother-tongue both during and outside class.

Through the introduction of the communicative approach in the 21st century, an increasing number of educators have realised the importance of developing learners' communicative, strategic and pragmatic competence, but learners are still expected to follow the given formats to produce grammatically correct answers. As a result, learners are only capable of one-way communication, and have not yet mastered genuine communicative competence; that is, interactional communicative competence (Tuan, 2017). In other words, the learners lack the necessary strategic competence to fulfil their language-learning goals, so they face difficulties in using the language and feel awkward in authentic communications.

English-language education policies in Vietnam and their importance

English-language education in Vietnam has a direct correlation with politics, economy and social affairs, and has been particularly tied up with the economic reform policy known as *Doi Moi* (Renovation) since 1986. With the aim of supporting Vietnam's economic transition and the economic and political shift toward globalisation, the nation has implemented a vast array of educational reforms (Phung, 2018), through national campaigns such as "Education is the national priority" and "Socialisation of education" (Central Executive Committee, 2013, 2019; Prime Minister of Vietnam, 2020). This significant transition in economic, political and educational reform has greatly contributed to the rapidly growing demand for learning English in Vietnam (Bui & Nguyen, 2016).

Since the time of *Doi Moi*, millions of Vietnamese people have studied English for different purposes, such as to look for well-paid jobs or to enhance job-promotion prospects (Le, 2011). In addition, since Vietnam joined the World Trade Organization in 2006, English has become more important to both the Vietnamese government and its people. One of the most recent, and most important, reforms in English-language education policy has been the release and implementation of the National Foreign Language Project, issued with Decision No.1400/QD-TTg (Prime Minister of Vietnam, 2008a) and Decision No.2080/QD-TTg (Prime Minister of Vietnam, 2017). This project has been described as the most notable language reform in Vietnam's history. According to the project, by 2025 most Vietnamese learners and workers are equipped with English-language skills and expected to be able to use a foreign language, especially English, appropriately in their work and daily communication, and to compete confidently in global job markets.

The English language is expected to continue playing a role as the most important foreign language in Vietnam (Nhan, 2017). To satisfy diversified learning needs, different English training programs and modes have been developed in recent years. However, the quality of teaching and learning English in Vietnam is still low, particularly for adult learners, and it has not met the country's socio-economic development strategies (Vu & Burns, 2014; Le, Nguyen, & Burns, 2017). Therefore, English-language education, particularly using a learner-centred approach, should be afforded more attention, and the adoption of English education policies and English education strategies should be extended beyond the traditional formal language-classroom context to cover different areas such as lifelong learning, out-of-class formal and informal learning and technology-moderated modes of education.

Communicative language teaching in Vietnam and its challenges

The communicative language teaching (CLT) approach appeared in English-language teaching in Western contexts in the late 1960s and expanded greatly throughout the 1970s. The aim of CLT is to help learners use the language for real-life communication. According to Richards and Rodgers (2014), CLT helps learners acquire communicative competence via their engagement in meaningful use of language at discourse levels. The use of authentic communication helps enhance learner's ability to communicate and stay engaged with the language-learning process (Sarfraz, Mansoor, & Tariq, 2015); thus, communication, rather than grammar, became the focus of language teaching.

Since Vietnam's "Open Door" policy in 1986, the country has adopted a variety of policies to realise trade and diplomacy directions. The use of the English language has provided opportunities for Vietnam to strengthen relations with other countries, especially once English was recognised as the language of international communication in Vietnam. Hence, the Vietnamese government recently issued policies mandating the study of English for all learners throughout the nation (Bui & Nguyen, 2016). According to these policies, Vietnamese citizens must master English-language skills in order to access a wide range of professions and advanced technologies, and to engage in nation-building and global community integration. In the ensuing decade, English-language curricula have been significantly reformed. In contrast to the 1990s, when the English curricula emphasised grammar and reading skills, since 2006 they have embraced CLT and learner-centred approaches (Bui & Nguyen, 2016). The curriculum covers a wide range of topics from economic reforms and environmental issues to broader socio-cultural and economic matters in order to improve learners' knowledge and capacity.

Although the "Open Door" policy was launched long ago, there remains a strong impetus from the government to improve and assure the quality of English-language education (Canh, 2002; Canh & Ngoc, 2017; Le, 2011). While the shift towards student-centred approaches in English teaching and learning in Vietnam (Tran & Lewis, 2012) and curriculum reform have created favourable conditions for English-language teaching and learning, particularly for those in large

cities (Canh, 2007), the application of CLT in Vietnamese contexts still faces challenges (Canh, 2000; Canh, 2011; Hiep, 2007). Teachers continue to conduct their teaching mostly using teacher-centred approaches, grammar-translation and audio-lingual, direct or reading methods, even though these methods run counter to the current rhetoric of developing skills in communication (Le, 2011). As a result, Vietnamese students' English proficiency is generally evaluated at low levels (Vu & Burns, 2014) amongst ASEAN countries. Also, according to Le (2011), the younger generations' foreign-language competence has not changed as vastly as the rhetoric of policy would suggest.

The application of CLT to improve learners' communicative competence in Vietnam also faces other difficulties. While CLT principles have challenged Vietnamese socio-cultural and traditional educational values (Nhan, 2017), the power distance and the hierarchic relationship between teachers-as-superiors and students-as-inferiors still exists (Nhan & Ho Thi, 2012). Teachers' limited expertise (Canh, 2002) and learners' low levels of motivation, autonomy and competence, as well as the persistence of grammar-based and exam-focused curricula (Nhan, 2017), are further obstacles to the implementation of CLT.

2.1.3. Lifelong learning and its implementation in Vietnam

Lifelong learning and adult education

Education is not just learning in the classroom; but learning everywhere at all times (Hozjan, 2009; Laal, 2011). Lifelong learning (LLL) has long catered to the need of people and society (Govinda, 2017, UNESCO & Institute for Lifelong Learning, 2016). That need is more urgent now than ever (Phung, 2018) because it helps build a stronger nation. As a result, many developed countries are now promoting lifelong learning systems as an essential aspect of national policy to reshape their human resources development strategies and to increase their global competitive advantage (Crick, 2008; Gedvilienė & Bortkevičienė, 2013; Gillies, 2011); Pirriea & Thoutenhoofd, 2013).

Lifelong learning emphasises that all citizens will have opportunities to continuously develop their knowledge and skills (Hung, 2007). It has become a central issue as a consequence of globalization and the adjunct rapid change in social life, workplace, technology and society (James, 2020). There are different understandings about lifelong learning. However, it is commonly thought that lifelong learning relates to learning that continues throughout a person's life (Halász & Michel, 2011; Hozjan, 2009). Lifelong learning helps individuals obtain skills, knowledge and competences through different modes of learning. In general, it can be understood as a method, or a collection of techniques, that organises and delivers learning to meet learners' needs (Govinda, 2017; Laal, 2011)**,** allowing people to learn from early childhood to retirement (World Bank, 2003).

Lifelong learning and adult education facilitate adult learners' engagement in systematic and sustained self-learning activities to gain new knowledge, skills, or values (Merriam & Brockett, 2011). Adult learning can occur in all learning systems, including formal, non-formal and informal learning. Potentially, the term 'adult learning' incorporates any form of learning that adults can engage in or beyond traditional schooling, encompassing literacy to personal fulfillment as a lifelong learner (Govinda, 2017; Osborne & Borkowska, 2017; UNESCO and Institute for Lifelong Learning, 2016). Adult learners have characteristics that differentiate them from traditional university or college learners (Cercone, 2008), who are generally defined as recent secondary-school graduates, financially dependent upon their parents and often studying for their first degree. Merriam and Bierema (2013) note some characteristics that are common to all adult learners; for instance, they have life experience with their prior skills and knowledge in diverse areas and tend to favour practical learning activities. They are intrinsically motivated and can learn better when material is related to their own needs and interests. Adults are autonomous and self-directed; thus, they prefer to work at their own pace (Cercone, 2008).

Lifelong learning and the implementation in Vietnam

Humanity increasingly faces challenges posed by the need for sustainability in nature and technology and resorts to continuous innovation and adaptation (Ilin, 2019; Norton, 2013; Panitsidou, Griva & Chostelidou, 2012). The movement towards lifelong learning emerges from the political, economic and educational recognition that the world and its citizens are in continual flux (Aspin & Chapman, 2000; Field, 2001; Panitsidou, Griva, & Chostelidou, 2012). Lifelong learning is thus an important part of a nation's education system (Halász & Michel, 2011; Hozjan, 2009; Mackiewicz, 2002). However, for many people, learning essentially stops once they leave their universities and vocational schools; Vietnam is not an exception (Phung, 2018; Tien, 2014).

In Vietnam, the idea of lifelong learning was raised shortly after the country won its independence (Pham, 2013). Its importance for the development of individuals, communities and the country as a whole has long been recognised (Hossain, 2016), and it has become a prominent component of Vietnam's efforts to achieve its socio-economic development requirements and a primary tool for promoting a knowledge-based society (Phạm, 2013; Phung, 2018; Tien, 2014). Over the past years, the Government of Vietnam have issued a wide range of initiatives and policy guidelines to confirm the position, role and necessity of education for all people throughout their lives, as part of building a "Learning Society" (Central Executive Committee, 2007, 2019; Prime Minister of Vietnam, 2013, 2020). The lifelong-learning concept was formally mentioned in the Vietnamese Constitution (1992) and in the Education Laws (1998, 2005, 2019). The Vietnamese Constitution (1992) affirmed that learning is the right and duty of every citizen.

In 2005, Vietnam's Prime Minister issued Decision 112/2005/QD-TTg to approve the model of "Building a Learning Society" for the period of 2011-2020. The model has now been extended to 2025 and is oriented to 2030, with clear responsibilities for the ministries and agencies involved.

Similarly, the Prime Minister's Decision No 927/QĐ-TTg, issued on June 22nd, 2010, established a National Steering Committee to implement the model of a learning society (Phạm, 2013).

At present, Vietnam is integrating deeper into the global economy, and this involves an ambitious process of industrialisation, modernisation and the development of a knowledge-based-economy (Educational Media Center, 2020, 2021; Phung, 2018; Vietnam Central Association for Study Promotion, 2021). To respond to this rapid development, it would be necessary for every citizen to engage in LLL to adapt to work and life changes (Halász & Michel, 2011), and to fulfill the national goal of working more effectively (Gedvilienė & Bortkevičienė, 2013). However, like many developing countries in the region and the world, Vietnam is facing many difficulties in the implementation of lifelong learning (Tien, 2014). This is really an issue as Vietnam is facing the challenge of shortage in highly qualified labor and professional skills to meet the demand for human resources for its current integration. One of the biggest limitations of the Vietnamese labour force is weakness in foreign-language skills; specifically and particularly, English.

Although the "Building a Learning Society" project has achieved some satisfactory results, it has also encountered some limitations (Pham, 2013; Prime Minister of Vietnam, 2020; Tien, 2014). First, although a variety of policies and legal regulations related to organising learning have been issued (Central Executive Committee, 2013, 2019; Education Law, 1998, 2005, 2019; Prime Minister of Vietnam, 2008b), the rhetoric of and propaganda about the construction of a learning society has not been given adequate attention and there are not yet effective solutions to ensure the implementation of a learning society (Phung, 2018). Second, Vietnamese society continues to have a narrow conception of learning that places too much importance on learning in schools, regular classes or training courses and fails to encourage other forms and modes of learning (Canh & Ngoc, 2017; Tien, 2014). Because of this norm, there is in fact insufficient support for the nature and meaning of lifelong learning. Third, the facilities and equipment at many continuing education and tertiary institutions are poor, meaning that they cannot meet their communities' diverse learning needs. In the light of the gap between rhetoric and action, many Vietnamese people are unconvinced about the importance of lifelong learning or the benefits of improving their qualifications (Tien, 2014).

The issues of lifelong learning, adult education and the model of a "learning society" have been supported by the Vietnamese government and involved agencies (Pham, 2013; Phung, 2018) and they initially created positive impacts on society (Educational Media Center, 2020, 2021; Tien, 2014). Yet there is limited research in relation to lifelong learning in Vietnam, particularly in the research context of adult foreign language learners. Thus, there is a genuine need for research on these issues.

2.2. Computer-assisted language learning / Technology-enhanced language learning and communicative competence concepts

2.2.1. Computer-assisted language learning / Technology-enhanced language learning

Definitions

Technology-enhanced language learning (TELL) is the use of technology for language-learning purposes (Golshan & Tafazoli, 2014). TELL aims to achieve the goal of modern approaches to language education, including CLT and task-based learning, and helps learners enhance their autonomy and control over their own language-learning process. In this research, I consider TELL a synonym for computer-assisted language learning (CALL) (Golshan & Tafazoli, 2014).

There are many different ways of approaching CALL. Beatty (2010) specifies eight generic CALL applications: word processing, games, literature, corpus linguistics, computer-mediated communication (CMC), WWW resources, and adapting other materials for CALL. The last of these involves, for example, tablets and mobile telephones. While some might be less common, the latter ones are mentioned as more popular activities associated with CALL.

Stages

CALL itself has gone through several stages of development: behaviouristic/structural CALL, communicative CALL and integrative CALL (Warschauer, 2000). The definitions of CALL are various. For Beatty, CALL is "any process in which a learner uses a computer and, as a result, improves his or her language" (Beatty, 2010, p. 7). Although this definition might seem unworkably broad, it still encompasses a wide spectrum of current practices in the teaching and learning of language at the computer. CALL covers a broad range of activities and it has become a part of materials design, technology, and pedagogy.

Stages	**1970s-1980s: Structural CALL**	**1980s-1990s: Communicative CALL**	**21st Century: Integrative CALL**
Technology	Mainframe	PCs	Multimedia and Internet
English-Teaching Paradigm	Grammar-Translation & Audio-Lingual	Communicative Language Teaching	Content-Based, ESP/EAP
View of Language	Structural (a formal structural system)	Cognitive (a mentally constructed system)	Socio-Cognitive (developed in social interaction)

Principal Use of Computers	Drill and Practice	Communicative Exercises	Authentic Discourse
Principal Objective	Accuracy	And Fluency	And Agency

Table 1. The three stages of CALL (Warschauer, 2000)

2.2.2. Communicative competence

Concepts

In the context of second-language acquisition and pedagogy, Canale and Swain (1980) proposed a theoretical framework for communicative competence, defining it as "a synthesis of knowledge of basic grammatical principles, knowledge of how language is used in social settings to perform communicative functions, and knowledge of how utterances and communicative functions can be combined according to the principles of discourse" (p. 20). In their framework, Canale and Swain (1980) and Canale (1983) understood Communicative Competence as an ability to use knowledge and skills needed for communication (Canale & Swain, 1980).

Their concept of "knowledge" refers to the knowledge of an individual about language and other aspects of language use, such as grammatical principles, the use of language in a social context to realise communicative functions, the combination of utterances and communicative functions in respect of discourse principles. The term "skills" in their concept relates to how individuals can use their knowledge in real-life communication and involves making a distinction between a learner's underlying capacity and the performance of that capacity in real-life communication situations (Canale, 1983). While this model lacks complexity (Bagarić & Djigunović, 2007), it is still influential in the field of second- and foreign-language teaching and learning (Leung, 2005).

Models and components of communicative competence concerning L2 acquisition and pedagogy

Theoretical and empirical researchers on communicative competence have based their studies on three models: that of Canale and Swain; that of Bachman and Palmer; and, more currently for Vietnam, that proposed in the Common European Framework of Reference (CEFR) for Languages (Bagarić & Djigunović, 2007; Tuan, 2017).

Canale and Swain (1980s) include four types of competence under the broader concept of communicative competence: grammatical, sociolinguistic, discourse and strategic. Bachman and Palmer divide communicative language ability into two broad areas: language knowledge and strategic competence. The CEFR model includes language competence, sociolinguistic competence, and pragmatic competence as components of communicative competence. However, unlike Canale and Swan, it does not incorporate strategic competence.

Although Canale and Swain's model is simple, it has dominated the fields of second-language acquisition as well as foreign-language teaching and learning (Leung, 2005; Celce-Murcia, 2008), even after the appearance of a much more comprehensive model by Bachman (1990) and Bachman and Palmer (1996) (Bagarić & Djigunović, 2007). The main reason for many researchers continuing to use Canale and Swain's model is probably the ease with which it can be applied (Bagarić & Djigunović, 2007). The theoretical framework presented by Canale and Swain has gained the status of a central doctrine for ELT (Brown, 2000). Canale and Swain's 1980s theoretical model of Communicative Competence is significantly represented in second and foreign language pedagogy (Leung, 2005). The model remains the key resource for most discussions of Communicative Competence and related applications in applied linguistics and language pedagogy itself (Celce-Murcia, 2008).

Canale & Swain's model of Communicative Competence

Figure 1 shows Canale and Swain's model of communicative competence, specifying its four components, which are discussed below.

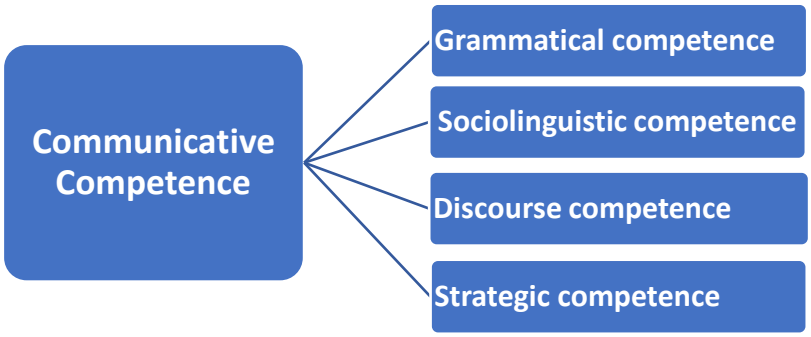

Figure 1. Communicative competence model (Canale & Swain, 1980s)

Grammatical competence (*linguistic competence*) is concerned with mastery of the language code itself. It includes features and rules of the language such as vocabulary, word formation, sentence formation, pronunciation, spelling and linguistic semantics. Grammatical competence focuses directly on the knowledge and skills required to understand and express accurately the literal meaning of utterances.

Sociolinguistic competence addresses the extent to which utterances are produced and understood appropriately in different sociolinguistic contexts, depending on contextual factors such as status of participants, purposes of interaction, and norms or conventions of interaction. It concerns mastery of how language is used in social settings to realise different communicative functions.

Discourse competence concerns mastery of how to combine grammatical forms and meanings to achieve a unified spoken and written text in different genres. It relates to the learner's mastery of understanding and producing different genres of texts (essays, narratives, speeches, presentations, news, etc.) in the modes of listening, speaking, reading and writing. It specifies knowledge of

how utterances and communicative functions can be combined according to the principles of discourse.

Strategic competence concerns mastery of verbal and non-verbal communication strategies that may be called into action to: (1) compensate for breakdowns in communication; and (2) enhance the effectiveness of communication. Examples are the use of reference sources, grammatical and lexical paraphrase and request for repetition, clarification and slower speech.

2.3. Research and innovation on TELL in intersecting contexts

2.3.1. Media literacy and the Internet resources to develop L2 capacity

With the development of new digital technologies and their introduction into language-learning activities, the Internet has increasingly enabled learners to reach beyond the borders of traditional learning settings, affording previously non-existent access to foreign languages and cultural learning. The web allows learners to find authentic language resources, including rich sources of cultural information, and thus expand their knowledge (Hauck & Youngs, 2008; Mateo, 2012). In a project to foster the communicative approach and to encourage self-learning by introducing free ICT materials into an EFL curriculum, Mateo (2012) discussed the outcomes of using BBC Learning English website's content and resources to encourage learners' development of functional communicative competence. The results showed an outstanding improvement in oral comprehension. In addition, the learning experience revealed an improvement in learners' motivation, academic performance, and social and communication skills.

In the same vein as the research facilitating learners' L2 capacity, Kung (2016) examined whether the development of media literacy in an EFL context in Taiwan could effectively promote learners' L2 oral communicative competence. Through a conversation-analytic approach, data were collected through an online networking environment based on news broadcasts. The data were analysed based on the emergent patterns to discover learners' oral communicative competence in their target language. The results demonstrated that, through the practical and genuine linguistic input, the development of media literacy facilitated learners' L2 oral communicative competence. Learners' linguistic and operational competencies as categorised by Canale (1983) as well as Canale and Swain (1980) were also strengthened. The authentic language exposure that accompanied the development of media literacy was also reported to assist learners in developing their L2. Although Vietnam possesses a favourable infrastructure in relation to ICT (MOET, 2007, 2008a, 2008b), research on the development of media literacy, the use of the Internet resources and particularly how media literacy development as well as the use of Internet resources could promote learners' L2 communicative competence is still limited in Vietnamese contexts.

2.3.2. Mobile devices to support language learning

Mobile devices provide learners with many advantages as learning tools, which include the learning of different language knowledge and skills. They allow learners to access to an unlimited amount of information and resources.

Mobile phones continue to gain popularity among learners (Stockwell, 2010), and this technology can be used to facilitate L2 learning in a wide range of contexts (Motallebzadeh & Ganjali, 2011; Muhammad Aslam, 2013). Gheytasi, Azizifara, and Gowhary (2015) conducted a study and found that the students who received the instructions via mobile phones scored much higher reading comprehension results than the other group learning using a conventional approach. Similarly, Kim (2014) researched on the use of mobile device outside classroom and indicated that students in the control group significantly outperformed the other group who did not use this method in reading comprehension. To compare the effects of using SMS and dictionaries for vocabulary learning, Alemi and Lari (2012) found that SMS is more effective and more welcomed by the participants.

Using mobile devices as a social tool aids authentic, personalised and relevant communication anywhere, anytime and for anyone with the appropriate technology and pedagogy to support it (Cui & Bull, 2005; Sad, 2008). However, mobile language learning also has some limitations. Stockwell (2007b) investigated the use of a prototype mobile-based intelligent vocabulary tutor system by learners in an advanced EFL class at a university in Japan. The results suggested that the learners tended to achieve better scores when using a computer. Also, an unexpected outcome of the study was the low usage of the mobile platform compared with the computer. The main obstacles were the small screen size and the cost of the devices.

2.3.3. Web 2.0 technology as a potential tool for language learning

Web 2.0 allows users to interact and collaborate with others via a social-media-based dialogue. During the implementation of the English course units at a Polytechnic Institute in Portugal, Martins (2015) conducted an action research project over two semesters to investigate the potential of Web 2.0 tools in the development of communicative competence in English amongst undergraduate tourism students. The data analysis indicated a markedly positive impact of Web 2.0 tools on learners' interactional tasks in English language learning. Social networks, wikis and podcasts proved to be important in learners' ability to solve authentic tasks and their improvement in cultural awareness and language competencies.

The study contributed to the implementation of the Bologna Process, which defends the role of higher education in the formation of autonomous, reflective and critical citizens. The findings also claimed Web 2.0 applications as an exceptional strategy to meet the goals of learning set by the European Higher Education Area. It positively contributes to building a knowledge society,

enabling them to continue the journey of lifelong learning. The students were highly motivated and showed extremely positive attitudes to the use of authentic materials as well as the rich-input interactions in English. These factors stimulated their learning. The learners recognised Web 2.0 potential on the development of their reading and writing skills, emphasizing the chance to learn new vocabulary through their autonomous exploration of these resources due to the increased opportunities to communicate in English outside the physical walls of the classroom.

2.3.4. Tutorial CALL and Social CALL activities

CALL activities not only include what students engage with L2 by responding to the prompts provided by the computer, but also entail what students involve in conversations with others through the use of the computer. The former is called tutorial CALL and the latter, social CALL (Guillén, 2014), or computer-mediated communication (CMC) (Blake, 2017).

Tutorial CALL often relates to programs that substitute for the teacher in delivering language lessons, practice and evaluation (Otto, 2017). In tutorial CALL activities, the computer takes on the role of a tutor by evaluating the learners' responses and presenting new materials to the learners (Levy, 1997). In early tutorial CALL, learners were provided with mechanical practice of selected and graded learning tasks. Its focus was on repetition and immediate feedback. Later the applications placed an increased emphasis on the individualization of the learning experience (Heift & Vyatkina, 2017). Tutorial CALL presents explicit explanations and focuses on discrete language points, for instance, short sentence-based practice or isolated language items, by following a deductive teaching approach (Schulze & Heift, 2013).

The origin of CALL can be traced back to the 1960s when the CALL applications were commonly referred to as tutorial CALL that focused exclusively on explicit methods of teaching. However, due to the technological advances and influence from interactionists, sociocultural and Second Language Acquisition (SLA) researchers, the teaching and learning using technology shifted its focus to the ways in which learners can interact with technology and with their peers and others (Lantolf & Thorne, 2006; Thorne, 2003). Such technology is called social CALL as mentioned or CMC (Blake, 2017) which can be further divided into asynchronous (ACMC) and synchronous (SCMC) communication. While tutorial CALL and ACMC tend to allow learners more processing time, which could enhance their language accuracy and complexity and reduce stress for learners, SCMC often stimulates learners to produce more utterances so help them gain fluency in their language (Abrams, 2003).

2.3.5. Computer-mediated communication as potential tool for L2 learning

New technology facilitates telecollaborative exchanges and collaborative computer-mediated communication (CMC). The first attempts to use CMC technologies were made in 1990s. These

were primarily in the forms of the asynchronous (ACMC) emails and the synchronous (SCMC) chat. Such pedagogical approaches are grounded in theories, such as the interactionist theory (Chapelle, 1998) and the sociocultural theory (Thorne, 2003) that consider the interpersonal communication a crucial factor in L2 acquisition.

Research in CMC has shown great potential for its use in the foreign- or second-language classroom (Lan, 2019; Razagifard, 2013). Although Hauck and Youngs (2008) stated that CMC tools enabled learners to establish contact with target language learners and native speakers by engaging them in telecollaborative exchanges, Zeng and Takatsuka (2009) questioned whether engaging in collaborative CMC could lead to linguistic improvement. To elicit students' perspectives on online collaboration, they used a mixed-methods study within a socio-cultural framework. The data consisted of students' chat logs, immediate and delayed post-tests and a questionnaire. The main findings showed a positive impact on language learning and mutual engagement in the form of a text-based CMC in gaining language forms.

Researchers have also suggested that text-based CMC in a second language can indirectly improve students' oral proficiency by developing the same cognitive mechanisms that underlie face-to-face speech (Payne & Whitney, 2002). To investigate the potential effect of synchronous and asynchronous text-based CMC on oral fluency development of L2 learners, Razagifard (2013) conducted a study with 63 intermediate learners of English at a university in Iran as participants. The results indicated that both synchronous and asynchronous text-based CMC helped learners improve their L2 oral fluency significantly compared with their peers in the control group. The study also indicated that synchronous CMC was more effective than asynchronous CMC in improving students' oral fluency. These findings provided evidence that a direct transfer of skills from writing to speaking did occur when language learners were given the opportunity to use language through synchronous and asynchronous CMC. The findings were reported to be in line with the Model of Speech Production by Levelt (1989, cited in Shattuck-Hufnagel, 2019), which suggested that the same cognitive-processing mechanism used for oral production was very likely also used for written production.

CMC has many features that are similar to those of face-to-face interactions (Ziegler, 2013). These benefits include feedback, negotiation of meaning and form, and request for clarification. It promotes participation and increase learners' attitudes (Chun, 1994; Kern, 1995). Due to the text-based nature of ACMC, it provides learners more planning time and revision opportunities as compared to them in face-to-face communication (Heift & Vyatkina, 2017).

2.3.6. Technology for teaching and learning L2 knowledge and skills

Technology and L2 pronunciation

Pronunciation is part of learning to speak well an L2. Researchers have argued that learning pronunciation well is difficult and even impossible for L2 learners, particularly adults (Bley-Vroman, 2009; Hulstijn, 2011). However, O'Brien (2006) supposed that, without comprehensible pronunciation, people could not achieve effective communication, therefore, it should receive serious attention.

Through its affordances, technology allows students to engage in a wide range of self-directed speech practice activities, particularly when learners do not have conversational partners or classroom instruction. While classroom learning clearly provides opportunities for learners to notice deficiencies in their L2 knowledge, this kind of individual practice is considered a good fit for speak-aloud individual practice activities. It facilitates the learners in memory storage as well as the retrieval of vocabulary, collocation, and other language items (Loucky, 2006; Teixeira, 2015).

In the past, many tutorial CALL programs have been criticized and tagged with unfavourable names. However, it has recently been shown to have a well-justified place in L2 teaching and learning (Hubbard & Siskin, 2004). During speaking tasks in tutorial CALL programs, learners can compare their own voice with that of native speakers with diverse accents. Through the automatic speech recognition (ASR), technology best facilitates learners in linguistic sub-domains such as words or phrases. This normally allows learners to practise with individual sound, recognition of word, or repetition of short sentence.

Because people do not always have classroom instruction as mentioned or their class time is limited, this tutorial CALL context becomes particularly useful for pronunciation training through the computer-assisted programs. In other words, the computer- assisted pronunciation training programs are designed to allow learners to regulate their learning through the practice of pronunciation in the risk-free learning environments.

Technology and L2 grammar

Historically, there are two main approaches to grammar teaching: explicit and implicit. Explicit grammar teaching focuses on rules and often employs deductive teaching methods to explain discrete points of grammar or isolated linguistic items by following a structural syllabus. In contrast, implicit grammar teaching bases on the assumptions that second language can be acquired through natural interactions and that the processes of L2 learning and L1 acquisition have many similarities (Krashen, 1988). Unlike deductive teaching methods, the inductive teaching approach focuses on meaning and communication rather than linguistic forms.

While technology plays a controversial role in teaching and learning of grammar (Heift & Vyatkina, 2017), it is proven that these two approaches to grammar teaching and learning have been well supported by technology. Technology has strongly facilitated learners in their learning. Further, newer technologies not only include the traditional dichotomy of implicit and explicit

grammar teaching, but they emphasise both learner-learner and learner-computer interactions by allowing self-discovery and independent learning through the exploration of authentic materials (Heift & Vyatkina, 2017).

Technology and L2 vocabulary

The advances of new technology have brought considerable opportunities for L2 vocabulary teaching and learning. They provide inexhaustible resources and software/applications for vocabulary learning (Ma, 2017) and facilitate learners' informal learning outside their classrooms. According to Chapelle (2007), these are opportunities, but these affordances have also posed big challenges to teachers and learners, particularly in choosing suitable learning resources and technologies as well as turning them into useful vocabulary learning tasks. The raising of awareness and level of self-regulated learning is also a concern that needs more attention on the part of educators, teachers, and learners. For Ma (2017), these environments are rich in resources, so it is particularly important for language teachers and learners know what is involved in the learning of L2 vocabulary. This would facilitate learners in selecting relevant online learning resources and make sustained efforts for their learning.

Learning new vocabulary requires mental processing like any other types of cognitive activities (Ma, 2017). The new information needs to be first perceived by the visual store. It then goes through the temporary working memory, then lodging in the long-term memory (Baddeley, Eysenck & Anderson, 2009). Based on this theoretical perspective, Ma (2014) proposed a memory-based strategic vocabulary learning model with four stages of vocabulary learning (discovering the new word, obtaining the word meaning, mapping the word meaning with form, and consolidating the word). The model was tested using data collected from a study with very large-scale questionnaire involving more than 300 participants. For Ma (2017), the framework has two implications for technology-mediated L2 vocabulary learning. First, learners should not only be provided with new words, but also be given the opportunities for subsequent encounters so that these vocabulary items can be consolidated and processed at a deeper level. Second, learners should be made explicit with the strategies to cope with learning in TELL environments.

To understand the mediation role of technologies on vocabulary learning, Ma (2017) proposed a framework which covered two types of vocabulary learning technologies (lexical tools and lexical applications). Lexical tools comprised e-dictionaries, dictionary apps, or lexical concordancers, which could be used on their own or be combined to support the use of lexical applications (learners use e-dictionaries/apps to facilitate their online reading or finding answers for vocabulary exercises).

Technology and L2 listening

Listening activities and tasks are incorporated in many language educational programs for students to process aural language and improve comprehension. They also support learners in the

acquisition of language forms and help them develop the sociocultural and pragmatic understanding of how the language forms are used. It is fortunate that technology can play an important role to help students achieve these purposes (Hubbard, 2017). With technological advancements, the human voice now can be captured and replayed. With the availability of devices and networks, listening materials have been placed within the reach of language learners.

Technology can help L2 learners improve the listening experience via a number of ways. Cardenas-Claros and Gruba (2013) have captured the affordances of technology in a relatively comprehensive framework of help options to support L2 listening. Based on the work of Chapelle (2003), Cardenas-Claros and Gruba (2013) divided help options into four categories: operational, regulatory, compensatory, and explanatory. These categories included but not limited to giving students the technical support and training (Romeo & Hubbard, 2010), listening tips and guidance (Vandergrift & Goh, 2012). Compensatory help helps L2 learners modify the input. Together with explanatory help, they make the input more salient for comprehension and later acquisition of language knowledge (Chapelle, 2003). Explanatory help includes explanatory hints, definitions, glosses, captions and transcripts (De Ridder, 2002; Cardenas-Claros & Gruba, 2009; Pérez, Peters, & Desmet, 2014; Winke, Gass, & Sydorenko, 2010; Yang, 2014).

One of the compelling affordances of digital technology as compensatory help is its potential to speed up or slow down the speech rate. In this way, learners could slow the speech rate down. This means they would have more time for language processing; thus, would have more salient listening materials. While results from early research on the slowed speech were mixed, Zhao (1997) found significant advantages for students to control the speed rate themselves. To particularly look at the benefits of speech rate adjustments on accented speech, Matsuura, Chiba, Mahoney, and Rilling (2014) found that, Japanese students did not find slower speech rate helpful when they listened to moderate accents, but they acknowledged that slower speech rate more comprehensible when they dealt with heavy accents. Although much more research is needed, a positive claim can be made on the speech rate adjustments for the L2 language listening (Hubbard, 2017). The control of speech rate can potentially make other elements of connected speech, for example, linking and reduced forms, more salient. This can strongly facilitate learners to identify familiar words, phrases, and grammatical markers when they face unfamiliar accents.

The research on the use of captions as explanatory help to enhance listening comprehension has been well published (Danan, 2004). Although the results of the early research in this area were limited, more recent results have shown that captions are a valuable tool for comprehension, and for listening-based vocabulary development. According to Winke, Gass, and Sydorenko (2010), the use of captions is influenced by many factors. While Winke, Gass, and Sydorenko (2010) found no significant difference in terms of benefits in students in different year levels, other researchers suggested that the use of captions can be strongly affected by learners' language level.

For instance, Leveridge and Yang (2013) found considerable differences between individuals and showed that higher level learners were less reliant on captions than their lower-level counterparts.

While many studies researched on target language captions, some researchers focused on the differential effects of the captions in L1 and L2. For example, Guichon and McLornan (2008) found that L1 captions provided students with more lexical interference. Whereas, Markham and Peter (2003) showed that listening with L1 captions first can better facilitate learners in subsequent listening with L2 captions or no captions of challenging materials.

The studies on full captions and keyword captions have also been researched. Pérez, Peters, and Desmet (2014) found that students in full caption group outperformed the ones provided with keyword captions in terms of listening comprehension. The study showed that students preferred full captions for their studies. It is similar to Danan (2004), who emphasised the positive affordances of captions, Vandergrift and Goh (2012) acknowledged the value of captions on the improvement of vocabulary and overall comprehension, but they caution that the enhanced comprehension would simply be due to their reading of captions, not by listening.

The use of transcripts as text support has been less studied. While transcripts were proven to aid students to identify the word boundaries and new vocabulary (Hubbard, 2017), some studies showed a mix result of advantages, disadvantages, or no effects (Grgurović & Hegelheimer, 2007). The research on multimedia materials has been implemented as well. They were shown to provide a richer and deeper processing of the listening material (Jones & Plass, 2002). However, most of the studies were on vocabulary acquisition (Jones & Plass, 2002), captioned video (Leveridge & Yang, 2013; Li, 2014) or just video as opposed to audio (Yang, 2014). Although most of the studies showed positive view for multimedia use as an aid to listening activities, the research on this field was still limited.

Technology and L2 speaking

According to Housen and Kuiken (2009), speaking proficiency consists of three separated but interrelated constructs: accuracy, complexity, and fluency. Accuracy is considered a part of what is called the basic linguistic proficiency, but complexity and fluency belong to extended linguistic proficiency that can only be attained by advanced study of that language (Hulstijn, 2011).

The use of technology to promote L2 speaking is framed by sociocultural theory (Lantolf & Thorne, 2007). The fundamental idea from the theory is that two or more people working collaboratively will produce more language and more accurate L2 utterances. This pedagogy is also supported by the interactional hypothesis perspective in which researchers showed that individual learners interacting with native speakers or with other learners tend to engage more in the negotiation of meaning process (Long & Robinson, 1998) that plays an important role in L2 acquisition (Gass, 1997). From the interactional hypothesis perspective, researchers centred their research around the feedback (linguistic recasts or reformulations) L2 students received when

more proficient learners provided them. This process of trying something out in response to the ongoing conversational exchanges was shown to be a point of learning, especially when the students noticed their own deficiencies or gaps in L2 knowledge and then tried to modify and improve their original utterance (Ellis & Sheen, 2006; Swain, 2000).

As mentioned, CALL can deal with activities that allow people to engage in conversation with others. This is often referred to as social CALL activities or CMC communication. Early CMC started with asynchronous textual exchanges and was shown to provide opportunities for students to negotiate meaning and give a kind of feedback similar to it in face-to-face encounters (Blake, 2000; Loewen & Erlam, 2006; Meskill, 2005; Peterson, 2009). There is often some degree of sub-vocalization when people use computer keyboard and there are many linguistic similarities between L2 spoken patterns and asynchronous computer writing exchanges (Kern, 1995). Through the use of a writing software to exchange text messages, the experimental group was shown to create more utterances and to gain more language complexity than their counterpart group in face-to-face communication (Kern, 1995). Further studies also suggested students significantly improved L2 speaking proficiency through keyboarding (Lomicka & Lord 2011; Payne & Whitney, 2002).

CMC later included the exchanges of voice-over IP sound and it provided two channels for learners to communicate (Blake, 2005). The voice-over IP then soon gave way to synchronous audio and now synchronous video. CMC tools today combine sound and video channels (Guillén & Blake, 2017) and the full combination of synchronous audio and video has brought opportunities to learners to practise speaking through a wide range of SCMC activities. Through their involvement in SCMC activities, learners today can participate in different telecollaborative learning programs (O'Dowd, 2007), tandem learning exchanges (Guillén, 2014), and social media sessions and collaboration (Lin, Warschauer, & Blake, 2017). This kind of videoconferencing provides learners alternative opportunities as those in their traditional classrooms. During their time at videoconferences, learners can actively experience and constantly take turn to practise speaking English (Blake, 2015). In this way, learners can gain greater speaking fluency and gradually improve their speaking performance.

Technology and L2 reading

The concepts of reading are now changing in nature since the widespread access to different forms of reading and reading resources. Although online reading allows learners to experience their reading with text and with other people in compelling ways, the readers, at the same time, are facing a lot of distractions and being overloaded with the volume of reading materials (Godwin-Jones, 2010). This is particularly right for L2 learners to read in a language that they are not proficient (Cobb, 2017; Grace, 2014).

Researchers have attempted to explain reading processes using reading theories from structural, cognitive, and metacognitive perspectives. While structural readers are viewed as passive recipients of information (Chun & Plass, 1997), they have also been criticized as overemphasizing the formal features of language. It is seen as being inadequate, and it downplays the significance of contextual comprehension factors (Liaw & English, 2017). Cognitive readers bring their background knowledge into their reading and emphasise the nature of reading and comprehension. The background knowledge is seen as crucial factor for hypothesis testing (Smith, 2004). In metacognitive reading, the readers were proposed to combine the roles of structural and cognitive language processing for their reading activities (Askildson, 2011). This perspective assumes that reading can be achieved better results due to their making use of both linguistic information and their own internal background knowledge (Brantmeier, 2003). By using metacognitive reading strategies, readers can activate their background knowledge, better monitoring their own reading by finding ways and planning their reading tasks (Boulware-Gooden et al., 2007).

The focus of cognitive theory on noticing has provided theoretical bases for studies investigating how online and multimedia reading (dictionaries, glosses, and annotation) influence vocabulary learning of computerized text and reading comprehension (Hegelheimer & Chapelle, 2000). Under the perspective from the noticing hypothesis, researchers have made efforts to investigate the ways readers perform in their traditional paper-pencil and computerized glosses regarding the development of vocabulary, linguistic features, and reading comprehension (Bowles, 2004).

One of the foundations for L2 reading research is Mayer's (2005) cognitive theory of multimedia learning (CTML). CTML suggests that meaningful learning occurs when learners learn using their prior knowledge and combine words and pictures, organising them into coherent verbal and pictorial modes. Alkhasawneh et al.'s (2012) study was an example of using the principles of the theory. The authors applied CTML to design multimedia materials for the students' L2 reading comprehension. Another study was by Garrett-Rucks, Howles, and Lake (2015) who examined how audiovisual features of L2 hypermedia text influenced on reading comprehension. The study was conducted with 70 French language learners.

To investigate how new technologies affect L2 reading behaviors, researchers also use metacognitive approaches as a theoretical framework to explain the procedure. From this perspective, researchers have compared the reading strategies used in online versus text-based environments (Genc, 2011). They explored the reading strategies used by EFL learners (Omar, 2014), and by L1 and L2 learners during their online reading activities (Taki, 2015). Studies also explored the strategies and decision-making processes used by L2 learners when they engaged in online reading activities (Park, Yang, & Hsieh, 2014). The strategies used for reading comprehension in mobile learning contexts were also investigated. For example, Auer (2015) explored how readers used the functions afforded by tablets for their reading. Similarly, Fu et al.

(2014) focused to explore the effects of reading strategies on their comprehension via e-book reading.

From the sociocultural point of view, the sociocultural researchers look at the active participation and interaction of learners involved in their reading (Lantolf, 2010). Researchers also investigated how learners' sociocultural backgrounds affected their L2 reading process including the use of web-based tools, collaborative learning and reading comprehension (Gao, 2013; Juffs & Friedline, 2014).

Technology and L2 writing

New technologies are changing the ways learners practise writing (Relles & Tierney, 2013). Web 2.0 tools, which include a variety of social media sites (Facebook, Twitter, or blogs), provide learners with unprecedented opportunities that allow them to experiment their learning of writing with real audiences. The learning now is not confined to the practice of communication within the language classroom (Li, Dursun, & Hegelheimer, 2017).

Empirical studies on how writing technologies support L2 writing have been undertaken using a wide range of methodologies. These studies aimed to address questions about learners' learning strategies, the use of language, the practice of writing, the attitudes, and the outcomes of writing.

Social networking sites and wiki-type tools have been used for the investigation of how L2 learners engage in meaning interaction and collaborative writing (Lee, 2010). Recent studies have showed that collaborative writing on Google Docs helps L2 learners focus more on meaning than form (Kessler, Bikowski, & Boggs, 2012). The studies showed that learners gained more in accuracy in grammar when they wrote collaboratively, and overall, it positively improved the learners' writing quality. In studies by Storch (2011, 2012) and Wigglesworth and Storch (2012), students who used wiki-based collaborative writing were proven to yield with higher accuracy in their pieces of writing.

The success of writing was shown to depend on many factors. Aydin and Yildiz (2014) looked at the writing topics of 34 Turkish learners of English and found that there were more peer corrections within the argumentative topics and that the informative topic triggered more self-correction in the part of learners. In terms of language proficiency level, Strobl (2014) found that there were more appropriate content selection and text organization in Google Docs-based synthesis tasks. However, in terms of accuracy, complexity, and fluency in writing, Strobl did not find significant differences in collaborative versus individual texts in these advanced learners.

The advantages of Web 2.0 applications for collaborative writing have been concluded by researchers, for instance, Chen (2014) reviewed 20 empirical studies on technology-enhanced collaborative writing and peer feedback, published from 1990 to 2010. The synchronous and asynchronous tools included email, Microsoft word, blog websites, online forums,

communication software and course management systems. The technology-supported peer feedback was shown to motivate interaction, language usages, and strengthen the learners' roles during their feedback activities.

The use of social media networks for education purposes, for instance Facebook and Twitter, has started to be researched (Manca & Ranieri, 2013). Through the implementation of a Facebook-integrated blended learning model in a writing course for first year English-major students in Taiwan, Shih (2010) found a significant improvement in students' English writing. The students were shown to improve their genre awareness and master the content and organization with better structure and more accurate vocabulary and spelling. Educational value of these social media websites, however, has not been fully investigated (Manca & Ranieri, 2013). Manca and Ranieri (2013) carried out an interpretive synthesis of 23 research articles and noted that the assumption that using Facebook could meet expectations of millennial learners was not well supported by these studies. The digital natives in these studies were shown not to necessarily have enthusiasm for the technology. Some of the learners were even not willing to use Facebook for learning, since they saw the conflict aims in the formal learning and in the learning using Facebook.

2.3.7. Opportunities and challenges of TELL implementation for language learning

TELL brings many benefits to education in general (Peeraer & Van Petegem, 2012; Pokrivcakova, 2019). In addition to the benefits mentioned above, other studies on learners' experiences in TELL environments showed learners' positive attitudes, particularly when the activities were based on the CLT approach (Miyazoe & Anderson, 2010; Sarfraz, Mansoor, & Tariq, 2015; Sokolova, Golovacheva, & Chernaya, 2015; Jung 2005). In these environments, adults can take advantage of the learning environments due to their busy schedules. The learning format is convenient, and it enables them to learn not only during in-class time, but also anywhere and at any time (Huffaker & Calvert, 2003; Dooly, 2017; Kukulska-Hulme, Lee, & Norris, 2017; White, 2017). This facilitates the self-learning process as well (Hafner & Miller, 2011; Lin, 2010).

TELL brings language acquisition to a great potential that foster students' communicative competence through communicative activities (Shih & Yang, 2008). However, as Beatty (2010, p. 159) states, "computers, software and WWW-based services are not seen solely as positive agents of change in the classroom; they also face criticism". They are time-consuming; they are onerous for language teachers; they are expensive and require frequent updates as well as a great deal of training to use; they can potentially offer learners less control over the learning process; and finally, in cases where classes and activities are too open and unstructured (for example, web quests and team tasks), they lack a clear scope and sequence for learners (Long, 2011a, 2011b; Dang, Nicholas, & Lewis, 2013). Also, while Jung (2005) emphasized the positive influence of CALL on language learners, he also indicated a number of disadvantages when learners

experience in this environment. He added that students seemed to be addicted to technology features and CALL activities. The cost of technology and lack of expertise can also be barriers both to getting involved in CALL and maintaining the latest applications.

2.3.8. Research on TELL and communicative competence in Vietnam

In line with the world trend of investigating language learners' experiences with advanced technology, Tan and Robertson (2010) looked at how Vietnamese EFL undergraduate learners responded to an online learning space from a Web 2.0 environment. The study particularly looked at learners' attitudes towards the learning management system (LMS), as well as their participation pattern in this virtual interactive space. Two hundred and forty-seven Vietnamese undergraduate students majoring in English from a public university in Vietnam were chosen as participants for the study. Besides the overall outcome of the study, which has provided useful insights into EFL learners' learning experience in Vietnam, the study showed that the learners' interactions varied in this new context. The results from semi-structured interviews and virtual observation indicated learners' mixed attitudes towards the LMS, ranging from neutral to positive and very positive. Learners' attitudes towards that learning environment were then reported to become more positive. However, the students tended not to use the synchronous chat room in the public section. Further investigations showed that the learners chatted mostly through other channels such as Facebook or instant messaging.

There are a number of similarities between the research aims and context of Tan and Robertson (2010) and Pham, Thalathoti and Dakich (2014). Pham et al. (2014) examined the frequency and pattern of learner interaction in an online English-language learning environment for undergraduate students majoring in English at a university in Vietnam. The results from asynchronous CMC forums revealed a drop in the learners' interaction in the communication forums after a high level of engagement at the beginning. However, the learners acknowledged the online forums as a useful platform to enhance their English communication skills with peers and instructors. The online environment also gave the learners, particularly the shy ones, a chance to express their thoughts and opinions in English.

Also focusing on pre-service English language teachers, Long (2011) examined learners' reflections on the application of synchronous and asynchronous CMC to EFL learners' collaborative learning. This classroom-based research was conducted in a university in central Vietnam. The participants included an intact class of 30 students who were enrolled in a four-year program to become teachers of English. The majority reported enjoying the technology-enhanced environment, saying that the course helped them improve their computer and collaboration skills. However, the learners remained skeptical about improvements in their English-language skills, despite acknowledging their enhanced confidence during the course. More learner involvement

was observed during and after the course, and the learners expressed their willingness to recommend this technology-embedded course to the next generations of students.

Other studies in Vietnamese contexts include Phuong (2016), who explored EFL learners' attitudes towards “quizlet” vocabulary activities on their mobile phones outside of class time with Facebook, and Long (2011), who attempted to investigate the possibilities and opportunities provided by the Internet, focusing on the World Wide Web as a credible way to access up-to-date and authentic language resources and materials for language teachers and learners of a foreign language. Phuong’s (2016) results showed that, although the ways learners used Facebook did differ from expectations at the outset, the questionnaires and a focus-group discussion indicated the learners' positive view towards mobile learning and using social networking to support their learning. In his research, Long (2008) addressed some challenges caused by the application of the new technology to language education for particular Vietnamese learners.

In the context of Vietnamese university students studying EFL, Tuan (2017) conducted a study using a communicative-competence test to determine the learners' ability to communicate in English covering linguistic/grammatical and discourse aspects. The participants comprised over 200 students chosen randomly from five universities. The learners' grammatical and discourse competence was found to be helped by their opportunities for formal and intensive learning, including conversing with native English speakers or rich exposure to social-media networks. The findings also showed that while the learners' grammar competence, not unexpectedly given the grammar-based teaching methods in Vietnam, was "competent to high”, their discourse competence was “fair to low”. The learners' low discourse competence was reflected by their low English-language exposure and a lack of focus on discourse in the teaching. The study suggested ways to enhance learners’ discourse competence and recommended that students should be given a wide range of opportunities to develop their communicative competence. In addition, the study recommended that universities consider the use of computer-aided and animated audio and visual presentations to enhance both linguistic and discourse competence for their learners. In other studies investigating the development of L2 pragmatic competence with pre-service EFL teachers in Vietnam, Minh, Pham and Pham (2012, 2017) adopted quasi-experimental research and found that both explicit and implicit form-focused instruction had positive effects. However, the explicit group performed significantly better than the implicit group on all measures. The findings also indicated a potential for teaching different aspects of L2 pragmatics through input enhancement and recast.

2.3.9. Gaps in the research in the context of Vietnam

The use of TELL in language education is being increasingly expanded. In recent years and particularly in the wake of the pandemic, the incidence of computer use, the massive development of the Internet and associated technologically advances, and particularly, the development and

application of Web 2.0 technologies, have contributed to this increase (Lan, 2019). The widespread and increasing use of TELL in various teaching and learning contexts has resulted in a considerable number of research studies investigating different aspects of TELL from different perspectives. Those studies have focused on the effectiveness of TELL learning environments, the satisfaction of both learners and teachers and the possibilities for access and flexibility in the uses of TELL. In many Asian countries, such as China, Japan, Taiwan and Singapore, the application of TELL in teaching and learning is gaining in popularity (Thu, 2013). However, while TELL research is well-applied and developed in western societies, the level of success varies in Asian nations because of different cultural backgrounds and specific challenges and policy environments.

In Vietnam, the application of TELL in educational institutions is well supported by the government and the MOET. The Vietnamese government has issued a favourable framework and related policies that support the use of ICT in education and in language teaching and learning (MOET, 2007, 2008a, 2008b, 2008c), which has helped expand the use of ICT in education in general and in language teaching and learning in particular.

As mentioned, along with some limitations, researchers worldwide have revealed that TELL environments bring a wide range of benefits to language learning in terms of learners' capacity to communicate. Empirical studies on TELL environments in Vietnam (Long, 2011b; Pham et al., 2014; Phuong, 2016; Tan & Robertson, 2010) have also shown that learners have positive attitudes to and varied patterns of participation in these learning environments. However, most of these studies have involved university students and pre-service English language teachers. Thus, there is a clear need for studies, such as the current thesis, that examine adult learners' EFL learning experiences in these environments, specifically in the context of lifelong learning, to enhance their capacity to communicate in English, the central research space occupied by this study.

Although there are difficulties in implementing language learning using technology, TELL environments are being increasingly used, particularly by adults (Cercone, 2008; Khadimally, 2019). They are using technology with various expectations that relates to their work and personal lives. Therefore, in Vietnamese contexts, teachers and educators also need to know what adult learners need as well as understand how the adult learners really learn and how they are experiencing in these TELL-based new learning environments. Teachers and educators will need to learn how to provide a positive "social" environment using this electronic medium. Instructors will also need to continue to learn about how this "electronic" environment can be used to best foster their adult learners (Cercone, 2008).

2.3.10. Research on online language teaching and learning in the time of the Covid-19 pandemic

In the world

The Covid 19 pandemic has created significant changes in our lives and society. It has had significant influences on education with an emergent trend of online teaching and learning to adapt to the lockdowns in many regions (Mardiah, 2020). This trend of e-learning has been applied as the most significant learning paradigm. It has changed the teaching practice and experience and required teachers to be more creative and collaborative in their work (Tod, 2020; Yi & Jang, 2020). Findings from various studies showed that teachers were found to be positive towards this online teaching and learning mode (Basilaia & Kvavadze, 2020). They were shown to realise the importance of online teaching and learning (Rahayu & Wirza, 2020) and express their intention to use ICT in their teaching in the future (Irene van der, Omid, Ellen, & Stan van, 2020). For learners, although there were some issues regarding the nature of learning apps, network connection, and infrastructure, they acknowledged to get benefits for learning. For instance, in a study by Al-Shamsi, Al-Mekhlafi, Al Busaidi, & Hilal (2020), the majority of learners were shown to be interested in using e-learning to support their learning and thus to have chance to improve their language including comprehension skills. This learning approach also helped learners to apply self-study skills for their learning during lockdowns (Yang, 2020).

This sudden switching as an emergency temporary shift to online teaching and learning (Hodges, Moore, Lockee, Trust, & Bond, 2020) has placed a lot of difficulties for teachers and learners (Cardullo, Wang, Burton, & Dong, 2021; Mardiah, 2020; Rahayu & Wirza, 2020; Yang, 2020). In responding to the Covid-19 pandemic, the education sector has witnessed the frustrations caused by the lack of knowledge about what and how to do to deal with the situations that educators had never encountered before (Efriana, 2021; Kim, 2020). The findings from various studies during these crisis circumstances revealed that many teachers lack online teaching skills and experience (Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto, & Tambunan, 2020); thus, they simply used what they had been scheduled for a conventional face-to-face class for their online teaching format (Tod, 2020).

Studies also showed that, during this transition to online teaching and learning, students have faced different obstacles including logistic challenges (Efriana, 2021; Wahab & Iskandar, 2020). For example, Fishbane and Tomer (2020) showed that students in low socio-economic backgrounds were falling behind their counterparts with better learning and living conditions. Also, students' poor learning attitudes have been found (Rojabi, 2020). For instance, in a study by Serhan (2020), students were shown to have negative attitudes toward their learning using Zoom. The lack of positive learning attitudes and motivation were also revealed in a study by Skulmowski and Rey (2020).

In Vietnam

In the context of school closures due to the Covid-19 pandemic, the Vietnamese ministry of education and training (MOET) stated that "suspend school, but not stop learning" (MOET, 2020d). This statement directed that online learning must be adopted as the only solution as the consequence of the pandemic lockdowns (Nguyen, 2021). As a result, the changes and determinations in the education system pushed schools and tertiary institutions to switch from their traditional face-to-face teaching mode to online education with flexible learning programs and basic courses (Hoang & Le, 2021). Throughout various studies, researchers have found that teachers expressed their positive attitudes to their switching to the online teaching paradigm (Dau, 2021; Ly, Nguyen, & Nguyen, 2021). They ensured that this is a good way for students to access to an abundant learning resource and thus they can make progress (Dau, 2021). Further, since e-learning environments are non-prejudiced, they were shown to provide fair access to knowledge for learners (Ha & Ngo, 2021). They are suitable for learners regardless of genders, languages, regions or racial backgrounds (Nguyen & Ngo, 2021).

On the other hand, the pandemic closure of schools confronted educators and other stakeholders with a totally new situation (Huber & Helm, 2020). According to Hoang and Le (2021), this crisis forced the educational institutions to accept the introduction and implementation of modern innovation and online learning, which they had ever been reluctant to apply. This transition to the online teaching delivery required teachers to implement their teaching through a totally new means of instruction and thus there were various requirements for their teaching and adaptation to persist learning for students.

The findings from studies showed that online teaching and learning have created heavy workload for teachers and these compulsory tasks have become a burden on the teachers' shoulders (Hoang & Le, 2021). Teachers were shown not to be confident in their computer skills and they expressed worries about their limited ability of using the Internet and technology for their teaching during the pandemic (Hoang & Le, 2021). The limitations made them feel stressed (Dau, 2021); thus, they were not willing to use more advanced and complicated platforms (Ly, Nguyen, & Nguyen, 2021).

Regarding learners, researchers found that while they acknowledged the benefits of e-learning, they were not interested in using it (Ha & Ngo, 2021; Nguyen & Ngo, 2021; Nguyen, Tra, & Nguyen, 2021; Van, Dang, Pham, Vo, & Pham, 2021). For Ha and Ngo (2021), one of the most stressful challenges was that the learners' listening process was compromised by low-quality devices that provided unclear sounds for the learners and that unstable internet connection was another obstacle in terms of infrastructure for these learners. Also, due to their lack of vocabulary and learning context, these learners expressed that this mode of learning was beyond their comprehension, since it had no direct guidance from their teacher as it was in face-to-face classes.

While most of the studies, particularly those conducted recently in the time of the Covid-19 pandemic, investigated teachers' perceptions on online language teaching and learning (Hoang & Le, 2021; Huynh & Pham, 2018a; 2018b; Ly et al., 2021; Truong & Qalati, 2020), only a few of them looked at the transition from face-to-face learning paradigm to this learning mode from learners' perceptions and experiences (Ha & Ngo, 2021; Nguyen, Tra, & Nguyen, 2021; Nguyen & Ngo, 2021). Further, the few studies exploring the learners' perceptions mentioned above again focused on pre-service English teachers (Bui, Ha, Nguyen, Nguyen, & Ngo, 2021). Thus, an investigation into how adult learners in their professional and LLL contexts experience and perceive their learning using TELL remains a significance.

2.4. Research on language learning using imitation and private speech

2.4.1. Imitation and language learning

Imitation is the primary mechanism of language acquisition (Tomasello, 2003). Through the analysis of audio and video recordings, Saville-Troike (1988) reported that children produced immediate imitative responses in the form of intrapersonal talks to the utterances of their teacher and English-speaking peers during communicative activities. A particularly important feature of imitation that links to internalisation is that the imitative process does not need to happen immediately after a specific linguistic pattern in the learner's environment has been given. Deferred imitation permits children to analyse language indirectly and serves as an essential element for building spontaneous speech later.

Imitation is important for adult learners' L2 language acquisition as well. Lantolf (1997) showed that adult L2 learners self-reported that they were also involved in similar language-learning activities to those in children, but very much more privately rather than socially. Further, Lantolf and Genung (2002) showed that adult learners often rehearse the language structures they encountered in the class when they were outside in everyday activities.

Imitation is needed for internalisation, and it also occurs as individuals attempt to imitate private processes that originate from social interactions. Both children and adults can not only imitate language directed at them by others, but also imitate language by eavesdropping on third-party conversations (Tomasello, 2003). Ohta (2001) found that adult learners practiced patterns in Japanese in what appeared as delayed imitations, like those found with Saville-Troike's children. Along with research by Ohta (2001) and Centeno-Cortés (2003) on adult classroom language learners, Lantolf and Yañez (2003) found that adult learners also frequently eavesdropped on interactions between the instructor and other learners and produced what Ohta (2001) calls "vicarious responses" to, or "vicarious participation" in, those interactions. The important function of imitation (Lantolf et al., 2015) is also evidenced in Swain's research (Swain & Lapkin, 2002) that focuses on how L2 learners learn through the use of their L1.

Imitation is fundamental. Alongside collaboration, it helps the learning process to occur. This is particularly right for the contexts of language learning (Holzman, 2018). For adults' learning, imitation keeps the same features in an adult' life as it in the children's (Lantolf & Yáñez, 2003); thus, this is the evidence for how people are capable of doing so much in their collective activities. Imitation is transformative and creative. According to Holzman (2018), people do not imitate everything; rather, they imitate only those things that are just beyond them. This clearly reflects that people imitate developmentally, and that imitation is not simply a copying process. Unlike other disciplines, in language learning and development, imitation plays a vital role in the learning process that help learners achieve the language communicative competence (Holzman, 2018). Thus, within language learning, learners need to creatively imitate other people in their daily interactions for their language development purposes.

2.4.2. Private speech and language learning

Second language (L2) researchers have investigated the cognitive function of private speech, which has been found to help the internalisation process (Ohta, 2001). It provides a clear example of the transformation process from an external symbolic action or social or communicative speech into a psychological tool of inner speech. Recent research studies have also explored the social functions of private speech. For instance, Smith (2007) found that private speech facilitates a public display that enables group-relevant problems and issues to be noticed and shared. It is particularly important for language learning and development (Lantolf, 2003), without private speech, language acquisition is not likely to occur.

Not only does private speech contribute broadly to the development of self-regulation, it is also useful for language learning, including L2 learning (Kozulin, 2018). One of the most robust studies on private speech, or intrapersonal communication as termed in Lantolf and Yáñez (2003), in L2 development is the study by Saville-Troike (1988). The study, which focused on ESL children in an American school setting, found that children were involved in extensive private speech using a wide range of language learning strategies such as repetition of others' utterances; recall and practice; creation of new linguistic forms; expansion and substitution practice of paradigmatic and syntagmatic features; and rehearsal for overt social performance, or interpersonal communication. The private speech Saville-Troike found is the reduced volume of the utterance. The frequent pattern of private speech among these children is their imitation of utterances used by the teacher and other classmates who speak English as a native language.

When adult learners learn a new language, they often engage in a deliberate inner dialogue as they practise newly acquired language forms. This facilitation to language learning also occurs while adult learners switch to private speech in their first language when they engage in particularly challenging tasks (Guerrero, 2005). In connection to the matter of whether or not the internalisation process (through their private or inner speech) has an impact on adult second

language learners, Guerrero (2018) shows that adult learners could use their second language in a form of private and inner speech function to direct their thinking processes. This finding has met the long speculation of practitioners in the field. Further, in this research, Guerrero (2018) also points out the role of L1 in the formation of L2 intrapersonal communication (private and inner speech).

Collecting samples of private speech from adult L2 learners is more difficult than collecting them from children (Lantolf & Yáñez, 2003). This is partly due to the higher self-awareness of adult learners. However, the findings from adult learner research show that they are not only active in controlling their own learning, but also have their own plan to learn what they suppose to be necessary. This agenda may or may not coincide with the instructor's intention.

One of the typical research studies in connection to these adults' learning agenda is Ohta's (2001) study. By conducting the study with an adult learner who volunteered to record her own classroom language production, Ohta reveals that the adult learner always tried to manage to take hold of bits of language for their personal use. This is certainly a purposeful behavior. The private speech used by the adult learner serves the function of internalizing, not all, but specific features of the second language (Lantolf & Yáñez, 2003) that are within their Zone of Proximal Development.

While, in reality, not all private speech serves the purposes of language learning, it has multiple functions including but is not limited to guiding learners through different complex cognitive processes and emotional tasks, helping learners prepare for their learning (Ohta, 2001). For second language learning, private speech has much to offer as mentioned. One of most importance is that learners use intrapersonal communication (Ohta, 2001) to assist their learning. It is important for an L2 learner since it acts as a foundation for him/her to become a real communicator.

Private speech has a close relationship to social speech, as Saville Troike's (1988) study shows. The study found that aspects of the L2 that children initially used in their private speech eventually appeared in their spontaneous social speech when they interacted in English with the teacher and their classmates. This evidence clearly provides a strong indication that intrapersonal communication or private speech actually results in the internalisation process and language development. Lantolf and Yáñez (2003) call for more studies on this link, particularly the relationship between private speech and social speech in adult L2 learners.

2.5. Research on informal, self-directed and lifelong learning using technology

A number of theories from a wide range of disciplines have contributed to the research on informal, self-directed and lifelong learning (Pemberton, Fallahkhair, & Masthoff, 2004). From social constructivism and SCT perspectives, learning is socially constructed and historically situated (Lantolf & Thorne, 2006) and involves a wide range of semiotic tools and produced over

time by communities. According to Lantolf (2007), SCT and Vygotskian social constructivist perspectives are both concerned with the development of human cultures over time; thus, such perspectives trace the development of individuals and groups during their lives (Lantolf et al., 2015).

Pemberton et al. (2004) assert that, learning can occur informally as a result of individuals' interactions with others and with the environment. In this regard, many researchers, particularly those inspired by the work of Dewey (1938) and Vygotsky (1978), see learning as socially and culturally mediated processes where learners can interact with others and with sociocultural artefacts. Pemberton et al. (2004) argue that the constructivist approach to lifelong language learning can be supported by allowing learners to access the learning space anytime and anywhere. TELL can provide L2 learners with such a space, where they can self-regulate and control their learning and interact with others and with the environment (Pemberton et al., 2004).

Powers and Jablonski (2015) described learning using technology as ubiquitous, since computing devices and the internet allow learners to search for information from wherever they need it. In the field of L2 acquisition, the ubiquity of technology-enhanced learning enables adult EFL learners to not only learn by these tools, but also to discover their own potential as learners who can regulate a learning process throughout their lives (Khadimally, 2019). According to Khadimally (2018), this technology-enhanced learning environment, supported by such rich experiential learning, aligns with the social constructivist theory of learning (Vygotsky, 1978) that focuses on experience-based and personalised learning. In these environments, learners can learn from experience, participate and collaborate actively (Newby, Lehman, Russell, & Stepich, 2010) through group-based learning at their own pace. Further, the use of technology can help adult learners solve their language problems without the constant presence of an instructor. These tools under guidance, initially help learners to construct the meanings and finally, learners can perform without the existence of the need.

Regarding the collaborative knowledge construction embedded in the social constructivism, Yang (2012) further found that learners experience more convenience in TELL environments because this environment enables them to learn cooperatively. Adult learners' personal EFL learning experiences with technologies outside of the classroom environment, as well as their language learning processes, are found to be strongly facilitated. To explain these positive experiences more clearly, based on the principles of Vygotskian social constructivist Theory, TELL can provide adult EFL learners with many fundamental skills. These include, but are not limited to problem solving skills**,** critical thinking, as well as the skills for collaborative and independent learning (Khadimally, 2018)**.** All the above mentioned have informed the approaches for conducting the research and interpreting the results of the study. The next section describes the theoretical framework of the study.

2.6. Theoretical framework

In this research, social constructivism has been used as an umbrella research paradigm, and sociocultural theory and experiential learning pedagogy have been used as a disciplinary and specific theoretical framework to support particular arguments within the field of L2 learning and development, as well as to interpret adults' EFL learning experiences in their lifelong learning contexts. The intersection between these three theories and adults' language learning in their professional and lifelong learning contexts will be considered. Figure 2 shows the overall theoretical framework for this study.

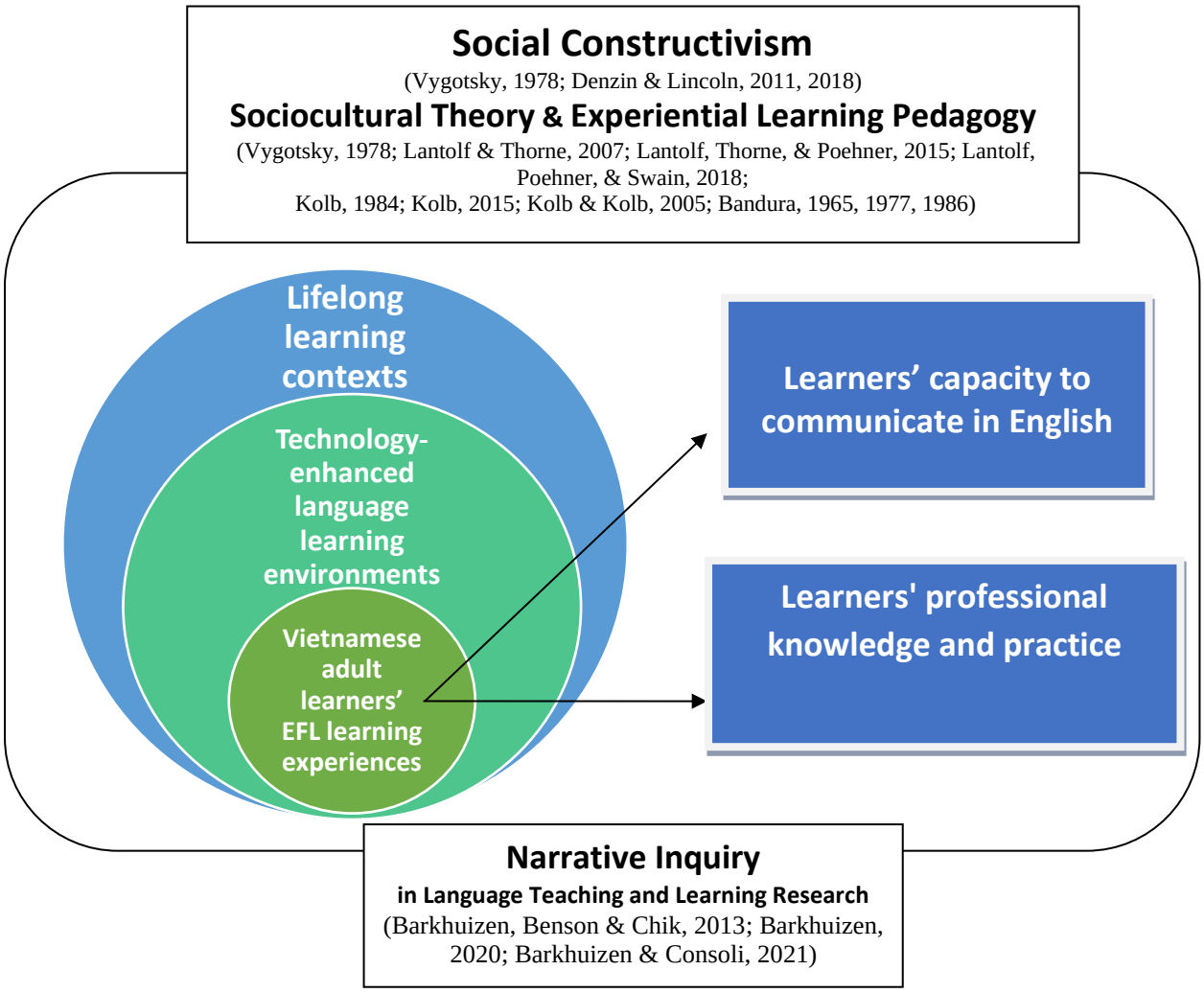

Figure 2. The theoretical framework of the study

2.6.1. Social constructivism

My positioning and the chosen research approach

"Positioning" refers to the way researchers view themselves in relation to their research, the research data and their understanding of self in the creation of knowledge (Berger, 2015).

According to Watt (2007), the acknowledgement of the researcher's positioning in the expanding world of qualitative inquiry has become essential. The questions to identify who we are or how we have extended the knowledge of self may guide us in choosing the approach to represent the data (Pillow, 2003), since our ability to know others depends on the ability to know ourselves.

As qualitative researchers, we are encouraged to reflect on our values and objectives and how they affect our research. As subjectivity guides everything in our research – for instance, the choice of research topic, theoretical framework, methodologies and data analysis (Ratner, 2002) – I came to understand that how I interpret the data and present the findings relies inherently on my personal philosophy, beliefs and values. As well, Creswell (1998) claims that there is a close relation between the philosophy researchers bring to their research and how they design the framework for their research. This understanding led me to evaluate a constructivist research paradigm as the worldview and theoretical structure within which my study can be viewed.

According to Higgs and Trede (2009), the nature of the world and what can be known about it (ontology) is constructed within social interactions. As an ontological position, constructivism also known as Interpretivism (Denzin & Lincoln, 2011; Mertens, 2010) – asserts that reality is ever-changing, and it is differently perceived and experienced by different people. The constructivist approach to ontology, according to Guba and Lincoln (1994), includes "multiple, intangible mental constructions, socially and experientially based" (p. 110). Reality is constructed intersubjectively through interpretivism (Higgs, 2001), and is only known through socially constructed meanings that are interacted between the human mind and their lived experiences (Snape & Spencer, 2003).

Epistemology, according to Hofer (2004), is concerned with the nature of knowledge, or how people come to know about the world. This involves thinking about the nature of knowing (Willig, 2001). A constructivist research paradigm assumes that the researchers and their social worlds influence each other, and the research findings are thus inevitably influenced by the researchers' perspectives and values (Snape & Spencer, 2003; Ritchie & Lewis, 2003). My epistemological stance on constructivism was confirmed by this understanding, with a central goal to seek to interpret the social worlds of my participants' learning through their lived experiences in lifelong learning contexts (Higgs, 2001). This stance was reflected by my own lived perceptions and experiences in teaching and learning. Constructivism manifests understanding of the meanings behind the individuals' actions and thus it helps me seek an understanding of the entire research context (Denzin & Lincoln, 2011).

Social Constructivism as the research paradigm

Social constructivism, as understood and articulated by Denzin and Lincoln (2011), Mertens (2010) and Mirhosseini (2020), has been chosen as the overall theoretical framework for this study. The constructivist researcher's intent is to make sense of (or interpret) the meanings people

have about the world (Creswell, 2013), always recognising that their own background will shape their interpretation, and that they "position themselves" in the research to acknowledge how their interpretation flows from their own personal, cultural and historical experiences and background.

The constructivist paradigm suggests that research findings are co-created through the dialogue between the researcher and the researched participants (Denzin & Lincoln, 2011; Roulston, 2019). According to Guba and Lincoln (2005, p. 198), any finding is "shared between inquirer and participants", and that the researcher and the research participants are interactively connected. Without equal or co-equal control during research, research cannot be carried out. Both the researcher and the participants are changed by their experiences so that the research data is shaped as the research proceeds; the new knowledge is a result of this interaction.

According to Cole and Knowles (2001), the way researchers conduct their research is a reflection of how they position themselves in the world, and they need to use that self-awareness as a guideline throughout the research process. This is not considered a weakness in the research, but an acknowledgement of the role of the participants' and researcher's selves in the study (Arnold, 2011). Acknowledging both parties' understanding allows their personal experiences to be extended into public matters.

Methodologically speaking, a researcher should listen carefully to their subjective experiences and make sense of their experiences in relation to those of participants (Mcgregor & Fernandez, 2019; Roulston, 2019). In this study, I aimed to listen to my experiences of EFL teaching and learning in the Vietnamese context, and made sense of them in relation to the similar experiences of the participants in the research**.** Using such a methodology had the potential to reveal the complexity of language teaching and learning in these particular environments in a way that was grounded in the lived experience of those closest to the object under enquiry. This research was aimed at understanding and recognising the importance of the subjective human creation of meaning.

Because this research was so closely related to my personal experiences, and because I was aware that embracing the subjectivity within an educational narrative research analysis can bring fresh perspectives (Arnold, 2011), I was able to incorporate my feelings, thoughts and emotions into the research as a way to understand the lives of the participants as learners through self-reflection and self-examination. In this study, I was aware that all the questions, observations and emotions reflected some part of who I was as a person and a researcher (Cole & Knowles, 2001). This position acknowledged my role as a researcher in this study.

In the next section I consider sociocultural theory (SCT), which was applied in this study as a lens intersecting social constructivism via the concept of "mediation".

2.6.2. Sociocultural theory

SCT has its roots in the writings by Vygotsky and his colleagues (Lantolf, Thorne & Poehner, 2015), who attempted to form a theory that emphasised the development of individuals within social and cultural environments. According to Wertsch (1985), Vygotsky highlighted the idea that human consciousness is social in origin, rather than merely biological, and that all human activities are mediated by sociocultural artefacts (Ratner, 2002). According to Ratner (2002), SCT looks at "the interrelationships of phenomena rooted and constructed in social interactions" (p. 9). From an SCT perspective, humans are understood as having the capacity to use existing symbols as tools to mediate their own psychological activities, which help to control their biological and behavioural activity. In practice, the processes for individuals' development occur through their participation in settings related to their cultural, linguistic, and historical contexts, including family life, peer-group interactions, schooling, organised social activities and workplaces. According to SCT, while human neurobiology is essential for mental development, the mutual interactions within social and cultural environments contribute the most to this process (Lantolf et al., 2015). With regard to these uniquely human forms of mental activity, Lantolf (2006) supposes that humans' mental activities result from the reflections between the interactions of humans with the environments.

Major theoretical principles and constructs of SCT

Mediation

Mediation, the central construct of SCT, unites all varieties of the theory. It has its roots in the observation that humans' mental activities are regulated by cultural artefacts (Lantolf, Poehner, & Swain, 2018). Humans can mediate their own psychological activity using symbolic artefacts as tools without having to control the physical world (Lantolf et al., 2015; Tomasello, 1999). Vygotsky proposes that symbolic tools are, in fact, inwardly or cognitively directed, while physical tools are outwardly directed. For him, while biological factors serve as the basis for the formation of human thinking, they are insufficient to account for humans' ability to regulate their mental activity. In the next sections, other aspects of SCT – regulation, internalisation, private speech, imitation and the Zone of Proximal Development – will be discussed as a way to better understand the concept of mediation, particularly within the field of L2 learning and development.

Regulation

There are three steps for each human mental activity: object regulation, other regulation, and self-regulation (Lantolf et al., 2015). The first describes instances when cultural artefacts are used to afford cognition and to regulate mental activity, such as the use of an online dictionary as tool to look up unknown words. The second involves different levels of assistance, direction or guidance from an expert, teacher, parents, siblings, peers and so on. The final is the ability to regulate activities oneself without relying on other people' support.

Through internalisation, self-regulation is made internally possible, although it is still very much social in origin. As self-regulation develops, the individual gains greater voluntary control over their thinking process (Thorne & Tasker, 2011). Self-regulation is needed to become a proficient user of a language; however, it is not a stable condition, even for the most proficient communicators or native speakers (Lantolf et al., 2015). When they confront challenging communicative situations, they may use language as an object to regulate their mental activity, rather than to control their use of language.

Internalisation

According to Vygotsky, specifically human ways of thinking and learning arise when people's minds encounter culturally constructed symbolic and material artefacts through externally situated practical activities. This perspective is formed based on a necessary link between external and internal activity; or between experiencing and thinking: "the process through which the external becomes the internal is internalisation" (Lantolf & Yáñez, 2003, p. 98).

In Vygotsky's thinking, internalisation is fundamentally a transformative, rather than a replicative, process (Lantolf & Yáñez, 2003). This process is marked by the transformation of interactive communication (or social speech) into audible speech to oneself (or private speech), and finally silent speech for oneself (or inner speech). As it grows inward to become intrapersonal, social speech often carries with it traces from interpersonal communication with others in the person's cultural community; thus, the social nature of the community comes to be the intra-psychological nature as well. In interpersonal communication, we experience with inspection, critique, ideas, concepts and so on; but, in intrapersonal communication, we do something similar, but talking to ourselves is essential for development (Vocate, 1994). Internalisation, in this regard, describes potentially transformative activities whereby individuals use symbols as tools to build meanings from affordances that are social in origin.

Vygotsky (1981) theorises that development proceeds toward higher mental functions. In this regard, during the internalisation process, the external symbolic tool is transformed into the inner psychological tool, which is then the instrument for the formation of higher mental functions. This process, along with mediation, is one of the core concepts in SCT (Kozulin, 1999).

Internalisation is the process through which individuals appropriate the symbolic artefacts used in their communicative activities and convert them into psychological artefacts using psychological functions that mediate their mental activities (Lantolf, 2006). During the internalisation process, symbolic artefacts lose their unidirectional quality toward social others and take on bidirectional functions between social others and the self. As a result, the social origins of higher mental functions are made available as higher cognitive resources. To understand "inner psychological", we would regard it as similarity to "inward-growing". It can be understood as "interiorization" in English (Frawley, 1997). The word suggests the emergence

of an “active and nurturing transformation” from outside world concepts into internal “meaningful experience” (Frawley, 1997, p. 95). However, this emphasizes that learning is not simply a copying process (Lantolf & Thorne, 2006).

As such, the social origins of higher mental functions are made available as higher cognitive resources. This is a creative appropriation process that occurs through the exposures to symbolic artifacts, thus internalisation is described as the developmental process where humans gain the capacity to undertake complex cognitive functions and decrease the reliance on external mediation and increase the reliance on internal mediation.

Internalisation is a negotiated process of co-construction both intra- and interpersonally that reorganizes the relationship between the individuals to their social environments and generally guides their future performance (Winegar, 1997). According to Winegar, internalisation is a long-term process that explains the continuity across time and space experienced by individuals.

Imitation and private speech

Imitation is a uniquely human form of cultural transmission (Tomasello, 1999). However, there is often a mistaken assumption about SCT that learning is simply a copying process. Indeed, SCT argues imitation is not a rote mimicking phenomenon, but an intentional and potentially transformative process (Lantolf & Thorne, 2006).

Language is the most important artefact for people to maintain their connection with others and to the world (Lantolf et al., 2015). Language use, along with its organisation and structures, is the primary means of mediation**.** The use of language by an individual is known as ‘private speech’ (Lantolf & Thorne, 2006). For L2 learning, private speech, or communication with the self, is the means through which learners actively learn and develop the repertoire of the language through their engagement in communicative activities, both verbal and visual (Lantolf & Yáñez, 2003).

To better understand the operations of imitation, particularly as it is involved in the internalisation process in language learning and development, the Vygotskian Zone of Proximal Development offers insights.

The Zone of Proximal Development (ZPD)

Educationalists and psychologists have characterised ZPD, a key element in learning and development**,** as "a phenomenon to explain and ultimately support learning" (Holzman, 2018, p. 43). Vygotsky (1978) defines it as the combination of an individual’s ability and the competence they would have with the support from a more capable person; or, as Lantolf et al. (2015) put it, the difference between the development an individual has gained and the possibilities that they can achieve through participation in collaborative activities (Figure 3). Ultimately, it is expected that the individual will be able to perform these activities without assistance in the future (Lantolf & Thorne, 2006).

Vygotsky argued that the ZPD is created through joint and cooperative activity in daily life. It is actively and socially created, not an entity existing in psychological-cultural-social space and time (Holzman, 2018). Vygotsky's writings stress that the socialness of learning and development is collective, and that the key to the ZPD is "people are doing something together" as a model of developmental processes involving internalisation. This process of internalisation, supported by private speech through imitation, repetition of others' utterances, recall and practice, leads to the transformation of social speech into inner speech, through the function of intrapersonal communication (i.e., private speech).

Alongside imitation, the ZPD involves "completion" as well. These two processes are needed to complete the ongoing developmental performance. Imitation and completion are closely connected in the same way as the Vygotskian concepts of "thinking" and "speaking" (Holzman, 2018). According to Vygotsky, speaking is not the outward expression of thinking. Rather, it is part of a unified and transformative process that entails thinking-speaking. To Vygotsky, the relationship of thought to word is "not a thing but a process, a movement from thought to word and from word to thought" (Vygotsky, 1987, p. 250). In language learning, this means learners learn, recall, practice, perform and re-perform in order for the thoughts to complete in words in real communication (Vygotsky, 1987).

The expanding of Vygotsky's speaking-thinking concept beyond the individual level leads to the understanding of how imitation and completion are essential in creating ZPDs. Language learners of any age need to be able to engage in language "play", as mentioned by Vygotsky, a form of practice and performance that helps create conversations to perform as speakers later.

Newman and Holzman (2013) note that while such meaning-making performances are fundamental to becoming a rule-governed language user and language-maker, they are insufficient for the learner to become a real language user in social situations. This requires engaging in interactions with others as joint activities and performances, being involved in conversations through both overt and covert imitation, repetition, recall and practice, and looking forward to the ability to perform as a conversationalist.

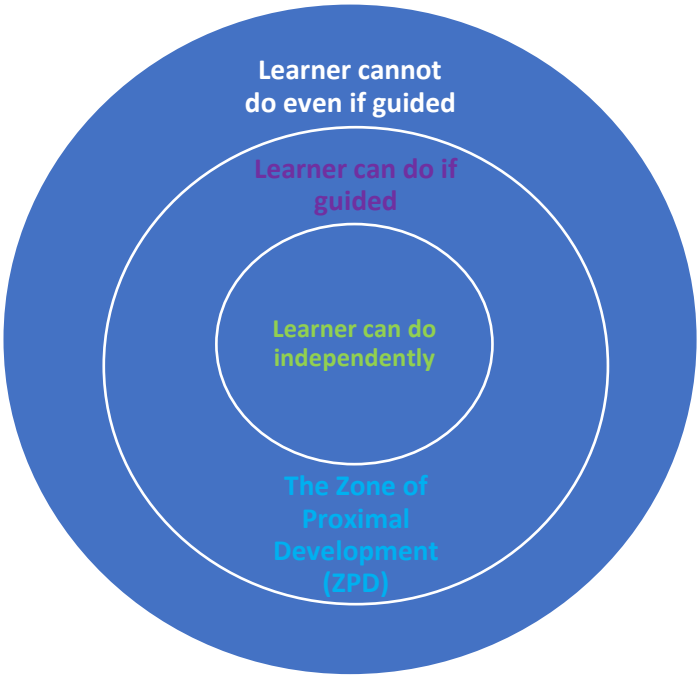

Figure 3. The Zone of Proximal Development (ZPD) (Vygotsky, 1978)

In the context of lifelong learning, the adult participants in this study had virtually self-explored their foreign-language learning; thus, they mainly learned from experience and self-directed learning, an approach to learning mentioned in the "experiential learning" pedagogy. The next section discusses experiential-learning pedagogy to better understand it, as well as to fully interpret these adult learners' experiences within their learning contexts.

2.6.3. Experiential-learning pedagogy

Experiential learning

Experiential learning is based on learners' direct involvement in a learning experience, rather than their being recipients of the content in the form of lectures (Masilamani & Sundarsingh, 2018). Under the perspectives of the constructivist research world view and experiential psychology, the learner as a person consists of a self with a social identity. This learner is as a member of a culture and a society, and all experiential learning is seen as situated, as the next section will describe. Kolb's concept of experiential learning itself is grounded in such learning theories as behaviourism, cognitivism and constructivism, drawing on the works of Dewey, Lewin, Piaget, and Vygotsky, who saw experience as central to human learning and behavioural change (Masilamani & Sundarsingh, 2018).

Concepts and stages in experiential learning

Kolb (1984) defines learning as a process where knowledge is created through the transformation of experience. Knowledge results from "the combination of grasping and transforming experience" (Kolb, 1984, p. 38). This definition emphasizes that learning is a process, and it is

not defined by its content or its outcomes as mentioned. Kolb and Kolb's (2005) model of experiential learning covers four steps: (1) concrete experience, (2) reflective observation, (3) abstract conceptualisation and (4) active experimentation. This learning model represents two polar opposite dimensions of grasping experience and transforming experience (Kolb, 1984, p. 38).

Kolb's experiential learning model suggests that people learn from their experience in a cyclical way: they experience or observe something occurring and they reflect on their observations. Their experience and reflection are then incorporated into their conceptual knowledge. To complete the learning cycle, people finally need to practice the new knowledge and skills learned so that they can apply them in new situations.

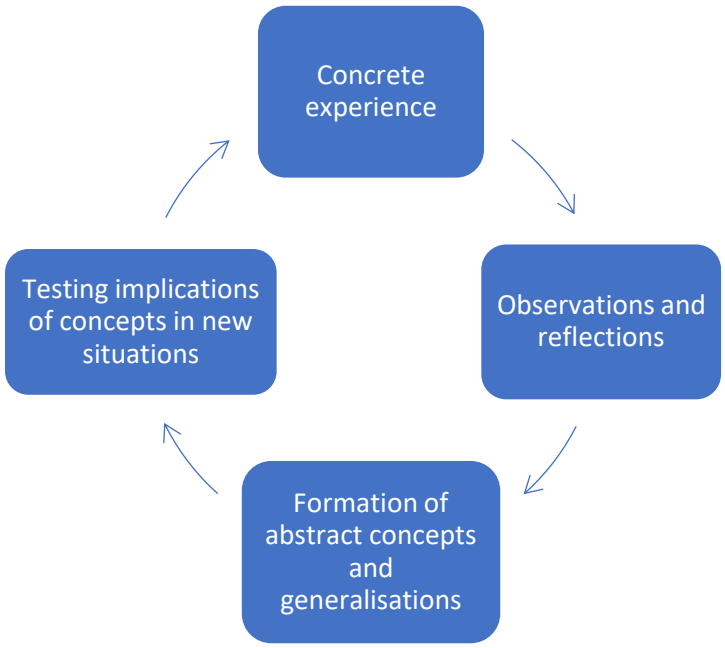

Figure 4. The experiential learning model (Kolb, 1984, 2015)

Why Experiential Learning works

Experiential learning, a key construct in research set in professional contexts such as my own, involves observing, doing, or living through things (Masilamani & Sundarsingh, 2018). This mode of learning can provide learners with opportunities to practice and deepen emergent skills that enhance their knowledge and support new learning (Kolb, 1984). Throughout the experiential learning process, learners have chances to learn from natural consequences, mistakes, and successes. They can pose questions, investigate and experiment with learning activities. Experiential learning facilitates problem-solving, creativity and the negotiation of meanings (Masilamani & Sundarsingh, 2018).

Vicarious learning

Social cognitive theory refers to vicarious learning processes as the ability though which humans can learn not only from direct experience, as in direct experiential learning (Kolb, 1984), but also from the observation of others (Roberts, 2010). Individuals can develop ideas of how a new behaviour is formed without actually performing the behaviour themselves (Bandura, 1977, 1986). These ideas can then be coded into symbols and used as a guide for future action.

Roots and definitions of vicarious learning

The inception of vicarious learning dates to Bandura's work in the 1960s. Bandura (1965, p. 30) provides a general definition of ‘vicarious learning’: "The behavior of observers can be substantially modified as a function of witnessing other people’s behavior and its consequences for them”. Positive consequences will guide them to attempt similar performances; negative consequences will encourage them to avoid them (Bandura, 1969).

By introducing the idea that people can learn by observing others, social learning theory introduced the concept of vicarious learning (or vicarious experiential learning). Vicarious learning continued to be explored under such labels as observational learning or social learning (e.g., Bandura, 1977; Rosenthal & Zimmerman, 1978).

Social learning theory argues that learning occurs within a social context, and that people learn from one another through observation, imitation and modelling, although what people learn may not always be shown in their performance (Bandura, 1977). Hoover and Giambatista (2009, p. 36) write that vicarious learning occurs when a "personally responsible participant(s) cognitively, emotionally, and behaviorally processes knowledge, skills and/or attitudes through processes of observation in a learning situation".

Stages in vicarious learning

Vicarious learning in the education context takes place when an individual actively observes interactions among the other students, or between students and the instructor, and benefits from them (Bandura, 1986). Bandura (1986, 2001) posited a model of four types of processes governing observational (or vicarious) learning: 1) attentional processes, 2) retention processes, 3) production processes and 4) motivational processes (Bandura 1986, 2001).

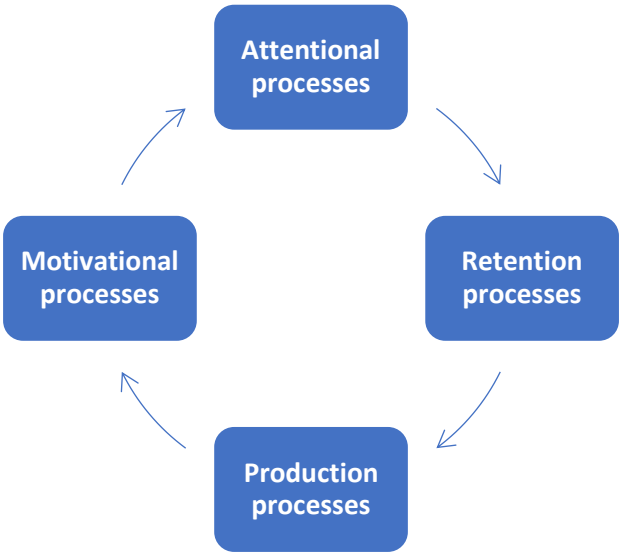

Figure 5. The vicarious learning processes (Bandura 1986, 2001)

During the attention stage, the vicarious learner, using observer characteristics, analyses and absorbs interactions, including modelled events, that take place between learner and learner and learner and instructor. For learning to happen, learners need to choose what to observe, rather than trying to pay attention to every interaction.

In the second stage, retention, the vicarious learner cognitively processes the modelled interactions using rehearsal. Through this active process, the information conveyed by modelled events is transformed and restructured into rules and conceptions for memory representation. This stage is strongly aided by the transformation of modelled information, such as social or communicative speech, into memory codes and cognitive rehearsal, such as inner speech of the coded information.

For the third stage, the behavioral production process, symbolic conceptions are translated into appropriate courses of action through a conception-matching process (Bandura, 2001). In this case, vicarious learners are aided by the existing set of sub-skills they may already possess. It normally takes many attempts for conceptions to be transformed into a masterful performance.

The final stage concerns motivational processes. People do not usually perform everything they learn, and they are "more likely to exhibit modelled behaviour if it results in valued outcomes than if it has unrewarding or punishing effects" (Bandura, 2001, p. 274). According to Bandura (2001), people are motivated by the successes of others – "seeing others gain desired outcomes by their actions can create outcome expectancies that function as positive incentives" (p. 276) – but are discouraged from pursuing courses of behaviour that they have seen result in adverse consequences: "observed punishing outcomes can create negative outcome expectancies that function as disincentives" (p. 276). They pursue activities that they find self-satisfying and that give them a sense of worth but reject those of which they personally disapprove.

The benefits of vicarious learning

Vicarious learning enables individuals to quickly form behaviour patterns that shorten the process of knowledge acquisition by reducing the time spent in trial and error; thus, it is essential for survival and self-development (Bandura, 2001). Also, people can only have direct contact with a small sector of the physical and social environment during their daily lives (Bandura, 2001). Consequently, the conceptions of their social reality are greatly influenced by their vicarious experiences, through what they see, hear and read every day, without direct experiential activities. In this regard, people act on their images of reality, going beyond the bounds of their immediate environments. Thus, new ideas, values, behaviours and practices can be more easily acquired by symbolic modelling (Bandura, 1986, 2001).

2.6.4. Intersection of social constructivism, SCT, experiential learning pedagogy, and lifelong learning

Social constructivism facilitates experiential, self-directed and lifelong learning

One central idea of constructivism is that human learning is constructed upon the foundation of previous learning; in other words, that learners build new knowledge based on their previous learning experiences (Khadimally, 2019). This view of learning seems to be analogous to that of experiential learning theory, in which learning results from the transformation of experience (Kolb, 1984). Within the constructivist approach, learning is viewed as an active, creative and socially interactive process that helps learners construct new ideas based upon both their current and past knowledge (Bruner, 1990). These views of learning sharply contrast with those in which reception, not construction, is key, and learning is the passive transmission of information from one individual to another.

From Social Constructivist perspective, Nafukho (2007) argues that learning is focused on learners, not teachers, and learning promotes learners' active involvement as they manage to construct their own knowledge and skills basing on their real conditions. For adult learners' personal learning experiences, particularly in their lifelong learning contexts, they heavily rely on the self-regulated learning approach as the core learning component throughout their exploration for learning.

Thus, Vygotsky's social constructivist theory allows researchers to see adult learners as having the ability to construct their own knowledge and learning by critical thinking and through a process of carefully cultivated experience and learning. This social learning process particularly fits with the principles of experiential learning pedagogy that has potential to allow these adult learners, within their professional settings, to experience their learning by using interactions with their colleagues, other people and existing artefacts, guided by sociocultural principles to manage to construct their own knowledge depending on their own reality.

Under the social constructivist paradigm, experiential learning has the potential to provide adult learners with a shift when these learners successfully manage to transfer knowledge from their prior learning and experiences to their current learning and practice (Murray, 2008). Adult learning and lifelong learning can, therefore, follow the principles of experiential learning pedagogy that provide knowledge for what the nature of learning is and guide understandings for what promotes and or hinders the learning process (Masilamani & Sundarsingh, 2018). Within experiential learning, learning is viewed as a social process of carefully cultivated experience and learning. Learning is a long-cultivated process, rather than an end-product and this process focuses on what happens when learning activities take place. To be permanent, this process requires the ability to learn throughout one's life. It is experiential learning and lifelong learning.

Experiential learning is an established approach

Experiential-learning pedagogy is based on the constructivist theory of learning (Masilamani & Sundarsingh, 2018). It is an established and important approach in the theoretical tradition of adult-education theory (Miettinen, 2000). Experiential learning can be viewed as a preferred approach for building the capacity for adult learners who are familiar with learning through action and experience. This aligns with adults' learning in their professional contexts, as examined in this study.

According to Linn, Howard and Miller (2004), when learners transform their previous learning experiences into new contexts, they master new concepts, principles and skills. Ultimately, these cultivated process of learning experience and skills create self-directed and lifelong learners. Experiential-learning pedagogy is necessary for learning to be "lifelong". This is particularly important in Vietnamese contexts, where adult learners are often viewed as mostly depending on their teachers, and where the teaching and learning practice is often one-way transmission and reception of knowledge. Research into and application of experiential learning, especially in lifelong learning settings and adult education, can create and maintain a positive attitude to learning in adult learners both for personal reasons and professional development purposes.

Experiential learning seems to lack the elements of social and cultural conditions of learning

Experiential learning is a useful guideline for educators and a useful practical tool for students, particularly adult learners. However**,** it has its limitations. In regard to the epistemological view of learning, Miettinen (2000, p. 71) argues that “adult education is at risk of remaining a quasi-scientific academic field without connection to the philosophical, anthropological, sociological and psychological studies of learning and thought." Further, because experiential-learning principles emphasise individuals' capabilities and experiences, the cultural and social conditions of learning that are fundamental for promoting changes and facilitating learning in real life could go unconsidered (Miettinen, 2000)**.**

To Miettinen (2000), the conception of experience in Kolb and Kolb's experiential-learning model seems to overlook the interactions between individuals and their sociocultural environments, which Cole (1997) termed cultural psychology. Therefore, when "Kolb's concept of Experiential Learning is combined with the romantic biological and therapeutic ideas of humanistic psychology, a thoroughly individualistic conception of learning emerges" (Miettinen, 2000, p. 70).

Sociocultural theory facilitates experiential learning and L2 development

SCT is based on the social constructivist research paradigm (Wang, Bruce & Hughes, 2011), which considers that knowledge is socially constructed and shared by individuals (Bryman, 2001). SCT has been championed in the field of applied linguistics and second-language education research by James Lantolf and his colleagues (Duff, 2007). It plays a very important role in second-language teaching, learning and development (Lantolf & Thorne, 2006). By considering social and cultural conditions of learning, as SCT suggests, the researcher can look carefully at adult learners' learning experiences in connection with their social and cultural conditions of learning embedded in their experiential learning, particularly within the context of their self-exploration and learning in their professional and lifelong-learning settings.

The principles of SCT guide the researcher to look at how learning and development in these adult learners occur as a result of their individual interactions with other people at work and with objects and events in their social and cultural environments (Vygotsky, 1978). To Dewey (1938, 1963), concepts and meanings are not constructed in the head alone but are the generalisations of the practical interactions between individuals and their cultural and social environment. In this sense, SCT allows researchers to look at learners' experiences within their real learning contexts.

As mentioned, SCT helps researchers look at individual learners' learning experiences and their mutual interactions with the environments. In this view, Miettinen (2000) argues that learning exists in relation to culturally appropriated elements and a process of practical activities in the real world. For him, the reinterpretation of conceptions and practices plays an essential role in the reinterpretation of observations and learning. As well, learning can be viewed as "a relationship between culturally appropriated conceptions, ways of action and hypothesis and empirically new ways, deviating from previous and problematic elements in practical activity" (Miettinen, 2000, p. 63).

The adult participants in the current study were constantly striving to improve their knowledge and understanding. They often interacted with their colleagues and other people, including senior experts, fellow professionals, friends and others in their workplace, for their language learning and development. From a social constructivism perspective, they were building their knowledge via their collaboration, and, in accordance with experiential-learning theory, by learning through their own experience.

To conclude**,** all the activities experienced by adult participants in their professional and lifelong learning fit with the principles of social constructivism**,** SCT and experiential-learning pedagogy, all of which have in common that knowledge is socially constructed, and learning is a social process. In this regard, these adult learners virtually self-explore for their learning, including seeking and making use of interactions not only with other people, but also with artefacts produced by others. Therefore, this study uses SCT and experiential-learning pedagogy within a social-constructivist context as components of its theoretical framework.

The next chapter explores the research methodology and methods.

CHAPTER 3: METHODOLOGY

This chapter begins by setting out the study's research aims, research questions, methodological approach. It then describes the research design framework and the participant selection process, also giving portraits of the participants. The next sections variously outline the approach and procedure for data collection, analysis and representation. The ethical issues encountered are described in the final part of the chapter.

3.1. Research aims, research questions and methodological approach

This study aimed to gain a comprehensive understanding of the participants' EFL learning experiences within TELL-based learning environments in their lifelong learning contexts. It also aimed to explore how these learning experiences influenced the learners' potential to communicate in English as well as the development of their professional knowledge and practice. Thus, the study posed two research questions:

> *1. What are Vietnamese adult learners' EFL learning experiences of developing their capacity to communicate in English in technology-enhanced language learning environments?*
>
> *2. What impact has technology-enhanced language learning had on the communicative potential, professional knowledge and practice of Vietnamese adult EFL learners?*

The study followed a qualitative methodology (Mirhosseini, 2020), set within a broadly social-constructivist research worldview (Vygotsky, 1978), which acted as an umbrella paradigm that informed the methodology for this study. According to Denzin and Lincoln (2011), the inquiry aim of social constructivism is to understand and interpret the meaning of phenomena through the joint construction and reconstruction of the meaning of lived experience. Such understanding is sought to inform praxis-improved practice (Denzin & Lincoln, 2011, 2018). The direction of this enquiry fits with the aim of my research, which focused on the lived experience of adult language learners. Thus, social constructivism acted as an overall theoretical framework to interpret data as well as a means of collecting it (Creswell, 2009; Denzin & Lincoln, 2011; Mertens, 2010; Vygotsky, 1978).

Under social constructivist principles, SCT and experiential-learning pedagogy were used to interpret particular phenomena regarding adults' language-learning experiences in their professional and lifelong learning settings. In this research, my subjective experiences were used as a reflective tool during the research, as mentioned. This also meant that my perceptions and personal experiences, as well as my own EFL teaching and learning, formed part of the foundation

for establishing a fuller, more rounded understanding of my participants' EFL learning experiences in TELL-enhanced learning environments.

3.2. Qualitative approach as research methodology

A qualitative approach has been employed in many disciplines and fields (Leavy, 2014; Mirhosseini, 2020). Qualitative researchers are sensitive to the value of multi-method approaches, applying to naturalistic perspectives as well as interpretive understandings of human experience (Denzin & Lincoln, 1994). According to Denzin and Lincoln (2011, p. 3), qualitative research "involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them". In this sense, qualitative research consists of a set of interpretive and material practices that make the world visible; through these practices, qualitative research has the potential to transform the world and turn it into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self (Denzin & Lincoln, 2011).

Qualitative research involves the studied use and collection of a variety of empirical materials (Leavy, 2014). Included within such methods are: case study, personal experience, introspection, life story and interview, along with cultural and historical artefacts that describe routine and "problematic moments and meanings" in the lives of individuals (Denzin & Lincoln, 2011, p. 3). Therefore, a qualitative research methodology was adopted in this research. Using this approach allowed me to understand more deeply the meaning embedded in the learning experiences of the participants (Hesse-Biber & Leavy, 2004).

According to Hesse-Biber and Leavy (2004), researchers are encouraged to consider a qualitative methodology for a research project if they aim to understand the meaning of particular subjects in depth. For me, using such a methodology had the potential to reveal the complexity of language-learning experiences in these particular environments in a way that was grounded in the lived experience of those closest to the object under enquiry. My research was not interested in prediction and control, in the manner of more-positivist approaches, but in understanding and recognising the importance of the subjective human (that is, the participants') creation of meaning. Also, Creswell (2009) claimed that "in qualitative inquiry, the intent is not to generalize to a population, but to develop an in-depth exploration of a central phenomenon" (p. 213), which matched the purpose of this study in exploring adult learners' EFL learning experiences in their lifelong-learning environments.

This narrative research design employed language-learning histories, learner diaries and semi-structured interviews (Barkhuizen, Benson, & Chik, 2013) as data-collection methods to gain a deeper understanding of the learning experiences within and reflections on TELL learning environments as a means to enhance participants' potential to communicate in English.

3.3. Narrative inquiry as research design framework

Narrative inquiry, a particular type or subtype of qualitative inquiry (Barkhuizen, 2020; Chase, 2011; Wei, 2020), is grounded in the tradition of qualitative research (Denzin & Lincoln, 2011). According to Chase (2011), what distinguishes narrative inquiry from other approaches is that it starts with the individuals' biographical accounts such as biography, history and society. Narrative inquiry involves an interest in life experiences (Benson, 2021). It is a distinct form of discourse, as it makes meanings of lives through the shaping and ordering of experiences, organising the events into a meaningful whole. It connects the consequences of actions and events over time. While there is no unified definition of narrative study among researchers (Barkhuizen & Wette, 2008), there is a common understanding that narrative inquiry deals with text or discourse from people's stories, and can be in the form of an autobiography, biography, life history or personal experience (Creswell, 2012; Riessman, 2008). Bell (2002, p. 209) explains that:

> Narrative inquiry involves working with people's consciously told stories, recognizing that these rest on deeper stories of which people are often unaware. Participants construct stories that support their interpretation of themselves, excluding experiences and events that undermine the identities they currently claim.

Bell (2002) writes that narrative inquiry goes beyond the truth claims of specific stories to explore any assumptions evident in the shaping and telling of stories. The purpose is not to construct either truth or fiction, but to illustrate the story structures a person holds. Stories, in short, offer a window into people's experiences, beliefs and attitudes (Polkinghorne, 1988). Narrative inquiry thus helps researchers investigate individuals' experiences and beliefs holistically. These insights can make a significant contribution to the traditional research areas that look at, for example, learning outcomes or measurable results, and that often disregard the influence of experience (Bell, 2002).

The narrative approach helps researchers engage with and make meaning of individuals' lived experiences (Barkhuizen & Wette, 2008). It specifically helps researchers understand the relationships between people's narrative practices and their local narrative environments (Gubrium & Holstein, 2009). The strength of narrative inquiry is that it focuses on how people use stories to make meaning of their experiences (Barkhuizen, Benson, & Chik, 2013). Narrative inquiry is useful for discovering the human perceptions (Lyons & LaBoskey, 2002; Webster & Mertova, 2007). It is ideal for capturing human experiences in relation to social and cultural contexts, the individuals' values, attitudes, and beliefs (Clandinin & Connelly, 2000). Narrative inquiry has been used increasingly in the field of education and it provide the potential for researchers to investigate how people experience the world and how they are linked to teaching and learning (Polkinghorne, 1995). Narrative and telling stories have their interrelationships and they help people understand their own and other people's stories methodically and authentically.

Originally used in the social sciences, narrative inquiry has been brought into applied linguistics and second-language acquisition (Benson, 2005; Riessman, 2003; Pavlenko, 2002). To Pavlenko (2002, p. 213), “researchers acknowledge that narratives elicited from the learners, as well as published language learning autobiographies, are a legitimate source of data in the hermeneutic tradition, complementary to more traditional empirical approaches”. This study employed narrative inquiry as the research design framework, in light of the work of Barkhuizen et al. (2013) regarding guidelines on narrative methods in the field of language teaching and learning research. Barkhuizen et al. (2013) asserted that researchers are interested in narrative study as an approach to language teaching and learning research if they are more convinced by “richly described individual case study” than they are "by statistical analysis of experimental data collected from large numbers of people" (p. 3). Narrative inquiry can also be viewed as a particularly useful approach to investigate how language learners are situated in specific social, historical and cultural contexts, in which the primary context is the learners’ lives.

The approach to narrative inquiry has been shown not only to be an appropriate tool for investigating learners' beliefs and experiences in general, but also specifically for analysing the learners' experiences in foreign-language education and TESOL (Pavlenko, 2002; Barkhuizen et al., 2013; Tsui, 2007). One of the strengths of narrative research in TESOL is its potential to provide insight into long-term language learning-experiences that cannot be investigated in real-time research (Pavlenko, 2002). Narrative research also facilitates learners’ own understanding of their learning experiences. According to Creswell (2012), narrative study makes use of words from the individuals' stories, unfolding their lived experiences chronologically within their personal and social contexts. Narrative inquiry as a research method in language teaching and learning looks at the stories that language teachers and learners tell about their lived experiences (Barkhuizen, 2014). By telling stories, learners can self-reflect on their learning experiences, understanding their practice, and hence make meaning of it (Jay & Johnson, 2002).

The use of narrative as a research method within the field of language learning fits well within social constructivism, the theoretical framework of this study: language learning is a social process, and the participants and all needed to interact closely and cooperate during the course of the research.

3.4. Rationale for sample size

3.4.1. Approach for selecting number of participants

Flyvbjerg (2006) indicates that narrative studies usually focus on small numbers of participants to explore the lived experiences and the complexities of actual life, rather than large numbers of samples for descriptive statistics. For instance, Menard-Warwick (2004) reported on two biographical case studies of female immigrant language learners; Shedivy (2004) explored five

case studies of university-level students of Spanish; and Coryell, Clark and Pomerantz (2010) investigated why seven female adult heritage Spanish learners chose to return to college to learn Spanish. Many other studies were only interested in exploring one individual life (Liu & Xu, 2011; Park, 2012; Pomerantz & Kearney, 2012; Tsui, 2007; Xu & Liu, 2009).

This study followed the work of Coryell et al. (2010) in terms of the small number of participants; thus, seven adult EFL learners were recruited as research participants. This small number of mature, experienced adult learner-participants, all between 25 and 55 years old, enabled the researcher to gain a fuller understanding of these learners' EFL learning experiences and avoided the pitfall of over-generalisation that is possible in thematic studies with more participants.

3.4.2. Source and selection of participants

The recruitment of participants in this research was based on their age (minimum 25 years old), English-language learning and working experiences, and voluntary willingness to participate in the research. They needed to have finished their first degree or diploma and had at least two years of working experience. Their English proficiency was required to be between post-elementary and upper-intermediate levels, and those who could use English for communication at their jobs were given priority. The participants needed to have English-learning experiences in Vietnamese contexts and have been learning English in formal, informal, and/or non-formal learning, including self-study.

I used my professional network to identify potential participants. I first approached them through my college's annual meetings with other educational institutions in early 2018 in Vietnam. I took this chance to express my research interests to my former colleagues as well as to the adult learners attending the meetings. Many were very interested in participating in the study. I recorded their contact details (phone number, email and Viber, Zalo or Facebook accounts) to follow up with them for official recruitment. I then came back to Melbourne and prepared the ethics application but kept in touch with them during this period. As soon as my ethics application was approved, I contacted them (via Messenger, Viber and Zalo) to see if they were still interested in taking part in the research; I followed up this informal approach with more-detailed emails with full information about the research. All these potential participants were given the ethics-approved explanatory statement about the research. Nine (four men and five women) immediately agreed to take part in the research; thus, they were given the consent forms, and were given enough time to consider their participation in the research. They were also informed that they could withdraw from the research at any time. One woman could not arrange time for continuing her learner's diary (LD) after the data collection started, although she completed her language-learning history (LLH) and two first diaries entries. Three additional participants (two men and one woman) completed their LLHs, but then could not make time for writing LDs due to their workload. As a result, five participants ultimately completed the data-gathering activities.

To ensure that the research met the minimum number of participants who could fully engage with all the stages of the project, I recruited participants for the second round through my network and contact list again. This time, two additional participants agreed to take part in this research after they had time to read the information about the research and the consent forms. The total number of seven participants (two men and five women) were chosen for this study.

Participants	**Age/Gender**	**Education**	**Jobs**	**Notes**
Thanh	25/Female	BA in environmental engineering	Sales assistant	Employed
Xuan	32/Female	Diploma/BA in economics	Office staff	Employed
Quyet	33/Female	BA in natural science	Sales assistant	Employed
Hung	43/Male	BA in civil engineering and master's degree in bridge and highway construction	Engineer/lecturer	Employed
My	43/Female	BA in mechanical engineering and master's degree	Lecturer/engineer	Employed
Nhan	41/Male	BA, master's degree (Doctor of Medicine – GP and specialist in radiology and echography)	Doctor	Employed
Bach	53/Female	BA (Doctor of Medicine –GP and master's degree in public health)	Doctor	Employed

Table 2. Participant details (identified by pseudonyms)

By chance, the participants, all mature learners, were from four different cities and provinces in Vietnam. All were professionals: two doctors; one lecturer/engineer; one engineer/sessional lecturer; two sales assistants; and one administrative staff. All these participants needed to improve their English skills for their jobs. However, they all, to some extent, had experienced challenges in their continuous (further) learning in terms of either the learning approach, the issue of motivation, or other conditions that either facilitated or hindered their studies.

To make the research trustworthy and to eliminate bias and conflict of interest, this study strictly followed ethical processes in recruiting participants, and in collecting and analysing the data.

3.4.3. Pen-portraits of participants

The followings are pen-portraits of the participants, all described under pseudonyms.

THANH

Thanh is the youngest participant in this research at 25 years old. She holds a BA in environmental engineering from a large university in Ho Chi Minh City, Vietnam. She has worked as a sales assistant at a real estate company in Ho Chi Minh City for six months. She previously worked for two years as a staff member at a large post and telecommunication corporation in Vietnam. She comes from an educated family in a small village in the Mekong river area. She performed very well at all her school subjects, which gained her university entry. After finishing university, she was recruited for her first job. She is soon beginning volunteer work in Myanmar to get further working experience that she hopes will benefit her in her career.

XUAN

Xuan is the second-youngest participant in this research, at 32. She holds a BA in economics and administration. She has been working in the administrative office of an enterprise in Haiphong city. She has two small children but receives extensive support from her family so that she can focus on her job. She has been learning English so that she can communicate well at her job, particularly in using administrative documents and business contracts.

QUYET

Quyet is 33 years old. She was born and grew up in Ho Chi Minh City. She is intelligent and determined, gaining a degree in natural science from a leading university in Ho Chi Minh City. As a result, she pursued and gained a degree in Natural Science from a leading university in Ho Chi Minh city, Vietnam. She has been working successfully for over 10 years at her current company and is about to take a position as an assistant director at a large organisation. She is married and has a daughter.

HUNG

Hung is a civil engineer in bridge and highway construction and a sessional lecturer at a local private university in the town where he was born. He holds a BA in engineering and a master's degree in bridge and highway construction. He is 43 years old and has had 15 years of experience in his field. He has recently been working as a consultant in a civil-engineering company, and he lectures at a local college. He has recently been trying to use English for his job. He has just been appointed to a new managerial position in his college, and while he is worried that he may be too busy to participate in the research, he is determined to try. He hopes that his English knowledge and communicative capacity will improve through taking part in this research.

MY

My is a lecturer in applied mechanics in the technology department of a local career training college. She has just turned 43 and has been teaching at this college for 17 years. Due to her success as a lecturer, she has been assigned other important roles in the college, including the

head of a leading department. She has two sons who frequently ask her about English vocabulary and scientific stories. She writes in her language learning diary that she is closely involved with her children's studies and activities. She successfully finished her own studies at a well-known Vietnamese university with a high-quality engineer title and went on to gain an MA in her field.

NHAN

Nhan is a medical doctor. He is 41 years old and has been working in a hospital in Hanoi for the past 15 years. His mother is a primary-school teacher, and his father is on the staff of a rural district foodstuffs company. During his childhood in 1980s in Vietnam, his family, which include eight children, experienced severe financial difficulties which motivated him and all his siblings to pursue a better life through education. He obtained a degree in medicine in polyclinic and then a master's degree in radiology and echography. He initially worked at a medical university before moving to his current job.

BACH

Bach is 53 years old. She has two daughters, who have motivated her to study English, primarily for her job as a medical doctor in a medical research institute. Her mother was a coal miner, and her father was an electrical engineer in an industry-intensive province in Vietnam. She obtained her honours degree in medicine from a prestigious medical university in Vietnam. In 2006, she also completed an MA in public health from a regional university of medicine and pharmacy. She has been appointed to many management positions at both her current and previous jobs in addition to her main role as a doctor, including Head of Faculty/Department. She is knowledgeable and interested in further and self-study, including learning foreign languages, particularly English and French.

3.5. Data collection, analysis and representation

3.5.1. Collecting narrative inquiry data

In narrative inquiry, it is common to adopt multiple methods for data collection (Barkhuizen et al., 2013; Creswell, 2012). For instance, Coffey and Street (2008) explored advanced foreign-language learners' experiences by asking them to write their language-learning autobiographies, and then carrying out semi-structured interviews. Similarly, Benson, Barkhuizen, Bodycott and Brown (2012) used pre- and post-sojourn interviews, on-site interviews, blogging and photograph elicitation to explore the identity development of second-language learners in their study-abroad program. In my research, I used language learning histories (LLHs), learner's diaries (LDs) and semi-structured interviews as data-collection methods. For each method, I used my own experiences to prepare, construct and reflect on the process.

LLHs are written, retrospective accounts of past learning. Benson (2011) points out that LLHs can range from "the entire period over which a person has learned a language to much shorter periods, such as a year or semester of study or an incident that lasts no more than a few minutes" (p. 548). In my study, LLH collection started as soon as the ethics application had been approved in June 2018. I asked participants to reflect on positive and negative experiences, beliefs, expectations and practices regarding their language learning in general, as well as their language-learning experiences with TELL.

LDs are autobiographical, introspective documents that record the experiences of language learning from the learner's perspective. Very much like personal diaries, they consist of a series of entries written over an extended period of time. In this research, the participants were encouraged to participate in at least eight weeks of learning and writing diaries, recording their general reflections and observations about their everyday learning, including stories of language-related successes and failures (Barkhuizen et al., 2013). The participants also had a chance to comment on their self-learning activities. Diaries were allowed to have a more specific focus, too, such as writing about learning strategies and styles, learner emotions, or cross-cultural encounters. The LDs in this study were collected over three months, between when the LLHs were collected and the interviews were conducted.

Interviews were used as the third data-collection method and guided by an initial data analysis of the LLHs and LDs. Polkinghorne (1995) confirmed the value of interviews, describing them as the most reliable method in narrative inquiry. This view is supported by Kvale and Brinkmann (2009, 2015), who described qualitative research interviews as attempts to understand the world from the interviewees' points of view, unfold the meaning of their experiences and uncover their lived experiences. In the same vein, Barkhuizen et al. (2013) argued for the value of the interview in narrative inquiry research, asserting that it was the most effective way to explore language teachers' and learners' perceptions and experiences. These researchers argued that the use of oral accounts of learning experiences should become more prevalent in language teaching and learning research because of their potential to contribute to improved learning experiences.

Kvale (1996) maintained that research interviews elicit qualitative descriptions of the subjects in the real world with respect to their own and researchers' interpretations of the meanings of their experiences. Interviews allow researchers to retrieve humans' feelings, thoughts and intentions that cannot be gained through direct observation or other methods. The interviewer might not need to instruct participants to create stories, since story-telling is a universal aspect of individuals' cognitive attributes in all cultures and languages, and a tool that they use naturally to create meaning from their life experiences (Polkinghorne, 1995). The interview process in this study involved designing, conducting, transcribing, translating, analysing, verifying, and reporting on the interviews (Kvale & Brinkmann, 2009).

The ideas for the use of interviews as a method of gaining detailed data about language teaching and learning areas were adapted from studies of similar contexts and region, such as studies by Xu and Liu (2009), Liu and Xu (2011) and Tsui (2007). As in the current study, these researchers interviewed non-native speakers of English in non-English-speaking countries to elicit their language teaching and learning experiences (Barkhuizen et al., 2013).

Interviews can be categorised as structured, semi-structured or open (Kvale & Brinkmann, 2009). In structured interviews, the researcher strictly follows a set of prepared questions without any changes in the sequence. Barkhuizen et al. (2013, p. 17) noted that one of the benefits of structured interviews is consistency: "With pre-set questions and sequence, structured interviews may provide a more uniform collection of oral narratives in projects involving a larger number of participants". However, Atkinson (1998, p. 41) argued that "the less structured a life story interview has, the more effective it will be in achieving the goal of getting the person's own story in the way, form, and style that the individual wants to tell it in". In the current study, the important factor was allowing the narrative to emerge.

Open interviews have also been used to elicit oral narratives (Barkhuizen et al., 2013); in these cases, the interviewer may only need to state the research interest and then let the participants elaborate. However, in the current study, most of the participants had no experience of being interviewed, and an open method would have been too vague for them to narrate their experiences. Thus, I conducted this research using semi-structured interviews with open-ended questions, using "probe" techniques to encourage participants to elaborate on their responses and to seek and establish a thick, descriptive interpretation of the learners' experiences in TELL environments (Polkinghorne, 1988; Punch, 2014).

Semi-structured interviews are currently the most commonly used format in language teaching and learning research (Barkhuizen et al., 2013). The questions in such interviews are usually open-ended, allowing participants to elaborate on their responses and researchers to pursue developing themes (Barkhuizen et al., 2013). In this research, semi-structured interviews were used with an interview guide (protocol) establishing pre-set questions, but in the form of open questions, and additional instructions as a resource to direct the interviewer and interviewees. To gain greater detail, a set of core questions was employed to anchor the interviews, and to provide coherence across interviews. The use of semi-structured interviews with a guide gives flexibility; thus, during the interview, the interviewer also asked follow-up questions to gain clarification or elicit elaboration from the participants (Alborno & Gaad, 2012; Barkhuizen et al., 2013). Recommendations from Coryell et al. (2010) and Seidman (2013) were also incorporated into the interview design. The interviews were conducted via Skype, as recommendation by Hanna (2012) and Holt (2010).

3.5.2. Data-collection procedure

Data collection for this study occurred electronically from Melbourne. While the LLHs and LDs were collected via email, semi-structured interviews were carried out using Skype. To seek more fluent and rich information from participants, Vietnamese was proposed and approved as the language for data collection in this research; thus, alongside English, all the tools, instructions, questions and guidelines for collecting data from LLHs, LDs and interviews were in Vietnamese.

Before writing the LLHs, the participants in Vietnam were provided with instructions and other prompts that guided them on how to write their LLHs and what to include. When they finished, they returned their LLHs via email. To complete the LLHs, participants were asked to provide narrative data that reflected on their experiences of learning English as a foreign language. They were encouraged to write LLHs that began from the time they started learning English to the present time, including their experiences with TELL, as well as their thoughts and imaginings about their future learning of English. They were also asked to reflect on who they were as learners in general and as learners in TELL environments, and to comment on what contributed to and inhibited their learning, as well as on how they could best progress in the future. The LLHs were collected as soon as the ethics application had been approved. To ease the process of writing their LLHs, participants were provided with a narrative frame, suggestions, and other prompts as guidelines for their writing. LLHs were around 1,000 to 2,000 words.

The same processes (Barkhuizen et al., 2013) were applied for collecting the LDs every week. Participants were encouraged to continue their language learning using TELL-enhanced learning environments and to write in their learning diaries over a period of eight weeks of study from August 2018, after they had returned their LLHs to me. The participants were encouraged to learn and write their diaries every day, but they were only asked to send their works to me every week via email. The participants were given a target of around 350-500 words per week. When participants needed further support, they were provided with advice and guidance, including suggestions and instructions on what and how to learn (learning websites, applications, software, etc.). Participants also had a chance to receive advice on how to write their LDs and what they should contain.

The diaries also focused on what facilitated and hindered these participants to learn to improve their potential to communicate in English. The guided content included the four aspects of the communicative competence model (Canale, 1983; Canale & Swain, 1980): grammar competence, sociolinguistic competence, discourse competence and strategic competence. Participants also had the chance to comment on their learning strategies and styles, learner emotions and cross-cultural encounters. When the participants constructed their diary entries, they were advised to consider: what they had achieved during the lesson or learning activity; what progress they had made and/ or how they had achieved it; how they felt about their progress/achievement; what they

had learned about themselves; how would they use the learning experience to plan new learning in the future; and how their learning activities could improve their potential to communicate and their professional experience and practice.

Semi-structured interviews, using a list of questions that had been refined based on analysis of the initial LLH and LD data, were conducted via Skype (Hanna, 2012) by the end of March 2019, with further information gathered later through follow-up sessions. The process for the interviews in this research was based on recommendations by Barkhuizen et al. (2013), Seidman (2013) and Coryell, Clark and Pomerantz (2010). The interviews were carried out in safe, quiet venues, at a convenient time for both the interviewer (from Melbourne) and the interviewees (resident in Vietnam). Interviews were conducted in Vietnamese.

The interviews were carried out with the seven participants over four weeks during February and March 2019. Each interview session lasted from 45 minutes to one hour, with the two longest ones running about one hour and 20 minutes. Individual follow-up sessions were held with four participants by June 2019. All interview sessions were video-recorded for analysis. To establish a narrative, thick, descriptive interpretation of the learners' experiences in their learning environments (Punch, 2014), semi-structured interviews were based on an interview guide (protocol) with a set of core guiding questions and additional instructions to direct the interviewer and interviewees, to anchor the interviews and to provide coherence across interviews.

The guided questions in everyday language were sent to the participants before the interviews so that they could prepare for what they wanted to talk about. During the interviews, the participants were also encouraged to express freely anything relating to their learning experiences. The interviewer had the chance to ask follow-up questions to gain clarification or elicit elaboration from the participants (Alborno & Gaad, 2012; Barkhuizen et al., 2013). To help enhance credibility, after the interviews, follow-up friendly conversations with the participants were carried out to clarify their responses and obtain more information.

The interview recordings were transcribed into written form. The procedure for doing verbatim transcripts to facilitate the analysis of the participants' learning experiences was based on that in Barkhuizen (2010) and was of great benefit in understanding what the participants wanted to say, as well as in reconstructing, retelling, and reliving their biographical narratives.

The transcribing technique in this study was based on an explicit approach to achieve transparency and consistency for the research (Kvale & Brinkmann, 2009). This technique was aligned with the study's goal of reconstructing the stories incorporating linguistic variations such as language registers, volume, pitch, hesitations or the length of silences. Before transcribing, I listened thoroughly to the records many times, stopping and replaying to become more familiar with the conversation and to minimise mistakes in transcription. I conducted the transcription immediately after each interview so that I remembered well all the features and the interactions from the

interview in detail between the participants and the researcher. The immediate transcription helped me avoid leaving out any important words. This was important as it gave me a better chance to faithfully convey the participants' feelings, thoughts and exact words during the interviews. During the transcription process, I kept in close contact with the participants so that we had the opportunity to clarify the ideas and obtain further explanations where necessary. The final transcripts were sent to the participants so that they could check them for accuracy.

3.5.3. Data-analysis approach

Polkinghorne (1995) described two kinds of data analysis in narrative inquiry: "analysis of narratives" and "narrative analysis". He emphasised the importance of considering the form of the data; in other words, whether the data is narrative or non-narrative in form. He pointed out that narrative analysis proceeds from components to stories, while analysis of narratives progresses from stories to components. These strategies were supported by Barkhuizen et al. (2013), who described analysis of narratives, which includes thematic analysis and discourse analysis, as being used for analysing narrative data; and narrative analysis, or narrative writing approach, as being used for analysing non-narrative data.

The distinction between narrative and non-narrative data can be unclear. Barkhuizen et al. (2013) suggested that narrative data can be understood as that which is already in story form. It contains, for instance, published language-learning memoirs, elicited language-learning histories or completed narrative frames. In contrast, non-narrative data is that which is not yet in story form, such as interview transcripts, diaries, reflective journals, multimodal texts or the various sources that often make up ethnographic data sets (Barkhuizen et al., 2013). As my study aimed to collect both narrative data (LLHs) and non-narrative data (LDs and semi-structured interviews), a combination of analysis of narratives and narrative analysis was used as the data-analysis approach for this study (Polkinghorne, 1995). However, narrative writing, or narrative analysis, was employed as the overall analytical strategy that led every stage of data collection and analysis in this study to construct and reconstruct participants' stories of their lived experience (De Fina & Georgakopoulou, 2015; Freeman, 2017; O'Mochain, 2006).

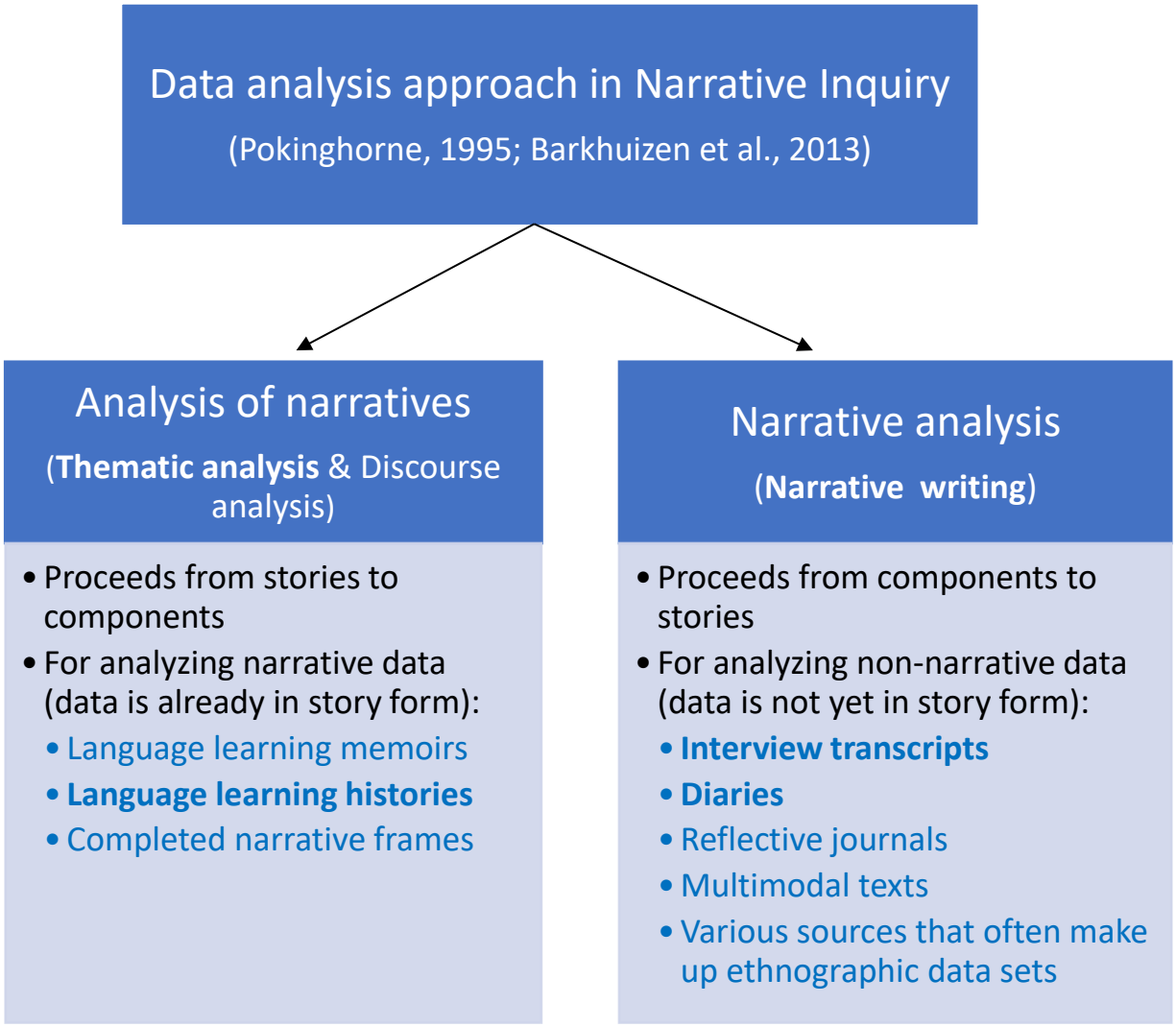

Figure 6. The data-analysis approach in narrative inquiry

Analysis of narratives

Under the heading "analysis of narratives" in narrative inquiry, Polkinghorne (1995) and Barkhuizen et al. (2013) discuss two data-analysis approaches: thematic analysis of the content of narratives and discourse analysis of the structure and language of narratives. While discourse elements of narratives were considered in this study, the thematic analysis of narratives provided by each participant was employed as the main technique for analysing their narratives.

Discourse analysis

Research has recently begun to look at how narratives uncover the discursively constructed experience (Barkhuizen et al., 2013). In these studies, the content and meaning of lived experiences are often treated as products of narrative discourse. According to Barkhuizen et al. (2013), the target focus in discourse analysis is on the specific linguistic features, rather than the ideas. The real meaning of experiences can be investigated through the study of structures, language and the uses of narratives. Thus, one of the commonly used strategies is the identification and interpretation of metaphors. Another is attention to structural features of

narratives or the discourse of the narratives; in other words, not on what the learners said, but on how they organise what they said.

A third strategy in discourse analysis is the focus on “narrative in interaction” to identify and interpret the interactional features in participants' lived experiences. For Watson (2007, p. 371), to look for interactional features, researchers should not only look at “the big retrospectives elicited from interviews”, but also identify the “ephemeral narratives emerging in everyday mundane contexts” of the participants. Examining the interaction allows researchers to see how participants identify themselves and others in terms of their mutual relationships and interaction relationships with a wider community. In the current study, metaphors from participants’ narratives were considered under social, cultural and contexts lenses to reveal what these participants wanted to convey in relation to their learning experiences. The structural and interactional features were also considered during the data-analysis process.

Thematic analysis

Thematic analysis of the content of narratives, in general terms, involves repeated reading of the transcripts; understanding and digesting these transcripts word by word and sentence by sentence; coding and categorising the data extracts; and reorganising the transcripts under thematic headings (Barkhuizen et al., 2013; Richards, 2003; Silverman, 2006). The smaller themes that emerge can be used to interpretively build larger themes. While thematic analysis can be applied in individual case studies, it is more frequently used in multiple-participant or multiple-narrative studies. According to Barkhuizen et al. (2013, p. 77), "thematic analysis is probably best suited to multiple case studies, because it opens up the possibility of comparing the narratives in a data set, of establishing shared themes, as well as highlighting individual differences". Thus, thematic analysis was used as a main strategy for the analysis of narratives in this multi-participant study.

One of the risks in this analysis process is that researchers may cherry-pick or look for pre-determined themes and fail to dig deeply into the data sets. To reduce the risk, Gao (2010) suggested that researchers should not simply look for explicitly mentioned themes, instead paying close attention to the meaning of data extracts from the transcripts. Barkhuizen et al. (2013, p. 76) argued that, whether the themes are determined in advance or not, "good thematic analysis always involves repeated reading of the data and several rounds of analysis, in which the researcher moves back and forth between the data and its coded and categorized forms in order to refine themes and theoretical relationships". Coding and categorising the data establishes the relationships between the concepts derived and the data (Ryan & Bernard, 2003). To keep the sequential coherence of the narratives in this method during the process of coding, categorising, and reorganising, I put data extracts and discussed them under each heading in chronological order. This process helped me to capture the important dimension of changes in the learners' learning experiences over time (Barkhuizen et al., 2013).

Thematic analysis can be an effective way to connect data extracts to more-abstract categories and concepts so that researchers can rearrange them to support their theoretical arguments. It is a helpful method, and one applied in this research to identify the similarities and differences across the narratives or multiple narratives (Ryan & Bernard, 2003). If thematic analysis is applied rigorously, "it can ensure that the researcher pays attention to all the data using the same analytical lens" (Barkhuizen et al., 2013, p. 81). While thematic analysis is essential to the analysis of narratives approach, as mentioned, it can also be seen as a weakness in narrative research, in that "there is inevitably a degree to which the narrative character of the data is lost in the process of analysis" (Barkhuizen et al., 2013, p. 81). Polkinghorne (1995) argues that the thematic-analysis process has the capacity to develop general knowledge of stories, but the knowledge derived from this process is abstract and formal and does not reflect the unique and particular aspects of each individual story. Thus, he views narrative analysis, or narrative writing, as a more suitable and widely used method of analysis in narrative inquiry. In this regard, a combination of analysis of narratives and narrative analysis was employed in this research to best avoid the drawbacks of using only one method.

Narrative analysis (narrative writing)

This research used narrative analysis as an overall approach to maintain a storyline throughout the research to construct, co-construct and reconstruct narratives with its participants (Barkhuizen et al., 2013). This approach to narrative writing, in which narrative writing is employed as an analytical strategy, was adapted from O'Mochain (2006). O'Mochain (2006) wrote that a story is crafted from the author's recollections, course materials, audio-recordings and the analysis of these materials. Polkinghorne (1995) suggested that narrative analysis is an approach to the analysis of varied data sources that is based on the construction of narratives, while Barkhuizen et al. (2013) maintained that narrative itself becomes an analytical tool that is brought to bear through narrative writing, and that the outcomes of narrative writing in narrative inquiry include historical accounts, case studies or storied episodes of people's lives. By applying a narrative analysis approach, the research filters and reorganises the mass experience of the participants through storytelling as a data-analysis strategy (Polkinghorne, 1995), and in so doing, constructs the narrative and achieves a narrative focus.

Narrative writing is also employed as a data-analysis strategy in biographical, or third-person, case studies (Barkhuizen et al., 2013). In the current study, I conducted research with adult language learners relying on our mutual understanding and cooperation. Xu and Liu (2009) and Liu and Xu (2011) were thus useful guides for my research in terms of analytical lens and choice of participants. In particular, Liu and Xu (2011) used narrative analysis through a process of interaction between the researchers and participants that encouraged the participants to tell and retell, live and relive their stories. The researchers used the analysis approach to analyse different sources of materials, including interview transcripts, written reflection reports and reflective

journals to explore EFL teachers' perceptions and experiences of educational reform. Their research has a similar context to the current study in Vietnam.

3.5.4. Data analysis and representation in this study

The data-analysis process and the reconstruction of narratives in this research were employed from its early stages (De Fina & Georgakopoulou, 2015; Freeman, 2017). According to Dörnyei (2007, p. 243), this differs from quantitative research, where there is a clear break between data collection and data analysis. Rather, qualitative researchers often "move back and forth between data collection, data analysis and data interpretation". Therefore, the combined process of analysing and reconstructing participants' stories in this research was implemented over the six months between July and December 2018, beginning as soon as I collected learners' LLHs. Barkhuizen et al., (2013, p. 73) argued that data collection and data analysis in narrative inquiry should not be separate processes: "Data analysis can begin at any point in a study and an early start is often advisable because preliminary analyses may help refine data collection strategies". In this study, the same process of data collection, analysis, and reconstruction of narratives was repeated at the second stage of the project, during which the LDs, each covering eight learning weeks within the eight-month interval of August 2018- March 2019, and for the third phase, the semi-structured interviews, which were conducted in March and April 2019. This ensured the use of the same analytical lens throughout all three stages of data collection and data analysis.

After the LLHs were collected, participants' written, Vietnamese-language narrative responses were first de-identified to ensure that the participants and their organisations were kept anonymous, with strict maintenance of confidentiality. The LLHs were then translated into English by an accredited bilingual English-Vietnamese translator. Data from the LLHs was first analysed thematically. Data-coding strategies for this study drew on recognised "word-based" and "scrutiny-based" techniques of observation (Ryan & Bernard, 2003) and involved "querying the text" to find out and craft the first-layer themes, threads and suggestions of changes and updates for the next data-collection phases (LDs and interviews).

The same process was applied to analyse the data from the LDs, which were first analysed using the coding techniques set out by Ryan and Bernard (2003) to identify themes regarding the participants' learning experiences. The results from the initial analysis of LLHs and LDs suggested themes and other important issues to explore at deeper levels at the interview stage; as a result, the interview protocol was significantly modified. The interviews were first transcribed verbatim into written form and translated into English. The same data analysis process that had been used for the LLHs and LDs was applied to the interview transcripts: data from the interviews were coded to find and compare themes and "threads" using "word-based" and "scrutiny-based" techniques of observation (Ryan & Bernard, 2003). To ensure a narrative structure, the narrative writing process was applied using short narratives of critical incidents within the interview

transcripts as core elements to rearrange the interview data (Barkhuizen et al., 2013). The themes and threads, as well as chronic and discourse issues from the interviews, were used to create an updated overall picture of findings regarding the learners' learning experiences and their impacts. The findings from all the participants and the interpretation of the findings were incorporated to create a whole storyline; this was presented as one single story that nevertheless retained the narrative character of each individual participant. It also compared and contrasted each individual with the other research participants.

To triangulate the data analysis techniques, I adapted Liu and Xu's (2011) four-step data-analysis procedure to reconstruct the narratives in my research. To apply their techniques, I again ensured that all data from the LLHs, LDs and interviews were fully unpacked through repeated reading of the materials and recoded them based on the learners' accounts of their learning experiences and reflections. The third stage involved adding and reconstructing the narratives for a storyline using short narratives of incidents as core elements. Finally, a process of telling and retelling, living and reliving the stories was undergone to ensure that the learners' learning experiences and reflections were accurately written up in the story storylines.

Table 3 shows the basic steps of data collection, analysis and representation in this study; Table 4 shows the coding strategies and steps.

Stages	Tasks/steps	Outcomes	Notes
1. Language learning histories (LLHs)	1. Collecting and translating LLHs		
	2. Analysing LLHs data using thematic analysis to reveal themes and extracts, considering participants' discourse elements		
	3. Using narrative analysis, considering chronic elements to craft the initial findings	First-layer outcomes (initial)	
2. Learners' diaries (LDs)	1. Collecting and translating LDs		
	2. Analysing LDs data using thematic analysis to reveal themes and data extracts including samples, evidence of their learning experiences and impacts, considering participants' discourse elements		
	3. Using narrative analysis, incorporating the extracts, examples and evidence to create the updated findings	Second-layer outcomes (update)	
3. Semi-structured Interviews	1. Conducting, transcribing (verbatim) and translating interviews		
	2. Coding (thematic analysis) to reveal extracts and themes, considering chronic and participants'		

	discourse components, comparing themes and threads analytically		
	3. Summarising (in tables and notes) all identified themes, threads including extracts, chronic and discourse components from the interviews, LLHs and LDs to facilitate the final analysis		
	4. Rearranging and reordering all themes and threads, ensuring that chronic elements and categories are maintained to help create the answers for the two research questions		
Synthesis	Using narrative writing (ensuring that the storyline is maintained) to create a whole picture. Writing while comparing constantly to create a full story of learning experiences and impacts of TELL based on the two research questions	Findings and discussions chapters (final)	

Table 3. The basic steps of data collection, analysis and representation

Steps	**Tasks**	**Notes**
1	Remind myself of the research purpose and key research questions	
2	Familiarise myself with the LLHs, LDs, or interviews transcripts	
3	Start with one transcript	
4	Identify text segments, extracts using the word-based and scrutiny-based techniques of observation, querying the text to ask what this participant is talking about	
5	Highlight text segments by colour, notation or bracket	
6	Assign codes that capture the text segment	
7	List all the codes and look for overlap and redundancy to refine the codes	
8	Group similar codes together using suggestions from my research question	
9	Identify categories that capture a group of codes	
10	Write memos about the categories	
11	Proceed with next transcript	

Table 4. The basic steps for data coding

3.6. Ethical issues in this research

Ethical problems in educational research can often result from thoughtlessness, oversight or taking matter for granted (Cohen, Manion & Morrison, 2007; De Costa, Lee, Rawai, & Li, 2020). Therefore, my research strictly followed Victoria University's policies on the responsible and ethical conduct of research to avoid possible harm and ensure the rights of the participants and community (Victoria University/Australian Code for conducting research/National Statement on Ethical Conduct in Research Involving Humans).

While my research was not expected to involve high risks, I still ensured that all possible measures were put in place to protect the participants' right to privacy, reduce researcher power and bias, avoid conflicts of interest and prevent disputes in authorship and data ownership (Barkhuizen & Consoli, 2021; Tagg, Lyons, Hu, and Rock, 2017). To reduce researcher power and bias and conflicts of interest, I included my own ethics and values (Carson, 2017; De Costa, Randez, Her, & Green-Eneix, 2021), as mentioned earlier, by positioning myself in the research using my own personal experiences regarding EFL learning and teaching as research data. I treated myself as a research participant as well as a researcher and used my own language-learning experiences and related EFL teaching and learning experiences to justify what I witnessed from these adult learners' EFL learning experiences (Josselson, 2007).

My research was categorised as a low-risk human study involving adults. It received approval from the Victoria University Human Research Ethics Committee (VUHREC) in June 2018. Information for participants and consent forms were carefully prepared and distributed to the participants to ensure that they were fully informed about the research and knew that their participation was entirely voluntary and that they could withdraw their participation at any stage of the research (Consoli, 2021). The research followed the Australian Code for conducting research and was developed in line with the National Statement on Ethical Conduct in Research Involving Humans.

Some ethical dilemmas raised during the data collection, data analysis and representation of the findings in this research will be discussed in relation with my reflections on the epistemological and methodological adoption in this research. This sub-section will be presented in the Chapter 8: Conclusion of this thesis.

The next chapter presents the findings of the research.

CHAPTER 4: FINDINGS PART ONE – LEARNING EXPERIENCES

This chapter addresses the first research question. Seven broad themes emerged from the analysis, and the chapter recounts those themes narratively.

4.1. Facing new contexts and choosing TELL as the only choice for their self-studies

Most of the participants in this study learned English from early stages of their schooling, at their junior secondary schools; however, they had little chance to improve their English skills, particularly for communication. For instance, one of them said: "I went to junior high school in 1989-1992. At this time, we had English, but mostly learned about greetings and vocabulary" (Hung, LLH, p. 1). Other participants had similar experiences: "… the teacher taught new words, pronunciation, we re-pronounced words, then learned some simple sentence patterns. In general, I really did not reach any goal" (Nhan, Interview, p. 1).

At senior high schools, they still engaged in rote learning, which was "completely passive" as My claimed: *"*My strong point was that I could memorise well new words, and my weak point was that I was completely passive during class" (My, LLH, p. 1). In addition to passive learning methods, the participants reported having to learn to deal with exam-driven curricula. Hung indicated the reasons behind this passivity: they "had no outside communication" during high school and "there were no foreigners for us to communicate with so, my English proficiency was very limited" (Hung, LLH, p. 1).

The perceived gap continued into university study, when the participants reported having low motivation for learning. Thanh indicated that English study served the sole purpose of expediting graduation: "The English subject in my major is just for a score on academic transcript. The books were nothing [to do with] communication, listening or writing practice" (Thanh, LLH, pp. 1-2). However, this lack of motivation was not universal; Quyet, for example, reported feeling enthusiastic about learning English despite an absence of real-world contexts for practice: "During high school, even university, learning English was an obsession for me, especially ESP at university" (Quyet, Interview, p. 1).

When the participants entered university, they realised the importance of learning English, though for most of them the motivation was purely instrumental, as Thanh indicated:

> Everything changed when I went to university, in 2011. To study at university, I had to move from the countryside to Saigon, a civilised life with advanced technology. In this place, all jobs required a foreign language. I suddenly realised that I needed to learn English again (Thanh LLH, p. 1).

Although English education at Vietnamese universities is generally recognised as better than that at schools, it was difficult for the participants to learn and improve. Thanh, Xuan and Quyet maintained that English was still taught at university in the same way as, or worse than, in junior high school and high school; as Thanh asserted, "the teaching of English was still going the same way as it was in high school, maybe even worse" (Thanh, LLH, pp. 1-2). Nhan shared this view: "… the teaching method was not much different from high school, except additional audiotapes from 'Headway' books" (Nhan, LLH, p. 2). For Xuan, the difficulties occurred because of the lexis of ESP programs: "English at university was mainly about economics, the words were difficult." Further, she did not have any chance to practice in "real life", and thus she did not feel confident to communicate with foreigners, even if the opportunity were to arise (Xuan, LLH, p. 3). These participants referred to the period prior to 2010, and all indicated that there was no technology to support their learning.

The English curriculum during their time at university was not attractive to these participants, making Xuan "less interested' in learning English (Xuan, LLH, p. 3). For students who were not majoring in English, it was hard to ensure the quality of English teaching and learning at university. Quyet remarked:

> At university, English was the most boring subject – outdated textbooks and curriculum, boring topics, mostly reading and writing again. Graduating, I was still unable to listen and speak … When I looked for a job, I often failed at the first round of English interviews. Overall, finding jobs then was not as smooth as expected (Quyet, LLH, p. 1).

Like Quyet, other participants realised the necessity for English for jobs, particularly ESP, so they were forced into relearning it. One interviewee said: "the purpose of relearning is to meet the needs for a job. I work in civil construction, with projects from ODA funding, so all work documents and dossiers are required to be bilingual, Vietnamese and English" (Hung, Interview, p. 4). Similarly, Bach started to learn English in earnest when she changed her workplace: "My institute receives foreign delegations every year from partner universities and some affiliate programs with the US" (Bach, Interview, p. 7). It was only being wakened by the necessity for English in the workplace that encouraged doctors such as Bach to learn to communicate with foreigners.

While all the participants had different learning contexts, they all seemed to choose TELL as the most useful method of self-study. Because all the participants only began relearning English when they entered the job market, it was difficult for them to return to formal learning, as Nhan noted:

> … but the thing is, learning English through technology seems to be the only way for those who have worked, because after graduating, they don't have opportunities to go back to school and classes. Mostly, they need to totally learn by themselves, search on their own

for documents. They seem to have no chance to learn in class again (Nhan, Interview, p. 20).

This example implies that these adult learners had work and other responsibilities, and thus did not have time for formal learning. Bach was not alone in this. She first had tutorial lessons at home with other doctor colleagues then attended classes at language centres, but then she had to stop due to her "work, family and other reasons" (Bach, LLH, p. 1). She turned to online media.

To better unpack learners' motivations to turn online, Thanh chose TELL as a result of her family's financial conditions. In her case, "adversity" brought "wisdom" in the form of searching on her own for resources and ways to learn: "Because my family could not afford for me to learn at the central areas of the city, I had to learn independently from the beginning". She was groping online, using Google to find keywords: "Self-study English", "Self-study basic communication skills", "Self-study advanced communication skills" (Thanh, LLH, p. 2).

In 2010, My, after 10 years of teaching, getting married and having two children, had more time, so she decided to return to relearning English. However, she was unable to enrol in any classes: "Because I was already 'old', I did not sign up for any extra English classes that delivered in face-to-face modes" (My, LLH, p. 3). This hesitation was due to the common fear of learning with younger generations; this is particularly pertinent to those Vietnamese born before the 1980s. In her view, her mature age rendered her unsuitable for formal learning, so she started exploring using TELL for her learning: "I realised the effects of technology … and that my English was not good enough. I asked myself, 'By what medium would I be able to study?', because at my age, it was no longer appropriate for me to go to school or to formal classes" (My, Interview, p. 8). It was ultimately fear of losing face, a deeply rooted cultural ideology, that led her to find ways to study on her own using technology.

4.2. Discovering resources and ways to learn

As mentioned, these participants did not have opportunities to return to normal schooling; nor did they have guides or mentors. Thus, they explored how to study on their own. One said: "In fact, no one taught me how to use technology to support learning, but I found it necessary, so I independently discovered such resources as TED talks, BBC Learning English, VOA and so on" (Thanh, LLH, p. 4). All participants who were mid- and late-career professionals (Hung, My, Nhan and Bach) discovered on their own the resources and ways to learn related to their work and life, shying away from socially embedded methods of learning.

The participants' first port of call to discover learning resources was in the realm of TELL: learning websites, YouTube, news, movies and professional channels. One elaborated: "I lived in a dormitory where there was wi-fi, every day, and as soon as I got home, I turned on the device to search for materials to study" (Thanh, Interview, p. 2). Participants such as Quyet actively sought resources from both familiar sites – "I went online, e.g., YouTube to find topics I wanted

to listen", (Quyet, Interview, p. 6) – and from diverse channels: "Today I opened Voice Tube (www.voicetube.com) to search for listening lessons, and this channel integrated BBC, CNN then trailers for movies, and TED talks. All things were within one page, so it was interesting" (Thanh, LD, p. 38).

Unlike the younger participants, the senior professionals tended to engage with specific learning websites: "I often went to the Living English Australia Plus site or YouTube to download lessons. I also accessed 'tienganh123.com' to download materials" (Hung, Interview, p. 9). Similarly, My wrote: "I selected 'www.tienganh123.com', www.studytienganh.vn, sometimes 'www.anglomanicya.pl', which had a rich source of vocabulary, grammar, fun, games and tests, etc. The vivid content and clear illustrations made me feel I could learn in a more comfortable way" (My, LLH, p. 3). Consciousness of what learning resources matched individual styles is a sign of metacognitive choices at work.

The choice of specific learning websites was evident, too, in Bach's narratives, which revealed that she tried specialist learning resources. She used "Special English" and was particularly interested in health and medicine to update her professional knowledge ("What I was most interested in is the field of health care", Bach, Interview, p. 2). She reported finding material for her speciality in "80-video-English lessons" on YouTube, and on the blog-style Vietnamese English-language resources https://www.hoc-tieng-anh.com/ and tienganh123.com.

Searching independently for individualised online resources was motivating for Thanh: "My first step was learning to listen...every evening, I rushed to bed, opened laptop, went to YouTube, opened the English listening channel from VOA radio to BBC to learn" (Thanh, LLH, p. 2). She was proud of her individual agency: "It had a lot of methods and materials. I didn't know which methods or materials were right, so I explored for myself and saw what was suitable" (Thanh, Interview, p. 2). This was also shown by the learning methods Xuan acquired in the workplace. When foreign experts used specialised words related to construction, trade or accounting, she would "record the meeting" and then looked up the words. Her courage grew and she sometimes "asked these foreigners or chatted with friends for the explanation" (Xuan, Interview, p. 5).

Learners discovered strategies for learning independently, as in Bach's use of video lessons: "When I didn't understand, I used to rewind. If I listened again but still did not understand, I stopped each sentence and deduced the meaning, and if there was any new vocabulary, I would look it up" (Bach, Interview, p. 18). In the same way, Hung used captions in clips while he listened to spoken English: "I both listened and looked at the screen for the instructions with captions in English." In light of this learning, he practiced independently, and when there were new words, he "paused the video clip, then turned to Google, and searched to see the meaning of the words" (Hung, Interview, p. 6).

While the data suggest that some participants had smarter approaches to devising learning methods, they also suggest that they still used traditional ways for their learning. On the one hand, Quyet reported a degree of agency:

> I have a habit of going online to find topics I am interested in: "How to be successful"; "How to learn English faster"; or "How to live a happy life?". For the topics I wanted to listen to, I would go to YouTube, listen, investigate and study (Quyet, Interview, p. 6).

On the other hand, Xuan wrote: "After each lesson on tienganh123.com, I always tried to learn by heart the words, grammar, the usage and structures to join them into sentences" (Xuan, LD, p. 4). In this scenario, she used rote-learning and joined the words to make sentences. This and her strategy of rewriting showed that she was using memorisation as a way of learning (Xuan, LD, p. 10). This way of learning was clearly based on her previous learning methods. This can also be seen from her views about learning vocabulary and pronunciation: "To learn English well at junior high school, the material that could be used was the English dictionary with phonetic transcriptions in Vietnamese … I tried to read English words with Vietnamese phonetic transcriptions many times" (Xuan, LLH, p. 2).

As mentioned earlier, the late- and mid-career professionals sought TELL methods away from social contexts and were motivated by work-led materials. For example, Hung often brought home documents from work and researched professional English. He said, "Working with foreign partners, I brought home the documents, such as documents that the two sides are working on together, working contracts in English, and so on" (Hung, Interview, p. 9). Such learning, he said, was supported by TELL. Other participants gave similar evidence. Nhan, a GP, commented on his experiences with finding materials from medical websites such as PubMed and Radiographic. "I often searched for particular problems. This is how the advent of technology has changed my approach to learning - it has made me feel much more comfortable in learning English and finding specialised materials" (Nhan, Interview, p 3).

This indicates that technology helped Nhan change his approach for learning. He is now proactive and takes advantage of advanced technology to search for professional materials: "Most of the pages I visited contained updated lectures on imaging diagnostic areas. People uploaded documents; I just need to search for them" (Nhan, Interview, p. 16). The following excerpt reflects his exploration strategies:

> If I am interested in a particular disease, I just need to search Google using keywords or phrases, e.g., 'ung thư tế bào gan nguyên phát' or 'primary hepatocellular carcinoma' in English. Materials and links appear. Lots of articles can be found from radiographic links, or PubMed, etc. I can download it to read, it lets me study (Nhan, Interview, p. 16).

The learning involved many of the other aspects of their lives. My said, "I have quite extended family with a lot of people living in foreign countries … When I talk, I turn on the device, and all

my family members talk, not just me." She tried to get her two children to speak, because they were at the age of learning to speak English (My, Interview, p. 27). The relationships between learning and lives were also reflected in Bach's narratives. For example, she said, "I have a nephew who cannot speak Vietnamese, so I must chat with him over the internet in English" (Bach, Interview, p. 10).

The senior participants experienced an apparent "inverse socialisation" in gaining English and IT skills, although they were often active, and their learning involved materials useful for their work. Hung had to ask his younger brother to set up a Viber account, My needed the guidance for IT use from her son in year 8 and Nhan was forced to use his daughter's Skype account due to his inability to install his own. English knowledge developed intergenerationally within the home. My stated: "One day I didn't know how to use words…then my nephew reminded me to say this and that and then I remembered, not only me, but also my two children remembered" (My, Interview, p. 28).

Similarly, Bach commented,

> Another interesting thing to share about my English learning was that my daughter advised me to watch foreign movies on HBO. I then followed her advice. To be honest, when I watched, I could learn how Americans spoke, how they pronounced English. I could learn the English expressions. The good thing was that I could listen and watch the subtitles at the same time (Bach, LLH, p. 2).

4.3. Using computers as tutors

All participants became involved in L2 through their interactions with computers and the information to which they gave access. They used computers as a tutor that gave guidance and provided materials for their study. My said:

> I learned through tienganh123. This website taught me all four skills. I also learned a lot of vocabulary through the vivid ways with pictures, easy to remember, very interesting. I often listened to the native teachers' pronunciation, read it over and over again. When I was tired, I listened to songs, or watched movies in English or with English subtitles (My, Interview. p. 6).

Other narratives were categorised under three sub-themes: engaging in observational learning and vicarious interaction; using the Control and Help options; and using a repeated process of imitation, repetition, recall and practice. For the first sub-theme, participants used learning channels particularly with video lessons from English-learning websites in which they observed interactions between groups of teachers and model students. When learning with the 80-video-English-lesson program on YouTube, Bach said, "I found it interesting … there were usually a teacher, tables and pens, and three model learners. They wrote, participated and had interactions.

The program also had specific sections for learners to learn and practice. So it was easier" (Bach, Interview, p. 16).

When using these programs, learners had a similar experience to attending in-person lectures: "teachers explained, e.g., the grammar part, sentence structure, verbs, pronouns, possessive adjectives, etc." (Bach, Interview, pp. 4-5). Although they did not have face-to-face interactions, they still learned, listened, watched and followed the interactions between the teacher and model students: "Although I didn't have direct contact, I could listen to their conversations, watch their interactions – then I imitated" (Bach, Interview, pp. 4-5).

The participants engaged in vicarious interaction with what the teachers asked and with the content of the programs. For instance, to answer a question by an [online] teacher from the Living English program, one participant silently responded: "The teachers often asked in a very new and lively way. They held up a ball, then asked what it was. I then answered myself silently in my mouth that *'It's a ball'* …" (Hung, Interview, p. 12). This showed that Hung had his own self-directed use of language in a form of private speech. In a different situation, he just whispered when the teacher in the video asked a question: "They asked, *'What is the shape of this image?'*, and I just whispered, *'It's a circle'* …". There were times when teachers gave an answer and asked learners to make the question for it. For example, Hung said, "The teacher held up a book, and said, *'It's green'*, so I then needed to ask a question for it: '*What colour is it?*' If the answer was '*It is a square book'*, then I needed to ask, '*What's the shape of the book?*' (Hung, Interview, p. 12).

During the learning sessions, the participants often imitated the utterances of the teacher and model students. Bach said, "I listened and read along with the talking" (Bach, Interview, p. 4). Thanh said, "I just watched they taught. I just followed and read again following to what the teacher taught" (Thanh, Interview, p. 4). When learning pronunciation and communication skills, she commented:

> My skills were very bad, oh my God … So, I went back to Google, and YouTube, opening videos to learn communication skills again. I saw how they used the mouth to pronounce the words and I followed the same way. For two months, talking to myself, people thought I was crazy (Thanh, LLH, p. 3).

To learn pronunciation to facilitate speaking and communication skills, My commented, "I often listened to what people said, and then listened again and again to follow them [pronounce again]. I also learned from movies, songs, etc." (My, Interview, p. 8). Similarly, Xuan said, "I went to tienganh123.com, listened to foreigners and read again. I often rehearsed and imitated their words and sayings … The program usually allowed time for learners to practice speaking after teachers" (Xuan, Interview, pp. 2-3).

The second sub-theme involved the use of Control and Help options for more salient resources. In this part, learners mostly used Explanatory help and Compensatory help. In the case of Explanatory help, when listening, many times they did not understand, so they looked for transcripts and dictionaries; these were the common resources to which they referred during their learning. Thanh talked about what she did when she faced difficulties with listening: "I went to YouTube, opened VOA radio, or BBC Learning English. I listened but could not understand. I was angry. I then started to listen and look at the transcript. Whenever I did not understand, I opened the dictionary …" (Thanh, LLH, p. 2). Learning this way, Thanh said: "My listening skills were much better" and that "While watching, I heard a lot of what the actors said." This motivated her to "watch and learn more" (Thanh, LLH, p. 2).

While listening, My encountered new vocabulary. She then used transcription and audio to support her learning. She found it convenient, as it had illustrations to help her remember the words. "The interesting thing was that … each vocabulary word had an example and illustration of how to use it. This both helped improve my reading skills [read aloud and pronounce] and helped me remember words better", and even facilitated practice because "it is convenient for me to listen to and recite many times" (My, LD, p. 10).

My also looked for translations to review her vocabulary lesson: "I reviewed the translation first to learn the words from yesterday that I couldn't understand from listening" (My, LD, p. 1). Nhan used the Help option to learn vocabulary in a slightly different way: "When I met words, I looked up online, clicked on pronunciation icons and listened to see how people said them. I followed, repeated, to learn how to pronounce it. I just kept listening and read along until I could say it fluently" (Nhan, Interview, p. 18).

Regarding Compensatory help, when Hung learned with video clips from the Living English website, it helped him in dealing with difficulties while listening: "At first, I had difficulties. So, I had to listen again to each sentence in the conversation … It was convenient because I could rewind back and forth, stopping when needed" (Hung, LD, pp. 1-2), and these facilitated his learning: "I listened to the whole conversation first. Then, I rewound the video from the beginning and listened again sentence by sentence to see if I knew all the words" (Hung, Interview, p. 18).

When Bach did not recognise a word – "there were easy words I could hear, but there were words I had to guess" (Bach, Interview, p. 4) – she stopped the video to look it up. She acknowledged the advantages of learning with technology in that she could replay the lesson and pause to look up words.

Besides using Google, Thanh and Quyet also employed Play Speed Control during their learning. This helped them to speed up or slow the speech rate of the lesson: "I could adjust the speed. If you wanted to listen with high or low speed, you could adjust it as you want." This again helped her learn and practise: "I just listened to it over and over. Sometimes when I couldn't hear, I

started with only one or two words, then guessed the words, and went to Google to look them up" (Quyet, Interview, p. 5).

As mentioned, the participants engaged in a repeated process of imitation, repetition, recall and practice. Xuan said: "I usually learned through websites. When people came to a store, they asked, then the seller responded. Via this, I imitated and applied the appropriate response when I was in the same situation". She imitated to learn vocabulary, expressions and discourse and negotiation skills through learning websites: "I learned common sentences, vocabulary and ways to express ideas. I learned how to buy, or ask for the best price. I knew how to suggest things to customers" (Xuan, Interview, p. 14).

During the time they spent learning, the participants engaged in practice every day. For instance, Quyet often learned and practised pronunciation with Elisa Speak: "Using the software on the phone, I learned pronunciation with words ending in the sound of the consonant /v/, e.g. love, give, have" (Quyet, LD, p. 16). First, she read on her own, then the software recorded, corrected and suggested ways for her to improve her pronunciation:

> I first clicked on the headset icon and read. The software recorded my voice, corrected errors and showed the ways of pronouncing. For example, it commented, "You have read /f/, instead of the correct sound /v/," and suggested, "Place your upper teeth on the lower lip and vibrate your throat to create the /vvvv/." So I listened to the speaker's voice again and read it again. If it was correct, the software scored up to 100 points and showed the word "Excellent". Then I moved to another word, and just did the same steps, and so on (Quyet, LD, p. 16).

The participants often rehearsed the situations. Xuan wrote in her learning diary: "I imitated, listened for several times, then I paused. I acted as the shop keeper, then the customer. I myself practised saying things like that" (Xuan, LD, p. 2). She repeated this in her interview: "I immediately played the part of the shopper and shopkeeper, and I answered myself. I often played back the sentences in the conversation to see if my acting was right …" (Xuan, Interview, p. 14).

By using private speech and vicarious interaction, the participants could practice in a similar way to the traditional formal classroom: "When encountering short sentences, I often repeated myself. The program had sections for learners to repeat: the teacher read it first, then I repeated" (Bach, Interview, p. 17). Hung described a similar technique that he used: "I looked at the example sentence by sentence, listened and then stopped one by one. I practiced speaking the sentences myself to see if I could pronounce them correctly" (Hung, Interview, p. 18).

Participants used the strategy of repeated involvement, in which they learned and then reviewed on a later day. My wrote in her diary at various points: "I didn't understand well yesterday, so I listened to it again today" and "Today I was busy all day so, late at night, I opened the smart phone to review the lesson yesterday … many words I today understood" (My, LDs, p. 1).

Imitation could be either immediate or delayed; for example, Thanh wrote, “Walking on streets, seeing some words printed on the signboard, although I did not know anything about them, I tried to memorise it. Later at home, I searched for those words …” (Thanh, LLH, p. 4).

Many reported finding this repeated process helpful. For example, Thanh wrote, “My vocabulary had not expanded much, but looking back, I went a lot further” (Thanh, LLH, p. 4). For Hung, it helped him develop cognitive knowledge: “All these ways encouraged me to think and ask questions. If I felt it was not right, I then would search online to see if I answered correctly” (Hung, Interview, p. 12). Bach acknowledged its values: “Because teachers explained, for example, introducing vocabulary, with accompanying illustrations, I recognised the new words, and understand those better” (Bach, Interview, p. 16). She also commented on her use of Special English news: “It was good that when I listened many times, I remembered lots of vocabulary” (Bach, Interview, p. 3).

4.4. Employing computers as a tool to connect with others for learning

As they learned, these participants actively connected with people in conversations through the computer. Thanh said:

> God seemed to support me, so one fine day, I accidentally surfed the Internet, and saw an app to make friends to chat with foreigners ... I immediately signed up for an account, chose a beautiful avatar, waited for people to chat, I told them to teach me English and I offered to teach them Vietnamese. Since then, I had people to interact with to learn English, even though it was only one hour a day, but it was fun. I then also downloaded Skype to join English learning groups. I have, since then, worked very hard, and am not lazy anymore (Thanh, LLH, p. 3).

She was interested in games, so she often engaged with other gamers: “Today I found ‘Wegamers’ for gamers like me, the software connected directly to the game … I really like it.” This helped her “connect with quite a lot of people from overseas” (Thanh, LD, p. 9). In the same way, when reading a Vietnamese newspaper, when Quyet saw an advertisement on a virtual learning site, she immediately “joined the group”, and her English ability subsequently improved: “The turning point for my English ability, I think it started from 2013 or 2014 when I joined some groups to learn English online, for instance, ‘Paltalk’ …” (Quyet, Interview, p. 2).

As they learned, they had exchanges with other people. For example, Thanh recounted: “The other boy sent me a recording of his voice and asked me to check pronunciation for him. It was all wrong …” (Thanh, LD, p. 14). She was always ready to help others: “Today a little boy from Tandem suddenly knocked on my door (gõ cốc cốc) to ask me whether ... I’d be willing to explain (Thanh, LD, p. 12). Participants also joined social-networking learning groups. For example, Quyet and Thanh participated in WELE Vietnam, where they learned and “interacted with the admin team, who corrected mistakes” (Quyet, LD, p. 15). They also interacted with other

classmates and helped them in their learning: "… the group asked me to serve as an admin for a while, which meant that I supported other learners, let them listen, did the tasks, sent their work back. I then fixed errors for them" (Quyet, Interview, p. 7). She "corrected, explained, and told them what were wrong, what to note, what the grammar mistakes were". She gave them advice and guidance: "during their studies, what they wanted to ask, I also answered them" (Interview, p. 7).

The participants, particularly Hung, My, Nhan and Bach, connected with professionals, including foreigners. My tended to be more active in this process: "So, a few years ago, I tried to have more communication. I started to connect with foreign professionals, from workshops … and then making friends with them via Facebook, Skype or Viber" (My, Interview, pp. 9-10). Similarly, Nhan joined groups via social-networking sites, particularly those for doctors to learn medical English online:

> There were different groups to connect with … I joined https://www.vietmd.net/, a group of doctors overseas, from the United States, Canada, etc. who taught medical English online for doctors and medical students. The group also helped other Vietnamese doctors learn and update their professional knowledge and skills (Nhan, Interview, p. 9).

Through learning with this group, Nhan could keep practicing using various medical situations to update medical knowledge and improve his discipline expertise: "We practiced and practiced so that we knew how to interpret the symptoms of the disease or how to make a medical record in English." He could learn from others in the group: "they normally corrected mistakes or raised a question, taught about the origin of medical terminologies, pronunciation, then the meaning, etc. I could also ask questions directly during the class session" (Nhan, Interview, p. 10).

During their learning process, the participants used both asynchronous and synchronous computer-mediated communication. Thanh said:

> There were usually simultaneous interactions between us. I texted people and then they replied immediately right away, so on and so forth … But sometimes, when I saw that my side must wait too long, that was, I must wait for the other person online, then I asked them for Skype or Viber to add their nick [identity], made friends to chat even off-line. In this case I still texted them and if they were unavailable, they would reply later (Thanh, Interview, pp. 11-12).

Similarly, My maintained asynchronous communication as well as synchronous: "I still maintained non-simultaneous communication because we did not always have the same free time … I was able to learn from such methods" (My, Interview, p. 11).

Some participants (for instance, Thanh, Quyet and My) often looked for chances to use synchronous computer-mediated communication: "I thought, why didn't I use technology for

communication with others at the same time, this was definitely even more effective. So, I started connecting with people I ever had contact with from different work seminars" (My, Interview, p. 9). Similarly, Nhan talked about his interactions with other medical professionals: "This is a public chat group, so if someone wrote or posted something, everyone in the group could see it. When a person asked but many others wanted to answer, they all could answer with what they thought" (Nhan, Interview, p. 12).

Synchronous computer-mediated communication brought benefits to these learners. Serendipitous learning was viewed as one of the biggest benefits, as My commented:

> I also didn't think that I was studying, but I kept talking naturally and very often. Many times, I didn't know that it gave me a lot of benefits, but after three years of actively learning, I now feel very confident. All my language skills were greatly developed (My, Interview, p. 18).

She continued: "Technology has become a part of my life…this has helped me speak a lot. Sometimes I did not immediately see the effectiveness, but I then saw that my ability improved" (My, Interview, p. 26). She mentioned the convenience: "All of these achievements were through technology that helped me connect and communicate with my distant friends. Whenever I needed, I could have their support" (My, Interview, p. 18).

While some participants (Xuan, My, Bach) mostly used text chat to communicate asynchronously with online teachers and friends, Hung often used email to exchange his work with colleagues. For Hung, writing work emails helped him increase his vocabulary and grammar skills: "I wrote incorrectly and used inappropriate words, but through my colleagues' replies, I gradually understood how to use correct words" (Hung, Interview, p. 11).

Although the participants felt that synchronous computer-mediated communication had benefits, asynchronous CMC was less stressful and gave them more processing time: "Exchanging by chat was less embarrassing than meeting face to face. Because I was not afraid of being laughed at when I made mistakes" (My, LD, p. 15).

4.5. Goals, agendas and reflection as part of learning

The participants all had their learning goals, agendas, and reflection for learning. For the first subtheme, learning goals and agenda, since they wanted to communicate in English, and to find a better job, they tried to find opportunities to realise those goals. For instance, Thanh even planned to go abroad to improve her English: "… I am going to Myanmar to do volunteer work, but my purpose is also to learn and use English and to connect with people there" (Thanh, Interview, pp. 31, 33). In her view, it was an opportunity for her "later career" (Thanh, Interview, pp. 24-25). In a different way, Xuan emphasised the "importance of grammar" while learning (Xuan, Interview, p. 17), and had her own agenda to achieve it: "My plan is to study grammar

and how to write sentences so I can compose texts and documents" (Xuan, Interview, p. 18). Bach, as an "older person", just aimed to gain general communication skills (Bach, LLH, pp. 1-2).

Unlike Xuan and Bach, other participants (Quyet, My, Hung and Nhan) had clearer goals and agendas. For instance, Quyet said, "If I was weak at listening, I would listen a lot more. When I was weak at speaking, I first listened to it, memorised, then spoke again. I addressed my weaknesses, then I spoke better, I listened better" (Quyet, Interview, p. 11). Similarly, the participants' learning goals and agendas were strongly related to their jobs. To communicate with his foreign colleagues, Hung first aimed to improve his "listening and speaking skills" (Hung, Interview, p. 10). He later aimed to "gain technical terms and reading and writing skills" to deal with bilingual documents that he considered were legal in nature for his construction work: "I must learn to understand those documents, to write documents in bilingual English and Vietnamese. Through this, I could improve communication and negotiation skills" (Hung, Interview, p. 26).

The second sub-theme involved reflection on learning. The participants first reflected on their learning in general. For instance, to learn to communicate, Thanh saw that she "must have someone to interact with", so she "went to the park to catch westerners [để mà bắt người tây, to find people from western countries] to practice with" (Thanh, LLH, p. 3). Similarly, My reflected and realised her need to interact with other people for learning after using various applications. Unlike Thanh and My, Quyet reflected that she could learn with the Paltalk program. However, after a while, due to some constraints, she "quit this learning" (Quyet, Interview, p. 2). While Hung acknowledged his progress, he proposed solutions for improving it: "I had a feeling that I made little progress, but I need to relate more to real life, for example, think of what happened and express it in English" (LD, p. 5).

The participants evaluated and often compared various programs and materials. Bach wrote, "I found it easier to learn with the 'video-English lesson' program. I also felt less pressure" (Bach, LLH, p. 2). In the same way, My reflected on the differences between her learning from websites and learning via synchronous computer-mediated communication with foreign professionals, appreciating the opportunities for learning that it offered. Reflecting on how he evaluated the quality of programs and materials, Nhan said, "There were times I found documents that I didn't really trust … I often chose the official documents from the websites recognised by the World Health Organization; then I read them more carefully" (Nhan, Interview, p. 21).

The participants reflected on the use of language. Quyet said, "When graduated, I could not communicate in English nor listen to foreigners speaking. I could not listen to the interviewers for a job interview"; thus, she asked herself why, after studying English for so many years, she still could not use it (Quyet, Interview, p. 1). Similarly, when Thanh spoke of facing challenges

with foreign customers at work: "… the day I met the Korean guest at work, I didn't understand what he said ... He then hung up the phone, which made me very uncomfortable." As a result, she re-evaluated her ability to use English: "I asked myself why I couldn't hear – was it because of my level or something wrong? … I felt restless, I sat down and texted [the Korean guest], begged him to add Zalo to exchange messages and ask for what he wanted and needed." She finally found out the reason and could learn from the mistakes: "Through follow-up Zalo conversations, he said he hung up the phone as our services were so bad …" This also helped her to revisit and reset sub-goals to fill in the gaps in her knowledge of English for specific purposes: "From then I went deeper to learn more specialised vocabulary" (Thanh, Interview, pp. 27-28).

4.6. Facing challenges

Narratives in this part are grouped under three sub-themes: (1) age, culture, work and life circumstances, (2) learning strategies and resources and (3) policies and support.

4.6.1. Age, culture, work and life circumstances

The first sub-theme relates to the challenges regarding age, culture, work and life circumstances. Participants perceived age-related limitations on their learning compared to young people. For example, Bach said, "As people get older, the ability to learn is not as good as young people" (Bach, Interview, p. 8). For her, it was "a significant disadvantage for older adults". She said, "It was really difficult when it was not as easy for adults to imitate as in children" (Bach, LD, p. 8). Similarly, for Nhan, the motivation for learning seemed to decrease: "Learning English needs time and perseverance. I am getting old and so I am afraid of learning" (Nhan, LD, p. 7).

Culture also affected their learning, particularly in learning English for communication at work and in daily life. Vietnamese people are often reserved in communication, and may not actively take opportunities to learn and interact. For instance, My said: "I have been to many workshops and met many foreigners, but because I was shy, I did not take these opportunities to learn English" (My, Interview, p. 9). Further, Vietnamese people are often afraid of being wrong and losing face. My described this in more detail: *"*I previously rarely communicated and was often not confident. I was afraid of being wrong and even more afraid to talk" (My, Interview, p. 15). Cultural stereotypes also affected participants' attitudes to learning. My, for instance, thought that her age was "no longer appropriate to go to formal classes" (My, Interview, p. 8), so she "did not sign up for any extra [face-to-face] English classes" (My, LLH, p. 3).

The participants' learning was also affected by their work and life circumstances. For example, Xuan said, "… at this age, people are often dominated by many things, and will also have difficulty in learning in terms of age. Unlike young students, adult people are often distracted and overwhelmed with other work" (Xuan, Interview, p. 17). Similarly, Bach, said, "I normally had

pressures from work, family, economic issues and many other things. Because of this, I was tired, and so could not study anymore after work" (Bach, Interview, p. 18).

Nhan, a medical doctor, also spoke about being overworked: "For those who have graduated and are working, the opportunities for them to go to and study in formal classes are almost unavailable" (Nhan, Interview, p. 19). This was also the reason that the participants often found ways to self-study. Nhan continued, "When we entered professional work, we were often overloaded with the work, even out of working hours, at weekends, so it was really difficult to follow formal schools and classes to improve knowledge, particularly to improve English skills [to the level of a university] major" (Nhan, Interview, p. 20).

While early-career professionals faced fewer difficulties in terms of age and health, they were still affected by other work and life circumstances that decreased their motivation during learning.

4.6.2. Learning strategies and resources

The second sub-theme involved in challenges with learning strategies and resources. First, the participants faced difficulties in processing information, analysing and summarising knowledge. For instance, when Xuan learned words, she "imitated and reread", but she did not know if she "pronounced correctly or not" (Xuan, Interview, p. 17). For her, assistance from a teacher in face-to-face classes would have been helpful.

To learn vocabulary, Xuan tried to use cognitive skills and tried to remember words: "I tried to listen and imitate many times the ways the people in videos read. I wrote and rewrote the words I learned from the lessons" (Xuan, LD, p. 12), but it was still difficult for her to remember the spelling. "I still had spelling and grammar errors. I could read words but could not remember how to write" (Xuan, LLH, p. 6). She commented in her interview: "Some of the difficulties I encountered were that I didn't know if my pronunciation was correct or not. I only studied online, so I was not sure about how to pronounce difficult words" (Xuan, Interview, p. 3).

They also faced challenges in organising, managing and supporting their learning. During their learning, the participants were still passive. Bach commented, "My strength was probably not much, although I did not lisp ... I seemed to have more weaknesses … Perhaps that was why when I learned by myself through audio-visual equipment, I was easily discouraged and often gave up" (Bach, LLH, pp. 2-3).

Similarly, Nhan elaborated on the need to have a specific teacher to support learning: "If [adult learners] attended a class with a specific instructor, it would be more convenient because they could communicate directly with the teacher, learn pronunciation etc. and ask questions if there was anything they did not understand" (Nhan, Interview, p. 19). He also implied that, in order to self-study, learners needed strategies to manage their learning.

The study participants met difficulties in determining what and where to learn to improve communication and facilitate their jobs. For example, although Xuan needed English for her career, she focused on learning with lessons for school students: "I often used websites such as tienganh123.com and IOE tests to listen to the lessons for primary-school children. After finishing the programs, I switched to listening to lessons for junior-high-school students" (Xuan, LLH, p. 5).

The participants chose different areas of language on which to focus. Xuan emphasised grammar, making it the centre point of her learning, although she aimed to learn for communication purposes. She also advised other adult learners to focus on learning language patterns. Similarly, Hung wrote, "While we learned, we paid attention to ensure that the sentences must include subjects, verbs, predicates and correct tenses in English … We had to translate English texts into Vietnamese and from Vietnamese into English" (Hung, LLH, p. 2).

The participants faced more difficulties with strategies to organise and support their learning, particularly for those at a lower level of English competence. For instance, Nhan commented about the challenges of finding appropriate reading materials: "… the English level of each person was different, so whether you could learn depends on it. For those with a lower [competence] level, finding and reading materials would be more difficult for them" (Nhan, Interview, pp. 18-19).

They also faced challenges in finding opportunities to interact, share knowledge and communicate with other people for learning. Bach found it relatively easy to understand grammar lessons, even advanced ones, but it still challenged her to turn that grammar into real knowledge of how to use English for communication. This revealed that, in addition to the strategies they needed to process information, they also needed metacognitive strategies to organise, manage and find opportunities to support their learning so that they could transfer what they learned into English-language competence.

While some participants were located fairly well in terms of finding resources for their learning, still faced challenges in finding suitable learning programs and materials. For instance, it took time for My to choose learning websites and materials for her learning – "the resources are so abundant that sometimes I felt like I did not know what to learn and how to start" – but she found solutions by refining her searches for materials: "I then selected some reputable sites and focused on these sites; other sites were for reference only. This helped me learn in a more focused way and avoid getting lost" (My, LLH, p. 3).

Other participants also found it challenging to choose materials and ways to learn. For instance, Hung said, "There were still certain difficulties, when the materials were too much, I didn't know which one was the best for me" (Hung, Interview, p. 24), and Thanh wrote in her LLH, "… I

didn't know where to start. So, I was groping online, sitting using Google search, etc. … The result offered thousands of ways to learn. This made me confused and terrified me" (Thanh, LLH, p. 2). Xuan commented, "Now there are too many support tools, so I don't know what to follow to study, this or that? That is, I am dominated by different orientations" (Xuan, Interview, p. 16). She sometimes found the documents unsuitable, saying that "websites have too many documents, which makes me unsure which one is right and suitable", lost direction in her learning: "There is too much information on a certain thing that makes me feel lost, unable to navigate"; thus she expressed a need to have an in-person teacher: "If I study English with a real teacher, I can focus more and save time" (Xuan, Interview, p. 16).

Unlike Xuan and other participants, Thanh looked for various learning apps, but she faced difficulties in finding suitable ones for her study:

> I today continued to search for apps to replace E-tandem, when I saw the Duolingo apps, … I downloaded it for a trial learning but felt sleepy and bored … That app was not suitable for my learning style, so I removed it (Thanh, LD, p. 15).

In another diary entry, she commented:

> For the first time I bought an English learning app, Rosetta Stone. Installation was easy, but it was not worth the money I spent, because the app did not satisfy me at all, a kind of too-passive learning … After going through five lessons with this app, I quit it too … ☺)" (Thanh, LD, p. 15).

Thanh also wrote, "I download and then delete, delete, download again, then delete … It's time-consuming to look for the apps … How can I find the apps I want, huh? Huh?" (Thanh, LD, p. 21). She faced challenges in learning punctuation with online apps: "… the people all over the internet are chatting using spoken text, semicolon then dash, blab. …" (Thanh, LD, p. 12). She also faced difficulties when dealing with learning formal writing and structures: "An American guy, my friend, has connected with me via Lords Mobile. Everything is okay except teaching me English ☹. Even when chatting, it was all in abbreviation, and confused me a lot" (Thanh, LD, p. 22). She also wrote about the difficulty of finding peer learners on these apps: "I decided to remove e-tandem apps from the phone, because I am bored. My sister praised it – maybe it suited her, but for me, how difficult to meet people for learning and interactions!" (Thanh, LD, p. 13).

4.6.3. Policies and support

The third and final sub-theme of this part relates to the difficulties in policies and support the participants faced. For the first stages at schools and universities, they showed that the language policies and exam-driven curriculums during these stages did not give them the opportunities to learn English for communication, but mainly for grammar learning: "To be honest, at high school and university, it was just to study for exams, so at that time there was nothing called learning to

communicate or apply for work later …" (Hung, Interview, p. 4). Due to the poor infrastructure, the participants only had a limited chance to access technology – for instance, just for learning to type – and did not have the chance to apply it to language learning:

> In Vietnam, we had no access to technology until we went to university, from 1997 to 2003. At that time, we had access to computers but did not have the internet, so we used computers just for learning to type, or taking a quick look at simple software, not applying them to learning English …" (Nhan, Interview, p. 2).

These participants also faced challenges with language learning during their time at work. One of the most challenging was the policies from their working environments that did not really facilitate their learning in the long term. The most typical reason for this limitation was that the policies and support were not consistent over time. Bach gave an example: "A few years ago, the hospital where I worked had a regulation that doctor's professional briefings must be in English … but that rule didn't last long" (Bach, LLH, p. 2).

Other examples include excerpts from Thanh, who mentioned about a lack of encouragement within her working environment to study English (Thanh, Interview, pp. 22-24). In these participants' view, the lack of encouragement in terms of policies and support did not "motivate them in learning" (Bach, Interview, p. 8). In practice, the policies were not strong enough to communicate, let alone support, the important role of English in the workplace (Bach, LD, p. 12).

The participants' other difficulties included that they had to teach themselves. For instance, My said, "Absolutely no one taught me how to use technology or TELL learning environments" (My, LLH, p. 3). Xuan said, "There is no specific person to guide myself for a way to learn to be effective" (Xuan, Interview, p. 16). Moreover, she said, "Because there are many websites for people to refer to, I am worried that I will learn in a wrong direction. Without an instructor, it would be waste of time and not be effective" (Xuan, Interview, p. 16).

4.7. Showing positive attitudes, determination and self-creation of affordances for learning

4.7.1. Positive attitudes

The participants showed their love for learning English. For instance, Thanh wrote, "… I am passionate about it. Any day without learning, I cannot sleep well" (Thanh, LLH, p. 4). Similarly, Quyet said, "I had a love for English. I had always imagined speaking fluently to a foreigner … When I saw someone who spoke confidently, I really admired them, and that image was always saved in my mind" (Quyet, Interview, pp. 8-9). Thus, although her work and other responsibilities hindered her studies many times, her love of English and her imagined community of English-speakers motivated her and helped her keep learning and gain success:

> I wish I would be able to speak like them – I wanted to speak the same, to be as confident as they were. So, whenever I had time, I came back to studying to improve myself so that I could speak like that. Even in real life, at work, or when meeting clients I expected that I could talk like them, I could be confident like that (Quyet, Interview, pp. 8-9).

The participants were positive about their learning environment, resources and materials for their studies. Hung felt that multimedia learning helped him improve cognitive ability because it facilitated deep learning and thinking: "I felt it was easy because I did not only work through the listening channel, but was able to see images, it was visual. That visualisation gave me a quick answer, helped me have more thoughts, so I learned faster" (Hung, Interview, p. 13). My said, "The illustrations were very vivid, very thorough and complete. This stimulated my brain" (My, Interview, p. 5). In her view, "it was not boring compared to traditional learning" in which she had just taken notes, learned vocabulary, and memorised grammar.

The participants were enthusiastic about their opportunities to be exposed to "qualified teachers and particularly native speakers" (Bach, LD, p. 5). In her view, "the content of the lessons is scientifically designed" and learners had "many opportunities to be exposed to native speakers' accents" (Bach, LLH, p. 3). Thanh also appreciated the rich resources: "I was interested because I was opened up to a new horizon of endless knowledge from the world" (Thanh, LD, p. 1). For Nhan, this learning environment had "abundant resources" and provided him with "professional materials" (Nhan, LLH, p. 3).

Learning in these environments also had the benefit of helping the participants to overcome the reluctance common in Vietnamese culture when senior people are afraid of learning in face-to-face classes, particularly with younger people. The participants indicated that TELL created an ideal environment for them to learn, in contrast to the stress and potential embarrassment of participating in formal classes.

4.7.2. Determination

The second sub-theme involves determination. My, for example, showed great dedication: "There were days when I finished my working day, very tired, but when I went home … I still used the smartphone to listen …" (My, Interview, p. 6). Similarly, Bach indicated that she always took time for her study: "I got home from work and was tired. I had a nap after a quick meal, until midnight … then I would wake up and start learning" (Bach, LD, p. 5). Thanh wrote, "Over four years of studying, I struggled for life [financial condition], but I had never missed a single day of 'touching' my English, so – strong determination, right?" (Thanh, LLH, p. 4). They even tried to learn when they were unwell: "To be honest, I was too busy this week and not well, a bit tired so I could not be able to study. This morning I tried to learn one lesson …" (Bach, LD, p. 25).

4.7.3. Creation of affordances for learning

The third and final sub-theme involves the creation of affordances for learning. The participants first tried to join social learning groups to improve general communication. For example, Quyet tried to seek out direct learning with teachers and native speakers overseas: “I first joined the groups mentioned by The Youth newspaper (Báo Tuổi trẻ), I then started to realise that I could learn through such similar groups … So, I continued to search for such groups to continue my studies” (Quyet, Interview, p. 5).

The participants often showed their willingness to learn more: “I made friends with experts and said that my English is still limited. Fortunately, they were very happy to exchange emails and make friends with me via Facebook …” (My, LD, p. 14). They also found opportunities to self-create learning materials. For instance, My often recorded her own voice for monitoring her own progress. She said, “I use Skype more, as it has a recording function, so I can record and listen again to my own voice to see if it was funny or not good” (My, Interview, p. 28). Hung often learned in an authentic, job-based context by asking his foreign colleagues “for working documents and then searched online, Googled, and learned from that” (Hung, Interview, p. 16).

The participants tried to take advantage of diverse equipment for their learning. For instance, Bach said,

> You can study anywhere, even when you have limited time. If you have a computer, you can study with a computer, if you have a phone, you can learn by phone. I even studied via the TV at my home, because the television now has an internet connection, so whenever I turn on the TV, I can study (Bach, Interview, pp. 7-8).

Regarding the creation of affordances for using English, the participants tried to create opportunities to speak with foreigners. For instance, Thanh first reflected while she learned. She then went to “find people to practise speaking” (Thanh, Interview, p. 4). Quyet wrote, “When I went to work, whenever I met foreign customers, I tried to speak with them as much as possible” (Quyet, LLH, p. 2).

Thanh even tried to go to abroad for a “volunteer trip” for a chance to use English (Thanh, LD, p. 7). My challenged herself to use professional materials in English to support her learning: “In my professional job, there were many documents from the country in Vietnamese, but actually, I still wanted to have access to the original documents in English” (My, Interview, p. 34).

Chapter summary

In this chapter, the triangulation of three different sources of data was used to find the answers for the first research question. Findings from the study showed that the learners faced new contexts; thus, they had to choose TELL as the only way to experience their language learning. To adapt to work and life changes, they had to self-explore for learning resources and ways to learn using TELL. While the early-career participants tended to use computer as a tool to engage

in conversations with other people for their learning, the mid and late-career professionals had the trend to involve in the language by interactions with computer itself and use computer as a tutor for their learning and interactions. They had learning goals, agendas, and reflection for learning. The finding revealed a gap between the vision of the national policies and the constraints posed by the adult learners. Although they faced challenges, they showed efforts, dedication, desires to learn, to become, and to belong to particular imagined communities.

The next chapter presents the findings relating to the second research question.

CHAPTER 5: FINDINGS PART TWO – IMPACTS OF TELL

This chapter addresses the second research question over seven broad themes. The first four themes describe the impacts of TELL on improving the adult-learner participants' communicative potential in English. These include the impacts of TELL on linguistic competence, sociolinguistic competence and cultural awareness, discourse competence, and strategic competence. The three remaining themes refer to the impacts of TELL on the improvement of their professional knowledge and practice, including new perspectives in learning and communications, and the development of lifelong learning skills.

Communicative potential in English

5.1. Supporting learning to improve linguistic competence

As they learned in a TELL environment, the participants had the chance to improve their linguistic competence. Within this theme, I will present the impacts of TELL on these learners' learning of pronunciation, grammar and vocabulary.

5.1.1. Learning pronunciation

Through learning programs, apps and online dictionaries, TELL helped these learners distinguish different accents. For example, Thanh said: "Today, I learned pronunciation again, for British and American English; sometimes, I could not distinguish them". To learn, she downloaded the Oxford dictionary, which "had both British and American English pronunciation" (Thanh, LD, p. 2). This experience helped her realise the difference and then learn: "British English sounds so interesting, but it seems difficult to imitate so I followed American English, as it is easy to pronounce" (Thanh, LD, p. 2). She also learned from other channels: "Today, thanks to YouTube and recorded video I learned how to pronounce monophthongs like /I/, blah blah (Thanh, LD, p. 2). Similarly, the exposure to many people through online resources helped Xuan recognise the difference between the pronunciation of Vietnamese people and that of foreigners, and the limitations in her prior ways of learning:

> People sometimes did not understand my English reading [pronouncing]. This is probably because I did not know how to express [pronounce] it. This time I recognised that my learning English in the wrong way was a disaster. I wish I could learn again from the beginning, not learn by reading [pronouncing the words] in a wrong way (Xuan, LLH, p. 4).

TELL provided the participants with opportunities to learn and practise pronunciation. In their former studies, they did not have the chance to learn which syllables to stress. Through learning

with TELL, they had the opportunities to rehearse conversations and imitate the intonation: “I often rehearsed and imitated conversations from tienanh123 …, I tried to express and use the same style and intonation, unlike previous learning using books that I just read the lines up without any stress” (Xuan, Interview, p. 14). Similarly, My could learn from native speakers via video clips: “Learning materials are quite rich … I can usually get feedback. I have watched many videos of native speakers so I can read [pronounce] much better” (My, LD, p. 16). Bach wrote that she could learn and practise with sound connections: “it is important for me today to listen and practice with how teachers connect sounds in English, the pronunciation with words accompanied by ‘*an’* …” (Bach, LD, p. 7). When learning about “family tree” diagrams, she wrote: “This time I got the right pronunciation with the words *child* and *aunt*” (Bach, LD, p. 6). Similarly, Nhan wrote in his LD for week 6:

> The lesson (vietmd.net) was very meaningful. It helped me know how to pronounce lots of words I had always mispronounced such as “name” /nei-m/ (I before read it /nêm/), for another word “love” /l^- v/, I noticed the mistake I read before, /lớp/ (Nhan, LD, p. 11).

TELL provided them the chance to learn with pronunciation software as if with a teacher in a face-to-face class. For instance, Quyet mentioned about learning with ELSA SPEAK: “This software made me feel really like I was learning from a real-life teacher: it is interactive, it assesses learners by scoring” (Quyet, LD, p. 4). The software provided them with instructions, feedback and encouragement; for instance, Quyet wrote, “If you were wrong, the software would comment what was wrong, and how you needed to correct it” (Quyet, LD, p. 3). It gave reminders: “Every day in the evening, the software reminds learners to learn with ELSA SPEAK to improve pronunciation skills.” She also noted that learners could “draw the lessons for them”, “draw what their English accent was” or “what part of their pronunciation was not good” (Quyet, LD, p. 4). She commented on the chance for repeated practise:

> Learners could listen to the voice from software and their voice again. Then they could compare and learn. If your pronunciation was still bad, then you clicked on the headset icon to hear the voice again as many times as you wanted, then you could read along and correct your voice (Quyet, LD, p. 3).

Quyet further wrote that “the software could correct learners' mistakes, praised and reminded, and suggested ways to pronounce to improve pronunciation” (Quyet, LD, p. 4). Figures 7 through 9 (Quyet, LD, pp. 6-9) showed the comments and suggestions provided by this pronunciation software for learners to practise.

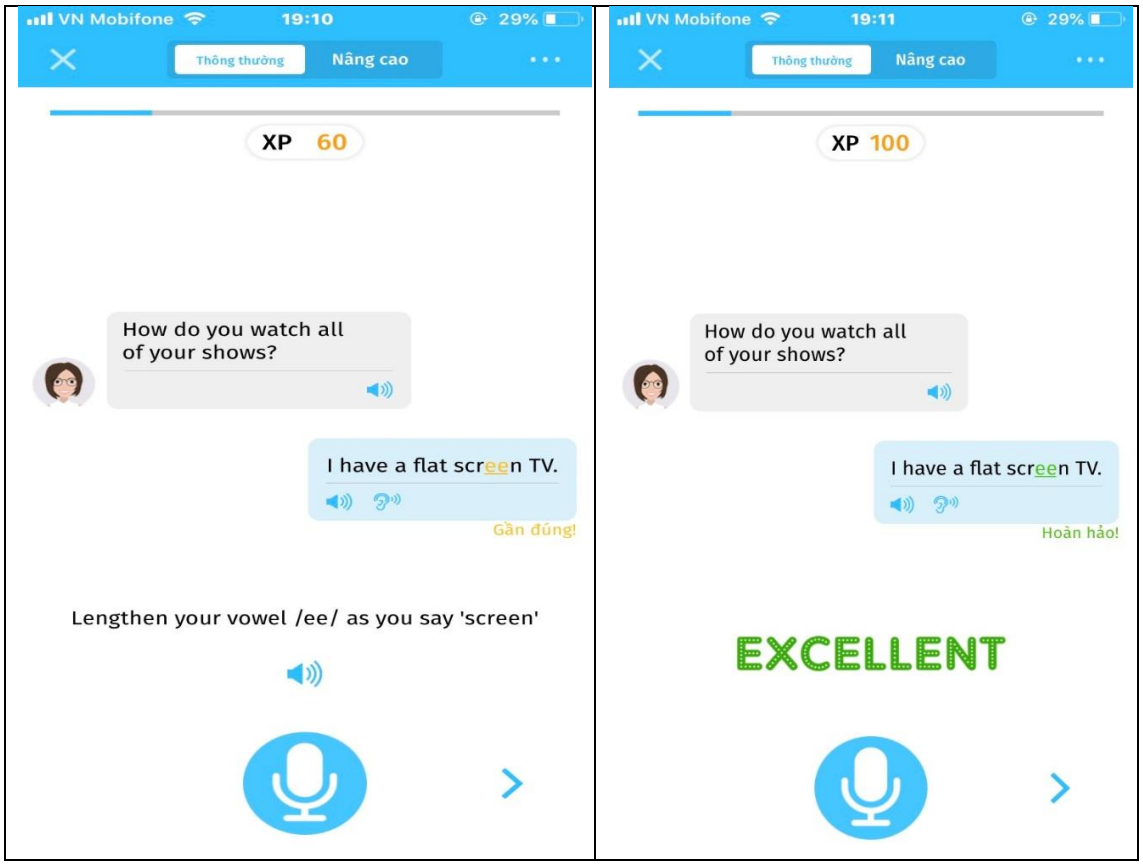

Figure 7. Example of Quyet's using an app to practise pronunciation (LD, p. 6)

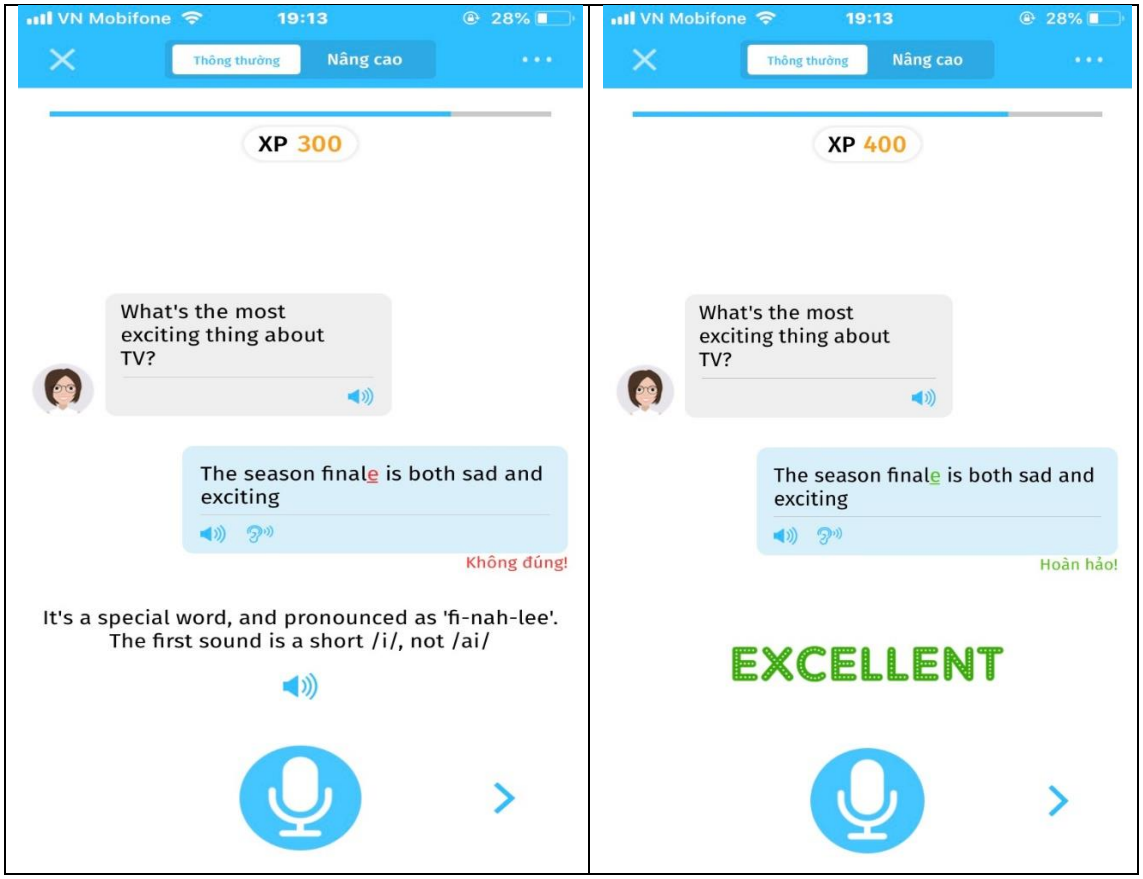

Figure 8. Example of Quyet's using an app to practise pronunciation (LD, pp. 8-9)

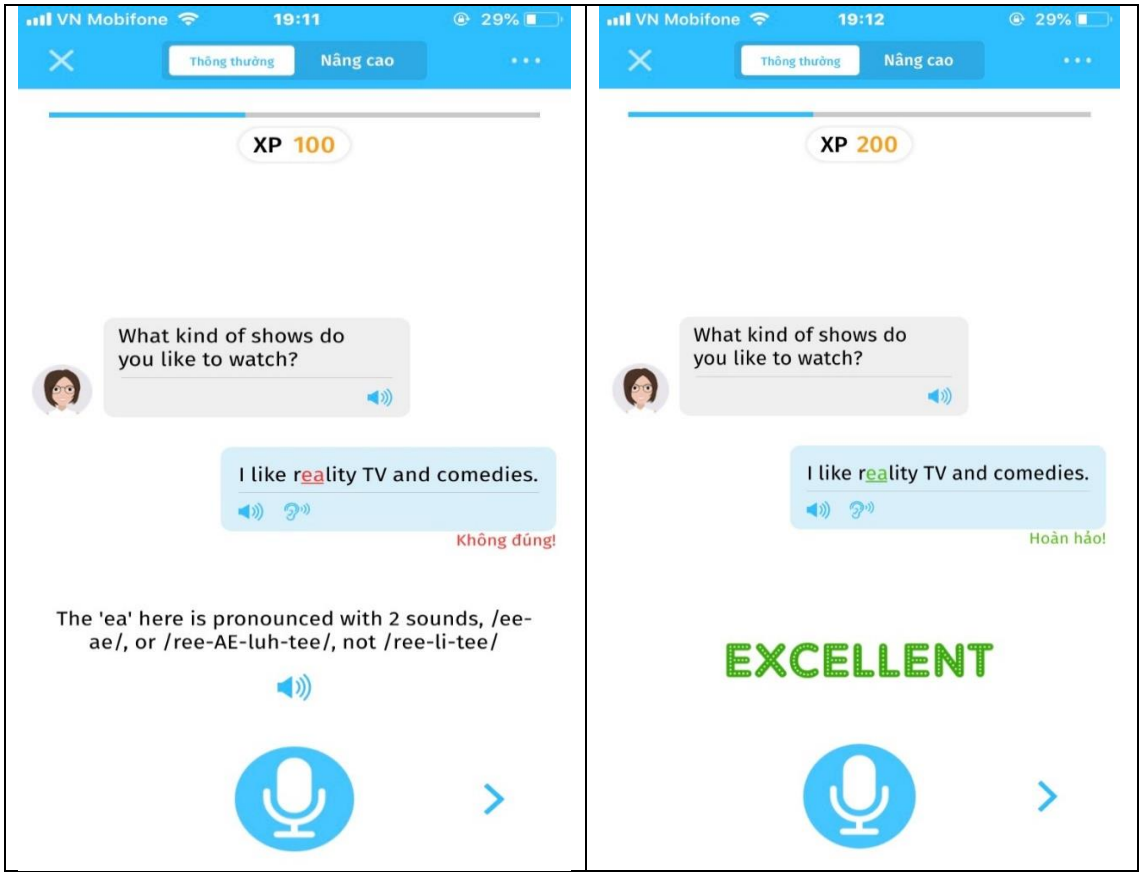

Figure 9. Example of Quyet's using an app to practise pronunciation (LD, p. 7)

TELL helped the participants become more active in learning. Previously, they had learned passively, learning new words by writing them repeatedly: "I used to learn passively, manually from a paper dictionary, self-pronounced, no-one pronounced for me at all ... now that I had technology, I could click on a new word, a sentence or a whole lesson and listen directly to see how foreigners pronounce it" (Hung, Interview, p. 8). This helped them learn more effectively. For instance, Bach mentioned that she "learned a lot" from online lectures (Bach, Interview, p. 10). Similarly, My wrote, "I selected www.tienganh123.com, www.studytienganh.vn., www.studyphim.vn. I focused on pronunciation. By learning this way, I improved listening and pronunciation" (My, LLH, p. 3).

TELL helped these participants learn faster and gain more accuracy in pronunciation. These were the changes. My said, "In terms of phonetics, it helped me speak more correctly with words, sentences, more correct phonetics. It reduced errors in my pronunciation and grammar" (My, Interview, p. 15). This learning experience helped the participants gain confidence: "When you could pronounce something the same way it was in the software, you would be very excited and confident" (Quyet, LD, p. 4); thus, it helped them in speaking and communication later: "Through learning with this software, when I met foreign customers or tourists coming to Vietnam, I was

very confident to communicate with them because I was not afraid of pronouncing things wrong anymore" (Quyet, LD, p. 4).

5.1.2. Learning grammar in context

The second sub-theme involved the impacts of TELL on learning grammar. In this study, all participants had opportunities to access grammar sections, particularly in lessons from language-learning websites. For instance, Hung said, "The instructors often introduced and illustrated the grammar items and how to use them" (Hung, Interview, p. 19). This was also reflected in Xuan's narratives: "After the vocabulary sections, there were grammar parts guided by teachers, such as sentence patterns …" (Xuan, Interview, p. 3).

They had chance to practice and interact with online teachers and get feedback. For instance, Xuan mentioned, "I also did the exercises and sent them back to the teachers so that they graded and corrected my mistakes. The teachers were very enthusiastic, they explained what was wrong and how to use grammar correctly" (Xuan, Interview, p. 3). Hung pointed out that the use of TELL enhanced practice: "This time I often expanded, used that grammar or topic to talk about things and situations around me. I immediately learned the grammar knowledge of that sentence, such as verb conjugations, word usage and tenses … When learning about the past tense, I often created statements about what I did yesterday, this morning or other things I did, the people I met, how I interacted with them" (Hung, Interview, p. 19). He tried to apply that grammar in "daily communication", turning grammar knowledge into "language practice". In his view, he could "apply the content learned to reality in daily life" (Hung, Interview, p. 19).

These participants had opportunities to learn about tenses in English. For instance, Hung commented on his learning with the Living English program: "The skills I achieved were through online lessons. I often saw how tenses were used, past, present, or future, how people used it, for the near future, or plans for a later time, etc." (Hung, Interview, p. 10). They had the opportunity to strengthen knowledge and learn about modes and structures. For example, My wrote about her learning of passive voice with *tienganh123*: "After a long time of not using grammar, I forgot it, but now I recalled it right away ..." need to be +PII; need + V-ing" means "what needs to be done", "needs to be hydrated" means "needs to be kept moist, filled with water or supplied with sufficient water" (My, LD, p. 9).

Other participants' narratives also illustrate this point. For instance, Bach wrote: "I review the usage of *this, that, these, those,* singular and plural practices, possessive pronouns, spelling, and pronunciation. I also learned the structures '*How many … do you have? I have …'"* (Bach, LD, p. 6). Similarly, Hung said that he often looked very carefully at grammar when he learned: "I tried to understand, and see how the verb was used …, or about plural, or the singular. That was,

I saw the grammar of that sentence, finding out adverbs, prepositions, etc." (Hung, Interview, p. 18).

They had opportunities to learn collocations in English. For example, Thanh wrote about learning the word "herd": "It was amazing for me to realise today that the words used with 'herd' were not all the same. For example, in Vietnamese, I could say 'a herd of' with all the words 'wolves, dogs, sheep', blah blah blah. But this was not the case in English" (Thanh, LD, pp. 3-4).

Another time, she wrote: "I accidentally saw the words 'the army of ants', I kept laughing, thinking that they probably used something like 'abstract' words …" (Thanh, LD, pp. 3-4). She reflected on this: "Suddenly I thought: for bees, fish, insects ... then could I use this?" She searched to learn more: "I was too curious, so I opened the laptop to search with Google right away." The results surprised her: "Surprisingly, each animal had a different word to go with it. Why I haven't realised that for 26 years now ...". She then expressed her positive views about learning in a TELL environment: "Oh my God, I didn't know how I felt like, from a phrase, it led me back and forth to many other questions, like I was traveling and discovering a continent … Without technology, I would have had to fly to Europe to ask the local people there" (Thanh, LD, pp. 3-4).

The participants had opportunities to learn the grammar of English for specific purposes as well. Nhan mentioned one of his experiences while learning English grammar rules in medical English: "Today, I learned with a clip that taught about respiration. I found it very interesting and helpful" (Nhan, LD, pp. 12-13). The following table was one of his notes during learning:

Singular	***Plural***	***Adjectives***	***Vietnamese***
Bronchus	Bronchi	bronchial	Phế quản
Alveolus	Alveoli	Alveolar	Phế nang

Table 5. Example of Nhan's notes (LD, pp. 12-13)

He also learned the roots of medical words: "The teacher taught vocabulary on lungs. He explained the origin of words, medical terminologies that were different from general English." He elaborated on what he had learned about the grammar rules of medical terms:

> The medical terms had a Latin or Greek root, so they did not follow the regular English grammar rules, but it was complicated. For example, the singular often ended with "us". Similarly, the plural often ended with "i". So, we had "embolus – emboli" (means a blood clot – multiple thrombosis), streptococcus – streptococci, fungus – fungi. In another case: for a singular ending with '*um'*, in the plural it changed to "a", e.g., bacterium – bacteria (Nhan, LD, pp. 12-13).

Finally, TELL would help learners within the reserved Vietnamese culture learn to overcome the hesitation they had previously felt about asking questions in face-to-face classes. For example, in a TELL environment, My could have her grammar work corrected without meeting them in person: “When I didn't have technology before, I did homework without knowing if the grammar was right or wrong, but I was embarrassed to ask people directly. Now, I can send my work to teachers so they can correct, explain and show me how to do it” (My, Interview, p. 14).

5.1.3. Learning essential vocabulary

The third and final sub-theme of this part relates to the influence of TELL on the participants’ vocabulary learning. TELL helped them discover word and learn their meanings, as well as consolidate the vocabulary they learned, including professional vocabulary.

For example, Quyet often encountered new words when she learned with the WELE Facebook group. She said: “I started with only one or two words, then guessed the words, and went to Google to look them up”. In this way, she “learned those words” (Quyet, Interview, pp. 5-6). Similarly, when Xuan learned with tienganh123, she often “encountered many difficult words”, particularly in lessons that went too fast (Xuan, Interview, p. 3). She “tried to audio-record and look up the word, found out how to write, went to the website to translate for meaning”. She sometimes did not understand the “whole long sentence”, but could “still realise the key words and still be able to get the main ideas” (Xuan, Interview, p. 3).

From searching on Google, Hung “knew many meanings for the same word”, and also learned “nouns, verbs, adjectives, prepositions, and ways to use them”. He often “looked back at sentences to see what words people used and how they used them” (Hung, Interview, p. 6). Similarly, Thanh wrote, “In the early morning or at night, I often turned on music and listen to songs with English subtitles to find out the meaning of words …” (Thanh, LLH, p. 4). In a slightly different way, TELL helped My in learning the meanings of the phrasal verbs that she had failed to learn before: “I really liked it because I was afraid to learn these phrases before. Now I could hear and learn with explanations with both pictures and English in a simple way. I found it very effective” (My, LD, pp. 5-6). She also wrote:

> I found the page testyourvocab.com. Just started, I saw the verb “look”, which came with many prepositions that I had given up ever being able to learn … It was great, with examples, explanations and pictures to help me understand: “look up” meant “to find the information in a book”; “Look through” meant “to read something quickly …” (My, LD, p. 5).

The participants had chance to learn about word use. This could be seen clearly from Thanh’s descriptions of learning from social-networking sites with her foreign friends: “This guy used the word ‘genre’ to refer to ‘genre of music’. I had never known this before, but often used ‘type’ to

refer to ‘all types of music’. This sentence was beautifully worded, he wrote it so well” (Thanh, LD, p. 31). Learning from one of her friends’ profiles, she wrote: “I before wrote ‘I am lost my way to go ahead’ but after reading the profile of the other guy tonight, I fixed my sentence to ‘I get lost in’ ...” (Thanh, LD, p. 30)

The participants could consolidate their knowledge of words through these learning environments. Xuan mentioned the ways she reviewed the words she had learned vicariously with learning websites: “I consolidated the words I had learned and learned new words by reading them repeatedly, following the teachers” (Xuan, LD, p. 14). Thanh wrote about her overall improvement in vocabulary: “Even acknowledging that my vocabulary has not expanded much, looking back, I also went a lot further than before” (Thanh, LLH, p. 4). This changed the ways they learned vocabulary. Hung, for example, compared his past and current learning: “I learned new words before by writing them many times, but now, I can listen and read at the same time. The main thing is that it can help me learn faster, with online lessons accompanied by illustrations” (Hung, Interview, p. 8).

They could also consolidate words through virtual interactions with people from many countries. For instance, Thanh said, “I chatted with quite a lot of people from different countries: Japan, Korea, Philippines, they still chatted in English, they still learned English, or people from Poland, Sweden, Australia, or the USA …” (Thanh, Interview, pp. 9-10). She said about learning from games: “Thanks to Lords Mobile, I learned quite a lot of words, such as troops, shields, shelter. I used to know only one word – ‘soldier’ – but now I learn daily life words too” (Thanh, LD, p. 9). She also had the opportunity to improve her English by communicating with different English users in real-life situations:

> Through chatting a lot, I could compare how they used words, native and non-native people, so, from different sources of people, I realised who said things wrong or which person was right. And then it was instinctive when I chatted more. I meant I had instincts, so when I communicated with them, I chatted with people, I just needed to look at their chat and then I knew the mistakes, so I remembered them (Thanh, Interview, pp. 9-10).

TELL helped some of the participants learn professional vocabulary, as Xuan commented: “I studied to improve professional vocabulary; I looked up specialised words … I found articles related to my specialty … At the same time, I learned professional knowledge” (Xuan, Interview, p. 7). Xuan also said, “This learning helped me strengthen my skills a lot. I used Google to look up and understand more about word use in context, how to apply the words at work, in writing letters or in conversations (Xuan, Interview, p. 10). This learning also gave My “access to much valuable information, such as subject-based vocabulary”. She could “listen to native speakers and reread the vocabulary many times” (My, LLH, p. 2). This helped her strengthen technical vocabulary in her field: “There were words, like 'spring', I used to know with just a meaning of a

‘season', but when I learned this way, it showed images and examples, so I understood that it also meant a piece of ‘curved/bent mental', a specialised word in my discipline” (My, Interview, pp. 13-14).

To learn English vocabulary for medical specialisations, Nhan joined vietmd.net, one of the learning groups he had found on social-networking sites. He wrote: “I visited English medical class with vietmd.net. The lesson today was on the digestive system. I learned professional vocabulary, pronunciation, the origins of words as well as the way to use them in reality” (Nhan, LD, pp. 9-10). He also learned about synonyms: “The instructor explained why different words could have the same meaning.” He learned that “in medicine, as well as in English more generally, there were many words that were borrowed from or rooted in from other languages, such as Latin or Greek” (Nhan, LD, pp. 9-10). Through this lesson, he “recognised the group of words that have the tail in ‘itis’, it meant ‘inflammation’, or ‘viêm’ in Vietnamese”. He summarised the words he learned in Table 6:

English	***Greek***	***Inflammatory disease***	***Meaning***
mouth	stomat	stomat**itis**	Stomatitis
stomach	gasto	gastr**itis**	viêm dạ dày
esophagus	esophago	esophag**itis**	viêm thực quản
small intestine	entero	enter**itis**	Inflammation of the small intestine
large intestine	colo	col**itis**	Inflammation of the large intestine
liver	hepat	hepat**itis**	viêm gan
gall bladder	cholecyst	cholecyst**itis**	viêm túi mật
common bile duct	choledocho	Chiledoch**itis/**cholang**itis**	viêm ống mật chủ
pancreas	pancreat	pancreat**itis**	viêm tụy

Table 6. Example of Nhan’s notes (Nhan, LD, pp. 9-10)

In another situation, when he learned words with the meaning of “cutting” (Table 7), he wrote:

> I learned and understood the meanings, and correctly pronounced, words with the suffix: -tomy and -otomy: both mean “cut” or “incision”. “Tomy” was used when it was preceded by a vowel, and “otomy” was used when it was preceded by a consonant (Nhan, LD, pp. 11-12).

English (medical terms)	***Greek (medical terms)***	***Suffixes added***	***meaning equivalence***
mouth	stomat	stomat**otomy**	oral (area) surgery
stomach	gastro	gastro**tomy**	stomach surgery
pharynx	pharyngo	pharyngos**tomy**	pharyngeal (area) surgery
esophagus	esophago	esophago**tomy**	esophageal surgery
small intestine	entero	entero**tomy**	small intestine surgery
large intestine	colo	colo**tomy**	colon surgery

Table 7. Example of Nhan's notes (Nhan, LD, pp. 11-12)

Nhan could also learn English for specific purposes from other learning groups, such as Dinh-Van Nguyen, a page established by a Vietnamese doctor in Canada that "taught very basic medical English classes at 8:00 pm, Vietnam time on https://zoom.us/j/108195897". The videos were also posted on YouTube, so it was convenient for him: "If I am busy, I can open them and study later" (Nhan, LD, p. 8). He learned words and also other linguistic items: "The first lesson was on positioning anatomy, at the link https//www.youtube.com/watch?V = J487XDkgL2M. I could learn a lot of words, pronunciation and stress: superior-inferior, anterior-posterior, lateral-medial" (Nhan, LD, p. 8). He elaborated: "I got the meaning and could pronounce 'proximal-distal' to talk about the human body; proximal (distal) esophagus, ureter … The words I got that indicated the anatomic plane were axial, sagittal, coronal …" (Nhan, LD, p. 8).

5.2. Facilitating the development of sociolinguistic competence and cultural awareness

TELL learning experiences helped the participants improve their sociolinguistic competence and cultural awareness. For the former, learning in a TELL environment helped them use appropriate language for formal and informal situations at work. For instance, Hung said:

> For conversations at seminars or conferences, I needed to use words that were formal, or very standard, and polite, and use them grammatically … On the other hand, when I talked to my colleagues, on the sidelines, not meeting or working sessions, then there was no need to use [too] beautiful words (Hung, Interview, p. 11).

Through video lessons, Xuan similarly learned how to talk to her boss at work.

> I saw video lessons and heard a conversation of a work partner calling an office. I learned from that how they asked and responded. Through this, when I talked to my boss at the

> office, for example, I knew how to express myself to suit the situation. I knew when I must use respectful speech, or when I could use jokes, because these ways of speaking would be different (Xuan, Interview, p. 15).

In daily life, TELL helped the participants learn appropriate ways to communicate with people in different sociocultural contexts. Thanh learned how English is used to communicate with her foreign gaming friends. To ask to join the "guild", she "just needed to type 'Please open the door, outside is so cold' ..." (Thanh, LD, p. 9). In contrast, Hung learned how to use language to speak to senior or younger people: "I understood the ways to use words. When talking to older people, I must use different ways, when talking to children, even though I would use the same words, I needed another way of saying things" (Hung Interview p11). Similarly, My had previously just focused on learning formal language, but now she learned and used informal ways of speaking as well:

> I can make jokes, and chat and chat, and so on. Before, I didn't know how to tell a joke. I always learned hard words for solemn sentences. I can now speak naturally. Of course, I haven't reached excellence, but I am able to confidently communicate (My, Interview, p. 29).

When My's nephew, who could speak English but not Vietnamese, used to come to Vietnam to visit, she had always wanted to invite him for dinner, but was prevented by her limited English skills. Now she could invite him, and even talk about how she made the food. She elaborated: "When I served the food, the people eating it found it too salty." If this had happened before she had learned English in a TELL environment, she "would be very hesitant and not know what to say". But now, it was different:

> It was amazing! Right away, I joked in a way I had learned from a movie, saying that "because the juice I was serving was really delicious, I made the food a little salty so that you could drink more juice" … I said this both for the sake of the joke, and to make my foreign relatives feel closer to me (My, Interview, pp. 22-23).

The learning experiences helped her safely experience life and cultures in a quite distant foreign country. The previous year, she "went to Malta, a beautiful land on the Mediterranean Sea". As she learned from the Internet, social networking sites and chatting with friends about the habits and culture of people there, when she arrived, she "was very confident … and completely caught up with the locals". She said:

> When I arrived, I could talk to them. Although I did not fully understand all the things they said, all the barriers and apprehensions no longer existed for me. I was ready to mingle with them right from the first day, which was going to the beach to sing and dance, that was their culture. Every day when there was a festival, they went to the beach to sing and dance (My, Interview, pp. 18-19).

To gain cultural awareness, Thanh first learned about the behaviours of her foreign gamer friends: "When communicating with these western foreigners, I also learned how to think and behave in their ways, so civilized! It was not like many young Vietnamese when playing games, they just wanted to swear" (Thanh, LD, p. 9). They learned about asking people about their age: "It was not polite to ask their age, but when I chatted with people in Holland, they were quite easy-going, they said 'It's okay, just feel free to ask'… so I then could ask …" She also learned how to address people in conversations: "There were some people who would love to be called 'Sir' or 'Madam', but there were some who didn't like that, so I learned a lot more about how to address people". She learned "the culture of different countries to behave and address properly to make a good impression" (Thanh, Interview, pp. 14-16).

Participants had the opportunity to learn about the customs of English-speaking and other western people. The illustrations from My are typical for this point: "Through talking about Christmas Day, I learned more about the culture of a traditional family in Ireland that had roots there going back many generations". She gained cultural knowledge "by reading, I knew they liked turkey and potatoes, liked a warm atmosphere on Christmas Day" so she tried to "help Nick feel warm and cosy when he was in Vietnam". This helped them reduce culture shock in communications and create bonds between them: "If I hadn't known, I would have let Nick feel lonelier. This helped our relationship become better." Via this, she "learned from Nick more about Western culture" (My, Interview, pp. 25-26).

Learning experiences in TELL environments helped the participants learn about people and countries. For instance, for one learning session Nhan wrote: "The introduction describes features of the island, location, population and Aboriginal people on Torres Island, etc. (Nhan, LD, p. 18). Such experiences also helped him learn about regional cultures, common issues in life or cultural traits in both English and Vietnamese:

> It had some effect to expand my knowledge on the culture of people from different regions; even in our home country, friends could be in the North or South, or for colleagues abroad, besides expertise, we could discuss other common issues as well as regional and cultural traits, sometimes in both English and Vietnamese (Nhan, Interview, p. 15).

The learners had chance to talk about "related social and cultural issues, not just about work", and this helped them maintain their relationships: "We still had conversations using Skype, Viber or chat to maintain long-term relationships" (Xuan, Interview, p. 10).

They could learn about idioms that they could use in specific situations: "I knew more about the idioms on anger. Instead 'angry', why didn't I use 'short fuse', 'lose my temper, set him off …'. Really, I upgraded the language when I talked more" (Thanh, LD, p. 3). After one lesson with tienganh123, My wrote, "I listened but didn't understand all. But I understood '*to pass with flying colours'* or '*to come through with flying colours'*. It meant '*to do very well on the test*' …". After

another session, she noted, "'*Show one's true colours'* (v) meant that someone was showing what they were really like as a person." She expressed her positive feelings about this learning: "I was very excited when I understood the lesson, as well as when I learned idioms" (My, LD, p. 2). "I had the joy of understanding. Because when I had encountered these structures before, I had not understood them … I was excited, as I could learn through contexts and vivid examples from videos" (My, LD, p. 1).

5.3. Supporting learning to improve discourse competence

Learning experiences with TELL helped the participants improve their discourse competence. It helped them master how forms and meanings were combined to achieve different spoken and written texts. This part will discuss the impacts of TELL on their ability to listen, speak, read and write in English.

5.3.1. Improving listening ability

The first sub-theme deals with the impact of TELL on learning to improve listening ability. TELL first facilitated the participants' processing of aural language, helping them gain listening comprehension and language knowledge.

TELL facilitated them through the Control and Help options. It provided the learners with operational and regulatory help so that they knew how to learn and manage their studies. They could access learning programs with reliable learning materials and detailed instructions for their studies. For instance, Thanh wrote about how VoiceTube could help her study:

> The right corner of the screen had detailed instructions on how to learn with VoiceTube. I used both the web and the apps, as it could be synchronised on both the laptop and the phone. When I couldn't study with the laptop, I just used my phone, so I didn't lose anything I noted there for learning (Thanh, LD, p. 39).

TELL provided compensatory help options that helped the participants practise with using repetition: "It brought a big advantage. I could open those broadcasts again and again. For the parts I could not understand, I listened over and over until I got it" (Bach, Interview, p. 3), and found this functionality "very useful for language learners" (Bach, Interview, p. 5). My "misunderstood the pronunciation of even very simple and already known words", so she was at first confused, but repetition helped her listen: "I listen to one easy-level lesson …, there were no new words …, but I didn't feel okay until I had listened three times" (My, LD, p. 3).

Thanh and Quyet used the speed-control feature on their apps to adjust the speed to where they could understand the spoken language. Quyet said, "In the WELE Facebook group, we must listen every week and transcribe about 1,000 words each … I could adjust the speed. If you wanted to listen with high or low speed, you could adjust it as you wanted …" (Quyet, Interview, p. 5-6).

These learning programs also offered explanatory help options that provided learning materials and rich lesson content. When learning with Australia – Living English, for instance, Hung commented on the support of subtitles from the lessons: "Each sentence has accompanying examples and explanations to make it easier to understand and remember" (Hung, LD, pp. 3-4). He also spoke positively about the benefits of these features, including the dual mode for language processing: "It was still a very effective support when the clip repeated each sentence in the conversation and provided accompanying sentences on the screen … When the dialogue appeared, I could understand, as I could combine listening with reading the subtitles" (Hung, LD, p. 2).

Many programs offered a combination of compensatory help (e.g., speed control and repetition) and explanatory help (e.g., subtitles and transcripts) to support the participants in processing the listening activities. For example, when learning with "BBC 6 Minute English from VoiceTube", Thanh said, "You could adjust the speaking speed, repeat each sentence or the whole listening. There was also Vietsub [Vietnamese subtitles] or Engsub [English subtitles] at the bottom of the videos, then it ran transcripts on the right." For her "it was very convenient to track" and "you could click on the movie theatre mode ☺))) if you wanted" (Thanh, LD, pp. 40-41).

Xuan still faced difficulties in gaining listening comprehension, particularly in a work context, other participants were more positive. For instance, Xuan said: "With normal conversations I could hear and understand. But at work, I still needed the help of interpreters" (Xuan, LLH, p. 4). For her, "simple conversations" posed few difficulties, but she still had problems understanding the conversation of strangers: "I faced challenges in comprehension whenever I encountered any new foreigners." There were people "whose speaking I could not understand until I listened again and again several times" (Xuan, LD, p. 37).

Thanh acknowledged her improvement due to listening to a large variety of people: "I improved my so-called acoustic perception (language). Listening directly to different sources of people speaking English helped me become more sensitive to sounds." She said that this also helped her to come up with original speech of her own and deal with various English-speakers' idiosyncrasies: "I could then improvise well. Another thing was the speed. Some people spoke very fast, but some very slowly, so my ears improvised according to their speech speed, and so became more sensitive to sounds" (Thanh, Interview, pp. 12-13). Another reason for her improvement was that she exploited listening materials from diverse resources:

> I found many sources and channels. My favourite was BBC Learning English 6 Minutes, TED talks and Spotlight English. I first found TED, but the interface made me uncomfortable, so I then searched for "VoiceTube – Learn English Through Videos". Because VoiceTube incorporates BBC, CNN, TED talks and other sources, I found this

was the best channel, so I liked (kết) it best … I still use these now (Thanh, Interview, pp. 6, 7).

By joining many programs such as Paltalk and social learning groups, Quyet greatly improved her English ability. In commenting on learning with WELE, she said, “The first few lessons were almost all wrong for me, I couldn't hear, but then I found my listening improved a lot.” Her improvement was also acknowledged by the admin of this learning group: “I received a comment from my admin that I had improved a lot compared to my first lessons, which was really okay” (Quyet, Interview, pp. 2-3). This encouragement motivated her to continue learning: “Many times I quit, then returned to listen again, became busy and so stopped again, and then listened again.” This immediate and sincere encouragement helped her “overcome and return to conquer English” (Quyet, LD, p. 15). Hung gained comprehension and could learn from Australia – Living English through its specific contexts and the salient and vivid content of its videos. He said, “At first, I just heard some words, but I still understood the meaning of the conversation, as it involved the specific situation of picking people up at the airport” (Hung, LD, p. 1).

Similarly, Bach said she learned vicariously through video content: “Oh, for ways I interacted, I sat outside learning virtually … mostly I strengthened my ability by trying to listen to the teachers’ questions, then I listened to what students said”. She had her own choice of how to learn to listen: “To increase ability, this time, I didn't look at the screen anymore, but played videos and closed my eyes … I just heard the conversations and checked whether I could hear...by doing so, it enhanced the ability to listen” (Bach, Interview, p. 17). She wrote about the improvement: “I had a feeling that my listening skills had improved”. For her, this learning and the initial improvement motivated her in learning: “my brain first heard words, then it created a ‘memory slot’, and later encountered I recognised them more easily. When I could hear to some extent, I was less depressed and more motivated” (Bach, LD, p. 14).

Through listening activities, TELL helped the participants gain more language knowledge and skills, including pronunciation and vocabulary. For instance, Thanh learned through her involvement in many conversations with different people via WhatsApp, Skype and Line: “The skill I learned the most was listening. I was aware of very strange pronunciation, for example for the word ‘school’, for which I heard people say ‘scho’ or ‘schon’ ...” (Thanh, Interview, pp. 11-12). This helped her “get more familiar with different types of accents” and learn about intonation: “VoiceTube helps me with listening practice...and helped me use intonation, move up or down with my voice, and learn ways to communicate” (Thanh, LD, pp. 45-46). At first, she “didn’t recognise” particular words, but “through listening from many different people, my ears became sensitive, then I could feel how people were pronouncing …” (Thanh, Interview, pp. 11-12). When My learned with www.tienganh123.com, a very popular Vietnamese website, she became more aware of sound connections: “At first, I thought it was not difficult, but I still did not fully understand until I heard things three times … It then turned out that there was a ‘sound

connection' …". She reflected and planned to learn more: "They were simple sentences, but I was not familiar with them. So, I must now try to listen more!" (My, LD, p. 3).

When Bach was learning with 80 Lessons, she said that she had the chance to improve listening comprehension and pronunciation, and that this gave her many benefits: "Even though I did not go in depth to find out where stress falls on a certain word, when I simply listened more, I could imitate and familiarise my ears with that" (Bach, LD, p. 12). Another time, she commented: "By participating in this Special English program, I became more diligent in learning listening, and through this I pronounced more accurately" (Bach, Interview, p. 4). She also made some comparisons between what she could not traditionally learn before and what the technology now offered her: "I felt that the [English-speaking] announcer spoke very well. For traditional learning it had been almost impossible to understand". For her, "many Vietnamese teachers could not surely have had such a good pronunciation" (Bach, Interview, p. 4).

Through these listening activities, the participants could learn more about vocabulary: "The app had both notes and explanation of vocabulary meaning (clicked on the word needed then the explanation appeared ☺))). It was just like they had prepared 'dinners' for us. You could also learn a British-English accent from the BBC" (Thanh, LD, pp. 40-41). Similarly, when Bach listened to video English lessons on YouTube, she could explore them to learn vocabulary: "Wherever I could not listen, I searched for new words, I looked up the words, then listened to those parts again" (Bach, Interview, p. 3).

Through learning to listen, the participants learned more language structures. For instance, My said, "I mainly listened to talks, conversations or speeches, then read along, and then I memorised them, and thus learned sentence structures" (My, Interview, pp. 12-13). Sometimes, as "there were idioms", she could not understand the lessons: "Today, I practiced listening, and although the conversation was short and almost all simple words, I did not fully understand". Through the "translations attached" feature, she understood the lesson and learned the idioms: "I can't stand him any longer, to lose one's temper, to keep one's mouth shut …" (My, LD, pp. 2-3). In her final statement, where a character named Jake advised the character Anna to go to see a doctor, she also learned "don't be a chicken". For her, it was important to have "contexts" (My, LD, p. 3).

Through learning how to listen, the participants could also enhance their professional and background knowledge. My said, "I usually chose the listening lessons that were close to the content of my work" (My, Interview, pp. 12-13). When the participants listened, they could "learn many professional terminologies" (Bach, Interview, p. 3). Bach commented on her listening to the news article "Mother's milk is best for smallest humans" from VOA Special English. She initially did not fully understand; "I just understood something about premature babies and breast milk", although she related this to her background knowledge. "As I was a doctor, of course I guessed and knew that breast milk was an excellent source of nutrition for any babies, especially

for those born premature" (Bach, LD, p. 28). After listening with the subtitles, she "understood and got the ideas". She said, "The article explained about preterm babies and mentioned a specific case in which babies were born after just 24 weeks in the womb and weighing little more than 700 grams" (Bach, LD, p. 28). In her final comment on listening to another resource, she said: "… I only clumsily understood that people were talking about 'chocolate and health', but I did not clearly hear the details". But after listening again with the subtitles, "everything was clearly understood" (Bach, LD, p. 29). Thanh also improved other areas of knowledge in her life: "In each theme, there was additional section, scientifically written by a professor/specialist, and this helped expand knowledge. You were not just learning English, but gaining more knowledge for life" (Thanh, LD, p. 41).

5.3.2. Strengthening speaking skills

The second sub-theme refers to the impact of TELL on learning to improve speaking ability. In this sub-theme, speaking ability includes three components: accuracy, complexity and fluency.

First, with respect to accuracy, through vicarious learning with learning websites, the participants could improve their accuracy in speaking. For instance, Hung commented, "I also said it out loud … When I could pronounce the words, it let me know if I pronounced them correctly." For him, "speaking out loud was a good way to fix my pronunciation and improve my use of the language" (Hung, Interview, p. 13).

The participants also gained accuracy by "recording their voice and exchanging the recordings with online teachers and classmates" for corrections (Xuan, Interview, p. 7). Xuan said, "This website, tienganh123, had sections for speaking practice … I chose a topic and often wrote a draft first, then practiced reading aloud over and over. I then recorded it and posted on the website forum for feedback" (Xuan, Interview, p, 4).

The learning experience helped Xuan learn from others and from her mistakes: "I tried to talk a lot with my friends so that they advised me and corrected my mistakes … I always tried to listen to my friends' posts so I could learn from them" (Xuan, Interview, p. 7). Similarly, My said, "I often spoke using the contents from lessons, recorded my voice and sent the recording to online teachers. They often made detailed comments, what needed more attention, and how to raise or lower the pitch …" (My, Interview, p. 13).

TELL also helped these learners develop the complexity of their spoken language. In other words, they learned more words, clauses and sentences through their vicarious learning and interactions in online conversations. For instance, Bach said, "I found that I had improved my English quite a lot; what I learned most was speaking skills …" The learning was of great help to her: "The lecturers, on the sites of my choice, were qualified. I learned intonation and how to use more words and phrases, and so greatly increased my ability" (Bach, Interview, p. 6). Similarly, Nhan

said, “I could better communicate in English with my colleagues and patients. I often used video clips to practice …” (Nhan, Interview, p. 4).

Xuan said, “Compared to my past learning, [learning in a TELL environment] helped me better acquire knowledge. I could practice communication skills ...” [I could] learn and imitate the ways of speaking in different communicative situations to apply in real-world situations later” (Xuan, Interview, p. 13). She applied what she learned from websites to specific speaking situations: “There were situations I felt like I had learned from lessons, then I thought back to the lessons and applied them to these specific situations. This learning helped me remember sentences and words, and improved communication, both at work and in daily life” (Xuan, Interview, p. 15).

In contrast, Hung used his own cognitive strategies. He stated: “I needed to think of words, whether it was just a bowl, a name, or a movie I just watched on TV. I needed to think to be able to speak in English, and to say things properly.” He said that this learning experience helped him: “Of course, speaking well or fluently was another step forward that I aimed to achieve, but through such methods, I gradually improved my English speaking” (Hung, Interview, p. 14).

TELL helped these learners develop the complexity of their language usage through their interactions with others. They first learned from interactions with their classmates: “I participated in online English study groups, shared with groups to learn” (Nhan, Interview, p. 4). Xuan said, “I sent my recordings to my friends, and they corrected me and guided me in how to speak. I learned new words and how to fix my mistakes. I listened to their postings and saw how they spoke to correct my own mistakes” (Xuan, Interview, p. 4).

They gained more vocabulary through interactions with other professionals. For instance, Nhan wrote,

> I mastered the verb “to vomit” (nôn), but in fact the patients did not say “I vomit”, but say “I throw up”. For the word “nausea” (buồn nôn), in conversations, patients say “I'm going to throw up” … The terms “vomit” and “nausea” were only used in professional exchanges between health care professionals Nhan, LD, p. 10).

Through the lessons, he learned both professional and communication skills: “It helped me a lot … with specialised materials to improve professional knowledge and English skills. The learning helped me know how to communicate with patients” (Nhan, LD, p. 10). Similarly, Thanh wrote, “After two years, I had been able to communicate with foreigners, able to express my thoughts in English. It was a longer process, but it was a great effort by myself” (Thanh, LLH, p. 3).

Third, TELL helped these learners develop fluency in speaking. For instance, Thanh said, “When I chatted with them [foreigners], of course, I must have vocabulary in mind, have the imagination of how to say things, and when I couldn't find a word, I must search. Gradually, the ways of speaking were absorbed naturally” (Thanh, Interview pp. 7-9). This improvement, for her, was a

result of her considerable involvement in real-life conversations with foreigners, through the computer: “I connected with quite a lot of people, around the world … and of course in English, so I improved” (Thanh, Interview, pp. 7-9). This was in contrast to her initial TELL-based learning, when she first found that it was difficult to gain fluency. She wrote, “I recorded a short presentation and sent to my online teacher … I recorded it three times; the words were not difficult but gaining fluency was not easy” (Thanh, LD, p. 13).

My said, “When I before was about to say something, I didn't know how to express myself. I often thought for a long time about how to start, that was my language response, and communication then was very slow.” But due to “recent considerable interactions with foreign friends”, her speaking ability “significantly improved”. She could then reduce “pauses in speech” and could “express ideas much better” and naturally convey what she wanted to communicate (My, Interview, p. 16). This achievement was the result of her extensive practice with her friends and with foreigners: “I practiced a lot and talked to foreign friends through Skype. I could now speak more easily, and I could much better express ideas. This was probably the number one effect” (My, Interview, p. 16).

The chance to gain exposure to many foreigners through virtual conversations helped the participants improve their speaking performance: “I thought simultaneous communication was much easier, thanks mainly to technology. The environment for learning helped me become closer to my friends, those in English-speaking countries who used English as their native language” (My, Interview, p. 11). This helped her with confidence and natural speaking: “Last year, I had a trip abroad again. Although I was alone this time, I was very confident. I knew what to say at the airport, I could speak naturally. The language was very smooth and natural” (My, Interview, p. 18). In her view, she learned a great deal: “Their ways of speaking and using words were definitely standard, accurate and excellent”, so “when communicating with them, I found, I myself learned a lot” (My, Interview, p. 11). In her final words, she commented: “Compared to my past learning without technology, I then couldn't speak and was awkward. I now see that my ability for language expression is pretty good. From work to life, I know what to say for specific situations” (My, Interview, p. 23).

In the case of Thanh, her better communication was reflected in other people’s view: “Saying it was very good, I didn't know if it was true, but … I got a lot of comments that my English was very okay, my communication was very good, so it was also fun” (Thanh, Interview, pp. 21-22). Thanh also acknowledged her own improvement and was positive about her learning: “I met many other people, they said [my English] is okay, that was fine, and that and that. But I realised that what I achieved was very good … I am proud that I have not given up studying for any single session, so, I feel very *good* …” [speaker’s emphasis] (Thanh, Interview, pp. 21-22).

The participants' overall improvement in speaking is shown by their social communications. For example, My commented, "One of the greatest influences was on my ability to discourse and the competence to use the language in specific social communications" (My, Interview, p. 16). Nhan commented on his improvement through his online learning groups' professional conversations: "Through the learning, exchanging in groups and communication with people, I actually improved my specialisation, and the ability to communicate in English with patients, foreigners and colleagues" (Nhan, Interview, p. 10).

5.3.3. Supporting reading activities and gaining knowledge

The third sub-theme deals with the impact of TELL on reading activities. TELL first helped the participants change how they read and accessed new forms of reading materials: "I read lessons online, newspapers and conversations from Google" (Xuan, Interview, p. 4). Thanh said:

> For reading, I didn't have much, but I had many foreign friends who often posted on Facebook, so I read, I also read articles on Daily Mail or BBC, and if I didn't know a word, I looked it up in a dictionary … I just found a good dictionary that I only needed to click on the word needed, then it was linked to the dictionary, I didn't need to waste time to retype the word (Thanh, Interview, pp. 5-6).

TELL helped the participants improve their reading comprehension and knowledge. For example, Bach could learn how to "read and summarise a topic" as she used the 80-Video-English lesson program (Bach, Interview, p. 5). Similarly, although Nhan felt he was still limited at other skills "listening, speaking and writing", he wrote that his "self-study, reading comprehension and vocabulary" improved (Nhan, LLH, p. 3).

Similarly, My learned through interactions with teachers and foreign friends: "When reading online texts, there were things I did not understand … but I could ask online teachers, or my foreign friends" (My, Interview, p. 34). For her, the significant practice of reading online resources helped her incidentally learn to improve productive language skills: "When I read those articles a lot, I was able to instinctively improve my ability to speak and express myself in English. I speak and write more easily and fluently" (My, Interview, p. 34). The participants reported that they could explore and update knowledge: "While reading, learning new words, then learning knowledge for expertise, it was also a way to update daily knowledge … This learning actually helped me update information more easily" (Nhan, Interview, p. 6).

TELL helped the participants to improve in reading for professional purposes. They could read specialised materials to get discipline knowledge and to serve their professional activities. For instance, Bach said, "I searched and read for professional activities, for example, for professional briefings in English, as each doctor [medical doctor/GP] was assigned to prepare one professional theme to present in English" (Bach, Interview, pp. 5-6). Through these occasions, she had the

motivation to read for new professional information – "I had to search the Internet for information in English for my chosen topic" – and this helped improve her overall ability.

TELL also helped them search on their own for documents to further improve their expertise: "I used technology to find specialised documents, to read medical English resources and to listen to articles with specialised information …" (Nhan, LLH, p. 3). Nhan used TELL-based learning to increase his professional vocabulary: "When I downloaded specialised documents, I had to read them. When I met specialised words, I had to look them up. I usually translated the documents to remember and use them." For him, this not only "helped him learn reading comprehension", but also "strengthened professional knowledge". He learned "how to express ideas from people's writing" (Nhan, Interview, p. 17).

Because professional documents in Vietnamese were rare, he needed to read mostly in English in any case; this improved his English skills: "To find the up-to-date documents I needed, I needed to find from English-language resources, so this helped me a lot in improving reading and writing skills". This learning experience greatly helped him "update his professional expertise". The materials offered high-quality content that let him "improve professional knowledge as well as English" (Nhan, Interview, p. 17). Although his other communication skills in English were still limited, his narratives showed that he gained more in reading comprehension: "It was still difficult for me to conduct English communication for professional purposes. But I could read and understand text documents. I could read and understand specialised documents" (Nhan, LLH, p. 3).

My was well aware of the need for "professional development" and expertise in "specialised English". Consequently, she focused on them: "To do that, I needed to focus on reading; specifically, reading professional-related materials" (My, Interview, pp. 31-32). This process helped her update professional knowledge:

> Qualified professional websites helped me a lot. They showed the ways to calculate the structure of a detail, the ways to assess durability and stability, etc … [The materials] always came with pictures and images … because professional vocabulary was difficult, 'expansion', 'elasticity' … I could not do it as normal, so I must learn through pictures" (My, Interview, pp. 31-32).

Similarly, Hung expressed the need to find professional documents for his "construction work". To prepare for this, he "focused on searching for documents in English" (Hung, Interview, p. 25). During the construction work, he often collected professional documents, then used them for learning: "First, I asked for work documents from foreign partners, then read and researched" (Hung, Interview, p. 16). Through this, he "reviewed the words already knew", and when faced new words, he often "looked them up from online dictionaries, Google search …" (Hung, Interview, p. 16). He often combined different methods such as learning from lessons and work

documents and searching online for more resources: “I received documents from my foreign working partners, I then went online to find information for that content” (Hung, Interview, p. 16). He elaborated on what he often did and acknowledged the support of TELL in his reading for professional purposes:

> I just needed to Google and type keywords, such as “canvas” … From those specialised articles, I continued to explore to learn not only about my professional specialisation but also specialised terms in English. Technology made learning technical English much easier (Hung, Interview, p. 16).

5.3.4. Facilitating writing and improve writing performance

The fourth and final sub-theme deals with the impact of TELL on writing activities. Through the affordances of technology, the participants could change their writing habits and practices. They used emails as well as text chat with Zalo, Viber or Messenger as platforms for their writing. For example, Thanh changed her approach and started to write statuses [on Facebook] in English instead of Vietnamese: “Because young people often wrote statuses, so instead of writing in Vietnamese as usual, I started to write in English”. During online reading, whenever she “encountered a good sentence”, she “looked the words up in the dictionary” and then “immediately put them in the status to remember how to use the sentence” (Thanh, LLH, p. 3).

To write and interact for work activities, Xuan often “used Viber to write in English to report and update the situations in Vietnam to her mother company in South Korea” (Xuan, LD, p. 23). Nhan used Facebook as a platform for his learning and updating his professional knowledge, and Hung employed Zalo as a main medium for his exchanging his professional activities.

In addition to using the above platforms for their writing, learning and communication, the participants (particularly Xuan, Quyet, Hung and My) used emails. For instance, My wrote: “If I needed to exchange communication, I usually used email” (My, Interview, p. 28). For her, communicating through email helped improve her writing. She further mentioned that these exchanges with friends and colleagues helped her improve her professional writing, such as “professional articles, documents or lesson plans” (My, Interview, p. 29).

TELL provided the learners with the opportunities to improve the accuracy of their writing. For instance, through communicating via email, Xuan needed to double-check the spelling of words: “During speaking, I might not need to remember the spelling, but in writing, there were words I must learn by heart … I had to re-check them …” (Xuan, LD, p. 30). Hung also often rechecked the spelling of words when he responded to his working partners’ communications: “Exchanging via Zalo, there were words I misspelled. When I responded to my work partners’ messages, I then realised that I was wrong so I had to double-check, and finally I could fix it” (Hung, Interview, p. 17). For him, “it took time to learn writing skills”, because it was “sentences, grammar,

conjugations, proper use of nouns, prepositions, etc." (Hung, Interview, p. 10). But he saw that, through the process of interacting with his working partners, he "learned and knew more" (Hung, Interview, p. 17). Similarly, My said, "I could now make sentences more elaborate, and especially use more precise words and ways of writing … This helped me use technical vocabulary more correctly for my work" (My, Interview, pp. 39-40).

TELL helped the participants enhance their writing skills. Xuan wrote, "Writing text chat … helped me strengthen vocabulary, spelling and grammar" (Xuan, LD, p. 22). She acknowledged the support of technology: "In writing emails, I had the chance to practise vocabulary, grammar and structures. It helped me consolidate the constructs and principles of sentences" (Xuan, LD, p. 22). Similarly, Hung "learned grammar from online lessons, how tenses were used, past, present, or future …", and this helped him improve his writing skills (Hung, Interview, p. 10).

Bach spoke about the difference between English and Vietnamese expressions: "… I could feel some very good things that the English language could express that were not expressed in Vietnamese". She said: "There were sets of words, to say, it needed to be very short, but it could make people understand … It was convenient to exchange emails in English for professional activities, and chat via social networking sites, Facebook, Viber, etc.". She acknowledged the flexibility of English words: "Many words could be used flexibly so it made the chat process easier, and although it was short, it had enough meaning". She also noted that she learned a great deal from text chat: "When I chatted, this was also an opportunity to learn more words and expressions. When people chatted again, there were new words. This was a gap for me to look up and update my vocabulary" (Bach, Interview, p. 13).

TELL also helped the participants improve their writing performance. For instance, My said, "I gained styles for writing … that I hadn't known before, so my prior writing, although it was also correct, it might not be the common style, or it was still very rough" (My, Interview, pp. 39-40). She also talked about her initial difficulties when writing emails: "I used to sit for hours but still could not finish an email. I had to think of how to start … I now used email normally, … and this helped me write better. I could present my thoughts more smoothly; the words were more fluent. I felt my ability to express the language improved" (My, Interview, p. 17). Hung initially met similar difficulties with writing – "I even made mistakes writing simple greetings" – but gradually, through exchanging emails and messages with working partners, he improved it: "When I read the emails people sent back, I knew how to write correctly, how to use words properly" (Hung, Interview, p. 17).

Improvements in the participants' writing regarding job performance were also clearly reflected. This was particularly so for Quyet, who emphasised the progress she'd made in writing in English at work: "For the current job I do, there are foreign customers, and usually I write contracts. For such foreign clients, I do bilingual contracts, English and Vietnamese. I write quotes, write emails

to guests, send documents in English to guests, etc." (Quyet, Interview, p. 3). My said, "The skills in the form of writing, e.g., documents, papers, or professional materials, I found were much better" (My, Interview, p. 36). Bach said, "… I often wrote articles and reports for conferences and workshops, domestically and internationally. This was my work; I needed to write often" (Bach, Interview, p. 14). She acknowledged that she had learned through professional activities: "Even a science conference domestically, abstracts must be in both English and Vietnamese … I learned from other people's writings … The other thing I learned was how to summarise things" (Bach, Interview, p. 14).

While My, Hung, Quyet and Bach noted that their writing performance had significantly improved, other participants still considered that their English was limited. For instance, one revealed: "technology helped me improve self-study, it also helped improve vocabulary and reading comprehension … but my writing skills were still very poor" (Nhan, LLH, p. 3). Xuan, while she acknowledged improvement – "using email writing helped me better remember the words and have chance to practice them" (Xuan, LD, p. 28) – she also commented on her limitations: "I could understand the content of the work-related emails, but I would not be able to write what I wanted to say" (Xuan, LLH, p. 5). Xuan also noted that technical or specialised documents presented particular challenges: "Other documents, contracts or things related to administration or documents to be sent to state agencies are more difficult" (Xuan, LLH, p. 5). While Xuan was still limited in writing performance, she still aimed to learn: "I must study and practise my English, especially for meetings, the important sessions with banks, departments and agencies" (Xuan, LLH, p. 5). She tried to find ways to write in English "to exchange information, I often used short questions and answers" (Xuan, Interview, p. 7). She also "sought support from the Internet, including translation sites for quick reference" (Xuan, LD, p. 28).

5.4. Supporting the development of strategic competence

Through their use of TELL, the participants learned the skills to maintain conversations, compensate for breakdowns in communication, and enhance the effectiveness of communication. For instance, My said, "I learned how to maintain a conversation, and to get smooth communication at work" (My, Interview, p. 19). She learned how to reduce pauses and avoid interruptions in conversations: "I could completely avoid interruptions or stopping for a long time to think. I overcame many of these disadvantages, even though previously they had been my major weaknesses" (My, Interview, p. 19).

The participants learned to request clarification of information. For example, when Thanh faced a bad communication situation at work with a Korean guest – "At first, I didn't understand what he said, I really didn't understand anything. He hung up the phone, which made me very uncomfortable" – she asked herself if it was her fault, then managed to find ways to keep their communication going to clarify what had happened: "As I felt restless, I sat down and texted him,

begging him to add Zalo to our communication, and asked what he wanted, what he needed." This way of communication eventually helped her find out the reasons for that situation: "Through Zalo, he said he had hung up the phone due to our bad service …" (Thanh, Interview, pp. 27-29).

Similarly, Nhan asked for clarification about what he did not understand when he interacted with other professionals on vietmd.net: "I directly asked the other participants and the instructors for what I didn't understand. That was how I maintained communication and interaction with these colleagues" (Nhan, Interview, p. 10). It was slightly different in the case of Xuan, who combined online search with online meetings with foreign friends to clarify things that were unclear: "I combined online search with meetings with these friends to discuss what it meant". For her, "this was also a way to improve self-study" (Xuan, Interview, p. 9).

When the participants did not understand, they knew how to ask for information to be repeated. For example, during career communications, when Xuan encountered words she did not understand, she asked the people with whom she was communicating to "repeat or explain in a different way" so that she could "understand and remember the words" (Xuan, Interview, p. 2). This was more clearly reflected in the case of Quyet, who showed that she gained confidence and emphasised that she often asked the people with whom she was communicating to repeat what they had said when she could not understand: "When I couldn't understand them, I was still confident, I still asked them again – I mean, I still tried to let them know" (Quyet, Interview, p. 8). Similarly, although My was reluctant at first to speak up at a seminar with foreign professionals, she eventually asked people confidently to slow down or repeat their speech: "It was true that what I learned helped me a lot in communication with foreigners. What I could not understand, I actively asked them to say again or speak more slowly … I felt very happy" (My, LD, p. 13).

The participants also learned how to paraphrase what they wanted to say when they could not find right words to communicate. My said, "I trained my ability to reflect in my mind that if I could not speak this way, I must use another way, for other people to understand me" (My, Interview, p. 19). She also learned how to paraphrase from her foreign friends: "I sometimes talked around and around, then my friends showed me which words to say, how to use words that were simpler but more meaningful" (My, Interview, p. 20). She noted that she became more proactive and could control conversations: "And with my improved ability, I felt that I could control a conversation or a certain communication, that I was able to be proactive in communication situations" (My, Interview, p. 19). This was completely different to what she could do previously in similar situations: "Before, I was often interrupted. I meant, when I was going to speak, I didn't know what to say." This made her lose confidence and hindered her ability to speak" (My, Interview, p. 19).

In the case of Hung and My, as they were lecturers at universities, they also applied what they learned about paraphrasing to express their ideas during their teaching. For instance, My said, “If my students did not understand, I did not feel too afraid, embarrassed, or disturbed as before, but I changed the ways I spoke, using other words, or combining words with pictures to support the lectures so they could understand ...” (My, Interview, p. 21). Similarly, Hung found other ways to express his ideas using both English and Vietnamese: “When I turned on video clips in English, students might know most of the words, but sometimes they did not understand specialised words, so I often explained to them how to use both English and Vietnamese for an action” (Hung, Interview, p. 20).

During their communications, participants used reference sources to help maintain communications. For instance, Xuan said, “I usually interacted via text chat, Viber, Skype or email with foreigners at work. While writing ... I often looked up online the words I forgot ...” (Xuan, Interview, p. 4), for instance, from the TFLAT dictionary. She considered that “everything would be easier if you did not hesitate to look for what you did not understand” (Xuan, LLH, p. 5). She said, “When people replied, sending emails, leaving messages, I used a lot of other help, such as from the Internet, to understand and reply to people. Therefore, my work was not interrupted” (Xuan, Interview, p. 4). In the same way, Thanh “made friends and connected with quite a lot of people, and chatted directly in English”. She often “used the Internet, Google or hellochao.com” to “search for ways to continue her chat and better communicate ideas with foreign friends” (Thanh, Interview, pp. 7-8).

The participants also learned ways to use body language to enhance the effectiveness of communications. For instance, when Thanh said, “I asked people to explain in a different way so that I could understand … I also used body language to express my request” (Xuan, Interview, p. 2). Similarly, My said, “Instead of not knowing how to say it, I asked them something or used 'body language', shaking my head or shrugging my shoulders. I imitated these from online lessons and communication via Skype” (My, Interview, p. 20). She acknowledged to have learned this from her foreign friends as well: “My friends taught me to talk using body language and facial expressions, so I knew how to make people understand what I meant. I might forget that word, but one way or another, I must keep the conversation going” (My, Interview, p. 20). She elaborated on what she often did to maintain conversations:

> I tried to never let the conversation be interrupted. If I didn't know a word, I talked a little bit around it. Because I didn't know, I had to find other ways to express what I meant or use body language and facial expressions to try to convey the ideas, so I did not have to stop or be silent (My, Interview, p. 30).

Professional knowledge and practice

5.5. Facilitating the development of professional knowledge, activities and practice

TELL helped the participants update their professional knowledge. For instance, Nhan said, "Through the learning process, I updated my approach, ways and principles to diagnose, and my knowledge of the signs and images of bones, from CT Scanner or magnetic resonance imaging … A lot of articles could be found from the radiographic links, or PubMed, etc. I could download it to read; it let me study …" (Nhan, Interview, p. 16).

He also spoke about how technology helped him search for professional knowledge in his specific field of imaging medicine: "There were illnesses, symptoms, I often used keywords to search. It showed a wide range of things, X-ray images, ultrasound, computerised tomography, magnetic resonance, and so on, that I could apply in my diagnosis" (Nhan, Interview, pp. 3-4). He said that, through these learning experiences, he not only "improved English" Nhan, Interview, pp. 5, 16), but also "improved my specialised radiology-related knowledge and skills" (Nhan, Interview, p. 7). For him, "this was very useful. For example, when I met a complicated medical situation, I found resources and read, and the resources helped me" (Nhan, Interview, p. 5). Searching for online resources particularly helped him expand knowledge for his "everyday diagnosis activities" (Nhan, Interview, p. 16).

The learning process with TELL facilitated the participants' professional activities. This could be seen clearly from My, Bach and Xuan. Through learning, they gained competence and confidence to attend and communicate in English at different professional workshops and seminars. This is one example from My regarding the attendance at a seminar for in-service teachers: "Today, I participated in a seminar on innovation of teaching and learning methods with representatives from several Canadian educational institutions" (My, LD, p. 13).

Similarly, Bach said, "I often searched for and read about professional activities; for example, professional briefings in English" (Bach, Interview, pp. 5-6). Through this experience, she "had the chance to learn presentation and discussion skills", and "had more interactions with her colleagues" (Bach, Interview, pp. 5-6). Using English to share their expertise in medicine helped her and her colleagues improve their English significantly and develop her professional ability. Bach said, "First, we shared about expertise in medicine, then our English knowledge and skills. This I found very good – it developed my ability" (Bach, Interview, pp. 5-6). Xuan also noted that she "used English very often for professional activities", for instance, to "write email and text chat for everyday work activities" (Xuan, Interview, p. 9).

Using TELL also enhanced the participants' professional networks and development. For instance, Thanh created good relationships with her colleagues through exchanging learning experiences with them; these relationships helped them all work better: "I felt happy when I

helped them learn English … I didn't know what the reasons for their studies were … but I felt that I was in good spirits when I went to work and that other people were in good spirits, and we were happy at work" (Thanh, Interview, pp. 26-28).

This type of learning experience helped Xuan make more friends with "different working partners within the country and overseas" that helped strengthen her "career network" (Xuan, Interview, p. 12). "I improved my language and career knowledge and skills and had good relationships for the future. When people returned home, we still kept in contact via social networking sites" (Xuan, Interview, p. 5). She considered that this further helped her develop her career as well as benefitting the institution at which she worked: "These relationships further developed my career ... Further, when we talked more, we had more relationships, and our businesses had more cooperation, more economic contracts and buying and selling activities" (Xuan, Interview, pp. 12-13).

Quyet's experience was slightly different. While this learning experience strongly helped her professional development and the expansion of her professional network, it also provided her with the chance to get a more promising job: "I recently was offered a better job [as an assistant director] at another company that aimed to expand its overseas markets" (Quyet, Interview, p. 4). For her, the success of her learning English strongly helped her in her career progression.

During learning and working, Hung used social media to interact with other colleagues in civil engineering as means of professional development: "In each project, we set up a Zalo group, for those who worked as investors. For those who were contractors, we then formed a team to carry out the construction work" (Hung, Interview, pp. 22-23). He had chance to interact in English: "The forums included the investors, the contractors, the supervisors, etc. As these groups had foreign experts, the exchanges must be in English" (Hung, Interview, pp. 22-23). Through the online construction forums, TELL helped him "improve his discipline knowledge and skills" (Hung, Interview, p. 22). He also spoke about the other opportunities these forums offered: "There were a lot of people coming in and asking questions, and then everyone asking each other … there were a lot of enthusiastic people there who were willing to support each other professionally" (Hung, Interview, p. 22). He noted that his career relationships and network became greater over time: "When the project was over, anyone who ever worked together continued to keep up the relationship to exchange other related work" (Hung, Interview, pp. 22-23).

For My, learning with TELL helped her become proactive in attending different professional activities, such as workshops or seminars, to develop her career: "Last week I went to a seminar at Maritime University and talked with experts who teach in the same field as mine. I also met other foreign experts who worked periodically on a monthly basis …". For her, this was a "valuable opportunity" for her work" (My, Interview, p. 32). This learning helped her "expand

[her] relationships and career network with professionals overseas via social media" (My, Interview, pp. 32-33).

Learning using TELL allowed Nhan to "join many professional forums to exchange and improve expertise in medicine" (Nhan, Interview, p. 8). This offered him the opportunity to learn more about his field: "At first, I was not proficient, but when I joined these groups, the professionals and experts here were very enthusiastic about encouraging, motivating and teaching me" (Nhan, Interview, p. 8). He also spoke about the specific discipline matters he talked about with the groups and what he learned from them: "For my colleagues, I exchanged about professional issues or had professional briefings. For example, I would upload an X-ray, CT scan or magnetic resonance image on the group page for my colleagues to comment on and suggest things" (Nhan, Interview, pp. 13-14). Comments and suggestions from colleagues helped him "update professional knowledge, experience and English language" (Nhan, Interview, pp. 13-14).

Bach's TELL learning experience also facilitated her professional development activities. For instance, her progress in learning and using English helped her "participate with confidence in doctor briefing sessions", and through this she and her colleagues "helped each other in the organisation … they expanded professional relationships, becoming closer at their workplace" (Bach, Interview, pp. 11-12). She also "participated in domestic and international conferences on maritime health" without the need to travel (Bach, Interview, p. 14). In addition to her regular professional medical work, she "gained the ability to organise for the conference" (Bach, Interview, p. 14). At these conferences, she and her colleagues "had the chance to learn from each other" (Bach, Interview, p. 15). As an editor and a research manager, she also "helped others in improving their English writing". She said that she was always willing to share with colleagues about how to write so they all could "learn and improve their English skills" (Bach, Interview, p. 15).

Learning with the support of online searching facilitated her overseas professional development as well. She said that the combination of the training course with online learning had a good influence on her job: "I felt that my experiences studying English had a good influence on my job, especially in my hospital …" (Bach, Interview, p. 6). This learning experience facilitated the "expansion of [her] professional network with foreign professionals" (Bach, Interview, p. 11). This helped her "connect with more people via training courses" (Bach, Interview, p. 11). Besides improving professional expertise, she and her colleagues "gained social knowledge and, particularly, learned English from different participants from different countries" (Bach, Interview, p. 11). For her, "the affordances of technology helped [her] keep in touch with foreign professionals and learn more" (Bach, Interview, pp. 12-13).

5.6. Facilitating the gaining of new perspectives in learning and communications

While some of the participants (particularly Thanh, Xuan and Bach) still focused on gaining accuracy in language learning and communications, others (particularly Quyet and My) gained new perspectives regarding the learning of English and using English in communication that made them ready to take risks and willing to participate in situations where they would need to use English. The former group of participants mostly emphasised learning linguistic elements to gain accuracy. For instance, in the case of Thanh, she always expected to be perfect in pronunciation as a mark of professionalism, mentioning the errors made by the sales consultants in her field of expertise: "I heard other sales consultants who consulted for foreign customers (in my field – real estate), but they always mispronounced words" (Thanh, LD, p. 13). In her view, it should be proficient and professional before attending and during the communications.

Those in the latter group were must more interested in the new perspectives regarding learning and using English and the opportunities to encounter and learn from different famous speakers and people and became much more ready to take risks and participate in communicative situations. For example, Quyet was inspired by the speakers giving TED talks: "I felt really inspired and motivated to hear what this speaker said" (Quyet, LD, p. 1). She wrote, "How well somebody communicates in English, actually has little influence on their English level. It has a lot to do with their attitude toward English" (Quyet, LD, p. 1). At other points, she wrote about what she noticed about people's readiness to become involved in daily-life and work-related communications. She noted her own new ways of thinking about going ahead and taking action: "Did you understand the email, and did you understand your customer? So go ahead and take action" (Quyet, LD, p. 1). She learned that active listening in communication is the important factor, not the perfection or accuracy of what one is going to express: "If someone was talking to you and you were busy thinking about how you were going to respond and express yourself correctly, you would not actually hear what the other person said" (Quyet, LD, p. 1).

When she learned with the WELE Facebook group, she noticed that "it was normal for foreign-language learners to make mistakes while speaking or spelling" (Quyet, LLH, p. 3). This helped her realise that English proficiency did not always require perfection. In the next excerpt, she revealed that through learning with WELE group, it helped her change the ways of thinking about what facilitate or hinder the ability to communicate. She also realised that: "whether you are better than you of yesterday was more important than comparing yourself to other people's English level and then losing confidence ..." (Quyet, LLH, p. 3).

The process of learning with TELL helped her learn from various speakers and scholars: "Through the learning, I learned that 'attitude and confidence would determine whether I could speak English successfully or not', even though my English proficiency was not very high, I didn't have a large vocabulary and my grammar was not correct" (Quyet, LD, p. 2). She wrote:

"Just continuing to have conversations with customers to get results was the first step to success. As well, we needed a good attitude in other situations in life and work …" (Quyet, LD, p. 2).

Similarly, My changed her ways of thinking and was now ready to take risks to participate in various forms of conversations to improve her communication skills. Previously, she had always been "afraid of losing face [due to being wrong], and thus afraid to communicate" (My, Interview, p. 15). She then changed perspectives and began finding ways and approaches to communicate with foreigners regardless of geographical factors: "I then realised I needed to learn English through simultaneous communication, because now that the technology had developed, I no longer thought that they were very far from me or that the geographical factors negatively affected me" (My, Interview, p. 9). In the past, in accordance with Vietnamese culture, she was often shy and reserved in communication, and thus "did not take opportunities to use English", even when she "had the chance to communicate with foreigners at conferences" (My, Interview, p. 9).

While learning in a TELL environment, My became more active and confident in communication and tried to create opportunities for learning: "At first, when I didn't know the foreign experts, I was still shy. Later, whenever I went to meet them, I suggested that I was weak and wanted to ask these experts for help … [When I approached others for help], immediately they were very enthusiastic … They gave me their contacts. I then contacted them via Skype a lot, and Facebook, mostly for learning more" (My, Interview, p. 37).

5.7. Supporting the development of lifelong learning skills

The experience of learning using TELL helped the participants gain skills for lifelong learning. For instance, Nhan mentioned the impact of this language learning on his professional development and lifelong learning, helping him gain an autonomous way to expand his knowledge and expertise: "… I am a doctor, so learning the language using technology helped me gain English-language skills in an autonomous way to expand my knowledge and expertise. It helped me find professional resources and specialised materials that I need, and so on" (Nhan, Interview, p. 5). "[Technology] supported me as I learned, while also helping me to find new ways to learn. Because when I found a document, it was not that I could read and understand it all right away, so I just read and learned at the same time" (Nhan, Interview, p. 7).

These skills for lifelong learning helped the participants continue to learn during their work. One of the benefits was that it helped them "improve communication skills in both English and Vietnamese" with foreign and domestic professionals (Bach, Interview, p. 10), which helped them in professional-development activities (Bach, Interview, p. 10).

The learning experiences were also opportunities for their lifelong learning. For instance, although Nhan did not have the chance at his medical university to learn about innovations in his rapidly changing discipline, he could now keep current at work: "When I was studying at medical university, the lecturers could not teach everything, and because these technologies were new, so

most of this knowledge I had to find out by myself later in my job … Previously, there were only X-rays or ultrasound technology. Then with CT scanners or magnetic resonance imaging … all these were new, so I must update, must explore, must learn regularly" (Nhan, Interview, p. 6).

Bach also felt that being in the medical profession required one to adopt a commitment to lifelong learning, and that knowledge of a foreign language and technology were the two important things to fulfil this requirement: "Working in the medical profession, it was really like a process of non-stop study, so professional study using foreign languages, and especially learning using technology, was really necessary" (Bach, Interview, p. 12). In her view, learning with technology helped her update professional knowledge, as well as acquire the skills to keep learning throughout their lives: "... because it helped us not only update the professional knowledge but also improve the ability and skills of learning foreign language. This was different from traditional learning. Mostly I felt very satisfied when learning using technology" (Bach, Interview, p. 12).

Chapter summary

This chapter has reported on the impacts of TELL on the adult-learner participants' communicative potential in English as well as their professional knowledge and practice. The chapter began with a description of the impacts of TELL on the improvement of linguistic competence, including pronunciation, grammar and vocabulary. The chapter then moved to the presentation of the impacts of TELL on the improvement of the sociolinguistic competence, discourse competence, and strategic competence. It finally referred to the impacts of TELL on the improvement of the learners' professional knowledge, activities and practice, new perspectives in learning and communications, and the development of their lifelong learning skills. These data, in general, revealed the improvement of the adult-learner participants' communicative potential in English. The findings drawn from these data showed the participants' much potential to enhance the learners' linguistic competence and spoken discourse ability. The affordances to improve the learners' professional activities, professional network, and lifelong learning skills were also witnessed.

The next chapter discusses the findings regarding the first research question.

CHAPTER 6: DISCUSSIONS PART ONE – LEARNING EXPERIENCES

This study aimed to investigate the learning experiences of adult EFL learners in TELL environments and the impacts of TELL on their communicative potential, professional knowledge, and practice. The findings from the study showed a variety of issues regarding TELL-enabled learning and its influence. Based on the theoretical framework detailed in Chapter 3, the findings from this study will be discussed in the light of experiential-learning pedagogy and sociocultural theory.

This chapter will discuss the findings relating to research question 1. This centres around the EFL learning experiences of adult learners in TELL environments in their lifelong learning contexts.

Research question 1:

What are Vietnamese adult learners' EFL learning experiences of developing their capacity to communicate in English in TELL environments?

Based on the findings emerging from language-learning histories (LLHs), learners' diaries (LDs) and semi-structured interviews, this chapter will discuss over five sub-sections the themes in relation to experiential learning using TELL, vicarious learning and interactions using tutorial CALL activities and private speech, connecting with others for learning using social CALL activities, challenges and determination for learning.

6.1. Direct involvement and self-discovering for resources and ways to learn

Experiential learning is based on learners' direct involvement in a learning experience, as opposed to their being recipients of the content in the form of lectures (Masilamani & Sundarsingh, 2018). In this research, the participants involved themselves directly in a process where they learned and relearned English by self-discovery. This is similar to Murray's (2011) findings that the participants in a self-access language centre first chose their learning materials and then found ways to work with those materials. This was in contrast to their previous learning, when they mostly relied on their teachers. As the participants in the current research had graduated and entered the job market, they did not have the opportunity to return to normal schooling. There was no one to teach or guide them; thus, all of them self-explored for their studies.

Although all of the study participants (except Bach) had previously spent as long as ten years learning English, and they realised the need to learn English particularly when they began university study, they could not achieve their goals of learning English for communication. Thus,

when they entered employment, they all needed to learn and relearn English. However, as they were not able to attend formal classes, all of them chose TELL as the only option for their study.

When the study participants were at schools, they had little chance to improve their English skills, as they were passive learners engaged in rote learning. Most of them recognised their English education as better at their universities than at their schools, but they still felt unmotivated. This finding corroborates the results from earlier research in Vietnamese contexts (Andrew, 2020a; Canh & Barnard, 2009a; Hoang, 2008; Nguyen, Warren & Fehring, 2014, 2015) and in other contexts such as the United Arab Emirates (Palfreyman, 2006).

There were various reasons for them to choose TELL as a key mode of study. First, all of them expressed that they did not have time to attend formal classes. Also, for some participants (Thanh and Quyet), while they noted that there were good English-language centres there in the city where they were living, they had to choose TELL for the self-study as a result of family financial conditions. For other participants, cultural norms also contributed to the reasons for their choice. For example, although My did not experience financial hardship, the reservations typical of Vietnamese culture hindered her from attending face-to-face English classes, as she hesitated to learn with younger people, feeling that her mature age made formal learning unsuitable for her. Thus, she started exploring the study of English using TELL.

Experiential-learning theory draws on the works of such scholars as John Dewey, Kurt Lewin, Jean Piaget and Lev Vygotsky. These scholars gave experience a central role in their theories of human learning and behavioural change to develop a dynamic, holistic model of the process of learning from experience (Masilamani & Sundarsingh, 2018). In this research, the participants took time and actively searched on their own for resources for their learning, using various channels such as learning websites, YouTube, news and movie and professional channels. This showed that they had tried to self-regulate their learning process and self-direct their learning, as proposed in the learning models of Reinders (2011) and Zimmerman (2000, 2011). This also showed that they were active in their learning, in contrast to the "transmission" model of learning, in which pre-existing fixed ideas are transmitted to the learner.

Through the affordances of TELL, participants could encounter various kinds of learning materials that helped them greatly in their studies. This agreed with Powers and Jablonski's (2015) assertion that this kind of learning using computing devices and the internet allow learners to search for information from wherever they are. However, while the younger participants, such as Thanh and Quyet, were eager to use a wide variety of information sources, the senior professionals, such as Hung, My and Bach, tended to engage more with specific learning websites. This can be explained by age differences and the two cohorts' reasons for learning. Bach, for instance, in addition to 80-Video English lessons programs on YouTube, was particularly

interested in Special English learning programs with medical news, because she aimed to update her professional knowledge in her field of work (health and medicine).

A number of theories from a wide range of disciplines have contributed to the research on informal, self-directed and lifelong learning (Pemberton, Fallahkhair & Masthoff, 2004). Research has also examined the contexts of learning using technology-supported environments. In the field of second-language acquisition, research has shown that TELL can enable adult EFL learners to not only learn using information and communication technologies, but they can also discover their potential as learners who can regulate their own learning process throughout their lives (Khadimally, 2019; Renes, 2015; Srichanyachon, 2014). In this regard, the participants self-explored for ways to learn. For example, when Xuan came across unknown words, she often wrote them down for future enquiry (Xuan, Interview, p. 4). She "searched Google" or sometimes "asked these foreigners or chatted with friends for the explanation" (Xuan, Interview, p. 5). Similarly, when Bach learned with video lessons, she often used the "undo" and "rewind" features to listen again, and to guess the meaning of the words (Bach, Interview, p. 18). Hung used captions in clips while he listened (Hung, Interview, p. 6).

While Xuan seemed to prefer traditional ways of learning – for instance, trying to learn by heart, using the words to join into sentences and reading English words with Vietnamese phonetic transcription – other participants (Quyet, Thanh and My) found more sophisticated ways to learn English more quickly (Quyet, Interview, p. 6). This interesting finding indicated that the learners showed some forms of self-directed learning as in the model by Reinders (2011) and self-regulated learning as in the framework mentioned by Zimmerman (2000, 2011). Based on a social constructivist view, self-formulation of their study, as found in this research, has the potential to transform technology-driven learners within their contexts into self-directed and, ultimately, autonomous and lifelong learners (Khadimally, 2018). This finding confirms the results of Murray (2011), in which the participants first looked for learning materials and then found out the ways to work with them. Murray (2011) also indicated that some participants had more clearly defined learning strategies than others. These views of learning, which are based Kolb's (1984) principles, sharply contrast with those that stress that reception, not construction, is key, and that learning is the passive transmission of information from one individual to another.

6.2. Learning as a long process and in relation to work and life

Within the constructivist approach, learning is viewed as an active, creative and socially interactive ongoing process that helps learners construct new ideas based on their current and past knowledge (Bruner, 1990). In this research, all participants had learnt English for almost 10 years at schools and universities. They had learned and relearned many times to meet their needs at different stages. Under the social constructivist paradigm, experiential-learning pedagogy has the potential to provide these adult learners with a transformation from their prior learning to their

current learning experiences (Murray, 2008). For instance, while Thanh, Quyet and Bach had recently learned new knowledge and skills, Hung, My and Nhan revealed that they consolidated the knowledge that they had not had the chance to master at school and university. Hung strengthened his knowledge when he learned and relearned later at his construction job and in his daily life. Similarly, although Nhan did not have the chance to learn about modern technology in his field of expertise when he was at medical university, he had the opportunity to learn it much later using technology. These findings imply that learning is not separate from transformation (Lantolf et al., 2015).

By experiencing the learning this way, the study participants could develop the knowledge of what reality is by relating the new knowledge to what they already knew (Kolb, 1984). This allowed them to reflect on their own learning and experiences, and thus check and refine their understanding. According to Linn, Howard and Miller (2004), when learners transform their previous learning experiences into new contexts, they master new concepts, principles and skills, and can become lifelong learners.

While the participants self-discovered how they wanted to learn, as mentioned, they explored things in relation to their work and life. For instance, Hung often brought documents home from work and he researched to learn professional English and discipline knowledge. Nhan, a GP, often explored health websites such as PubMed/Radio Graphic for professional materials. His written materials and interview indicated that technology had helped him change his approach to both learning English and updating his discipline knowledge. He is now proactive and takes advantage of advanced technology to search for professional materials for his specialisation on health websites. This finding supports Kolb and Kolb's (2005) assertion that "learning is a holistic process of adaptation to the world" (p. 194), as the study participants learned things that they adapted to their work. In this research, since the participants were mature learners, their learning involved their children and other relatives as well. For instance, Bach often chatted with her Vietnamese nephew living abroad to learn English (Bach, Interview, p. 10), and My usually involved her children in learning with her. Further, during their learning, the study participants learned practical things. For instance, Thanh went to parks to find opportunities to communicate with foreigners. Similarly, My invited her foreign nephew to her home parties for more chances to speak with him. This indicated that they used ideas and learned in new situations in a practical way that experiential-learning pedagogy refers to as "reflective observation" and "active experimentation".

This authentic communication increased their awareness, and thus influenced their language development. For instance, My mentioned that she remembered words really well through conversing with her foreign nephew at joint cooking activities. This finding is in agreement with Stickler and Emke's (2011) assertion that practical and genuine interactions in non-formal and informal situations offer opportunities for language learning and development, and Nafukho's

(2007) idea that learning is focused on learners, not teachers, and promotes learners' active involvement as they construct their own knowledge and skills based on their authentic conditions. Learning is not just the result of cognition but involves the integrated functioning of the total person – thinking, feeling, perceiving and behaving (Kolb, 1984; Kolb & Kolb, 2005). This is in line with the social constructivist perspective.

The current study indicated an inverse direction of socialisation of literacy skills (Field, 2005) among the mid- and late-career professionals (for instance, Hung, My, Nhan, Bach) during their learning. In other words, although the participants were active, they still needed support from younger relatives and other younger people in gaining English and IT skills. This finding is consistent with Palfreyman (2011), who found that the older learners, in this case parents and uncles of the main participants, met difficulties with English, and thus sought help from their children. Early-career participants in the current study (for instance, Thanh and Quyet) helped older learners in their working institutions. The findings in this research that adult learners can have limited IT skills support earlier studies in Vietnamese contexts. For instance, Long (2011a) showed that computer and typing skills are two of the biggest obstacles hindering learners from effectively integrating computer-mediated communication activities, although they still felt that the process was positive and constructive. Long even found this to be the case for the younger participants (university students). This suggests a need to find ways to support learners in Vietnamese contexts, particularly adult learners, such as those in the current research.

6.3. Vicarious learning and participation using tutorial CALL activities and private speech

6.3.1. Vicarious learning and tutorial CALL activities

In practice, virtually all behavioural, cognitive and affective learning from direct experience can be achieved vicariously through the observation of other persons' behaviours and its consequences for them (Bandura, 1969, 1986). This has been called vicarious, observational or social learning (Bandura, 1977; Rosenthal & Zimmerman, 1978). According to Bandura (1986), vicarious learning takes place when an individual actively observes interactions among the other students, or between students and the instructor, and benefits from them.

Tutorial CALL activities help learners in second-language learning by their interaction with the computer itself; for instance, to do an exercise or respond to given prompts (Blake, 2017). Through these activities, learners use computers as a tutor that gives guidance and provides materials for their study. In the past, tutorial CALL programs have often considered an inferior component in the language curriculum (Blake, 2017), but according to Hubbard and Siskin (2004), their place is well-justified. Although it has drawbacks in terms of giving individualised feedback, various programs, apps, software and systems have been developed that can help

improve these limitations (Blake, 2017). While classroom learning provides learners with more opportunities to notice their language gaps (Loucky, 2006; Teixeira, 2015), individual practice in tutorial CALL activities helps learners develop memory storage, retrieval of words, collocations and appropriate language usage.

6.3.2. Vicarious learning and participation

Vicarious learning exists when "personally responsible participant(s) cognitively, emotionally, and behaviorally processes knowledge, skills and/or attitudes through processes of observation in a learning situation" (Hoover & Giambatista, 2009, p. 36). In this research, participants experienced their learning through observation, imitation and modelling (Bandura, 1962). They often rehearsed situations by talking to themselves when they practiced. According to Bandura (1962, 1977), people can learn by observing the behaviours of others and the outcomes of those behaviours. This finding corroborates the results from earlier studies. For instance, in Ohta's research, one of learners was witnessed to experiment with a Japanese stem which she first expanded to form an adverb, and then changed it to an adjective (Ohta, 2001). She was reported to vicariously participate in language-play activities. Along with research by Ohta (2001) and Centeno-Cortés (2003) on adult classroom language learners, Lantolf and Yañez (2003) observed that adult learners also frequently eavesdropped on interactions between the instructor and other learners and produce what Ohta (2001) called "vicarious responses" to, or "vicarious participation" in, those interactions.

Bandura (1965) posited a model of four processes governing vicarious learning: attentional, retention, production and motivational. In this study, for instance, after Xuan analysed, absorbed and cognitively processed the interactions of modelled events that she saw taking place between learners and instructor (the first stage, attention), she proceeded to the other three stages (Xuan, Interview, p. 14) for cognitive rehearsal, appropriate courses of action and execution of behaviour patterns (Bandura, 2001). This also meant that the information conveyed by the modelled events was transformed and restructured into rules and conceptions for memory representation. This stage is strongly aided by the transformation of modelled information, or social speech, into memory codes and cognitive rehearsal, or inner speech, of the coded information.

According to Sutton (2000), the cognitive processes that happen during vicarious interactions are very similar to those of observational learning and modelling. In this research, participants spent their learning time using symbolic artefacts produced by others, such as available lessons from learning websites, video clips and readings. Further, they often actively involved themselves in the lessons and benefited from them through observing the interactions among the other students, or between other students and the instructor. With regard to the experiential-learning pedagogy, this is a form of vicarious learning and participation that is strongly supported by sociocultural theory principles (Lantolf et al., 2015; Ohta, 2001).

Bandura (2001) argues that people can only have direct contact with a small sector of the physical and social environment during their daily lives. Thus, it would normally be out of reach to explore situations and activities for the achievement of new knowledge due to constraints on time, resources, and mobility (Bandura, 1986), but vicarious capabilities would allow learners to do that. In this research, the participants showed positive feelings toward vicarious learning and participation. Although they did not have face-to-face interaction, they revealed that they still learned, listened, and particularly watched and followed the interactions by the teacher and model students and among the students themselves. Because vicarious learning enables individuals to quickly form the patterns of their behaviours, they can avoid time-consuming trial and error (Bandura, 2001).

As they used these online programs, the study participants have the experience of attending the lectures as if in person, which has been shown to be an effective and increasingly common way to learn (Pemberton et al., 2004). In vicarious language learning using technology, learners can learn from overhearing the re-usable dialogues. This is a particularly helpful resource for distance learners (Stenning et al., 1999) as in my research. To Stenning et al. (1999), this new type of learning resource holds out promise also for isolated learners and for those who might need greater exposure to language than they are likely to get in traditional educational encounters in the classroom and or lecture hall. This is also applied well when many cases, actual opportunities to engage in dialogue, discussion or interaction may be restricted or when the resources can be scarce.

6.3.3. Involving in imitation process and using of private speech

Imitation

The participants in this research were involved in a process of imitation. They imitated to learn pronunciation, vocabulary, expressions and discourse and negotiation skills through learning websites. However, they also applied "appropriate responses" learned through this imitation when they found themselves in the same situations. This showed that imitation is not a rote mimicking phenomenon (Lantolf & Thorne, 2006). For Lantolf and Thorne (2006), internalisation through imitation entails an active, and frequently creative, reasoning process. This is an intentional, potentially transformative process and is a uniquely human form of cultural transmission (Tomasello, 1999). This finding supports Newman and Holzman's (1993) assertion that imitation is creating something new, not parroting what the others of the culture do. Imitation is critically important, as "something new is created out of saying or doing the same thing" (Newman & Holzman, 1993, p. 151). Imitation, therefore, is understood as the involvement in goal-directed cognitive activity or a self-directed imitative pattern that exhibits the transformative possibilities of this process and can result in transformations of the original model (Lantolf & Thorne, 2006).

In this regard, imitation is not slavish nor mere repetition. In contrast, it is a means for further ends - with the aim at the future.

Imitation is the primary mechanism in language acquisition (Tomasello, 2003). In this study, participants (particularly Bach, Hung, and Thanh) often imitated the utterances used by teacher and model students. Imitation can be 'immediate', as found in this research and in that of Saville-Troike (1988), who found that learners produced immediate imitative responses to the utterances of their teacher and English-speaking peers during communicative activities. Through the analysis of audio and video recordings, Saville-Troike concluded that students frequently produce intrapersonal speech that includes repetitions of their peers' and teacher's utterances. They recall, practice and create novel forms, then expand, substitute and rehearse for interpersonal communication.

Participants in this study also experienced what appeared to be 'delayed' imitation when they learned and internalised, as in the cases of Hung and Thanh. This means the imitative process does not need to happen immediately after a specific linguistic pattern in the learner's environment has been given. Delayed imitation permits learners to analyse language indirectly and serves as an essential element for building spontaneous speech later. This finding was in congruence with that of Lantolf and Genung (2002), who employed interview and diary study techniques and found that some adults reported practicing patterns they had heard in their classes when they were outside of the classroom or engaged in everyday activities; for instance, when they were walking a dog, jogging or walking across campus. The finding also supports those of earlier studies; for instance, Saville-Troike (1988), Ohta (2001) and Centeno-Cortés (2003).

Private speech

Language is the most powerful symbolic artefact for humans to mediate their connection to each other, to themselves and to the world (Lantolf et al., 2015). According to Lantolf et al. (2015), the learning and development occurring from SCT perspectives include not only direct experiences in language learning but also the vicarious participation in learning. They view Ohta's (2001) vicarious participation as culturally organised activity for language learning in which learners just participate to observe the linguistic behaviour of others and attempt to imitate it through the use of private speech (Lantolf et al., 2015).

In this study, the participants often talked with themselves (for instance, whispered, or silently mouthed the words) through their engagement in vicarious interactions (Ohta, 2001) with online teachers and with the content of the programs. This finding is similar to that of Saville-Troike (1988), who documented instances where ESL children in an American school setting imitated the speech of their classmates while eavesdropping on conversations between peers. In Saville-Troike's research, video recordings while using radio microphones under natural conditions showed that the children extensively used private speech, in which they employed a wide range

of language learning strategies, such as repetition of others' utterances; recall and practice; creation of new linguistic forms; expansion and substitution practice of paradigmatic and syntagmatic features; and rehearsal for overt social performance (in other words, interpersonal communication).

Ohta (2001) found similar patterns in what she referred to as “vicarious response” in the case of adult foreign language learners of Japanese. She discovered that learners often quietly responded to interactions between the instructor and other learners in the form of private speech**.** These dialogues with the self (Ohta, 2001) helped learners stay motivated and self-control their learning. Through these dialogues, learners have the chance to acquire the language through the repeating of all or part of the interlocutors' utterance (Lantolf & Yáñez, 2003). In intrapersonal communication (Lantolf & Yáñez, 2003), or "private speech” or "communication with the self" as termed by Vygotsky, learners do somewhat the same thing. It is essential for development (Vocate, 1994), as it has been shown not only to facilitate learners’ cognitive development and improve their ability to respond to the difficulty of learning tasks, but also to help them improve their awareness of social orientation and their own learning styles.

Private speech is useful for language learning and its significant contribution to L2 learning has been confirmed (Kozulin, 2018). According to Lantolf (2003), without private speech, language acquisition is unlikely to occur. Adult learners have higher self-awareness than that in children. They are not only active in controlling their own learning, but also have their own priorities for which aspects of the language they will emphasise. These priorities may or may not coincide with the instructor's intention. In this study, participants often vicariously responded to short answers from their online teachers, which they directed at themselves in the form of private speech (as in the case of Hung), or repeated short sentences from the learning programs (as in the case of Bach). This is certainly a purposeful behavior. Lantolf and Yáñez (2003) argue that the private speech used by the adult learner serves the function of internalising, not all, but specific features of the second language. Thus, in this study, as sociocultural theory suggests, learners pay attention to and try to learn those features of the new language that are within their Zone of Proximal Development. This supports the findings from Ohta's (2001) study regarding adults' learning agendas. By conducting the study with an adult learner who volunteered to record her own classroom language production, Ohta reveals that the adult learner always tried to take hold of bits of language for her personal use.

In this study, participants reported that they gained confidence and competence in pronunciation and speaking as a result of their use of private speech in learning, and they could then apply the language to use in real communication later. For instance, Thanh’s and Quyet’s prior learning of pronunciation led their being able to pronounce words confidently in real communication. Similarly, Xuan gained the language skills to be able to have a job interview as a result of her repeated practising by herself with sentences from online lessons. This finding seems to have

some similarities to those found in other studies; for instance, Saville-Troike (1988) concluded that the aspects that the L2 children initially used in their private speech eventually appeared in their spontaneous social speech when they interacted in English with the teacher and their classmates.

The interplay between social speech and private speech helps learners to transform social speech into private speech and inner speech, which then, in turn, serves as the foundation for communicative purposes. The evidence from this research provides a strong indication that intrapersonal communication or private speech actually results in internalisation and language development. Although there need to be more studies on this link in L2 acquisition research, particularly the relationship between private speech and social speech in adult L2 learners (Lantolf & Yáñez, 2003), this study provides more evidence on the interplay between intrapersonal communication and language development in adult learners in the context of learning English as a foreign language.

As they learned, the study participants engaged in a repeated process of imitation, repetition, recall and practice that led to language development. They often engaged in deliberate inner dialogue through practicing newly acquired language forms. They engaged in practice every day, not only learning, but reflecting on their learning. This repeated process of learning with computers significantly helped them in their language development.

6.4. Connecting with others for learning using social CALL activities

Participants in this research did not only engage in L2 learning alone using computers; they also engaged in both synchronous and asynchronous computer-mediated communication, or CMC (Blake, 2017; Guillén, 2014), with other people.

6.4.1. Connecting with people for learning

Social constructivist theory is based on the social constructivist research paradigm (Wang, Bruce, & Hughes, 2011), which considers that knowledge is socially constructed and shared by individuals (Bryman, 2001). Individuals acquire knowledge and understanding through their interactions with social and cultural environments. In this research, the participants connected to other people through virtual social learning spaces. They participated together in the learning groups to share their learning, so as to improve both English-language and professional knowledge, and they supported and motivated each other in their learning. This also helped most of them develop friendships. This meant that they participated in communities of practice (Lave & Wenger 1991; Wenger, 1998). This finding was similar to those of Murray (2011), who identified a non-formal EFL learning context in the north of Japan. Murray (2018) later found that a common purpose, a shared practice and a supportive learning environment created opportunities for learners to learn from and with others, and that participation in a community of

practice enhanced the learners' experience. The current study's finding also supports the ideas of Kolb and Kolb (2005) that social knowledge is created and recreated in the personal knowledge of the learner.

While some participants often interacted with online teachers and classmates for their learning (for instance, Xuan and Bach), others had more connections with foreigners and foreign professionals. When they had people with whom they could interact to learn English, they felt more motivated to learn (Chun, 1994; Kern, 1995). For instance, Thanh said, "Even though it was a little [time], one hour a day, it was fun … After I started that, I have worked very hard, and don't feel lazy anymore" (Thanh, LLH, p. 3). Based on the perspectives and pedagogical applications from sociocultural theory (Thorne, 2003) and interactionist theory (Chapelle, 1998), this is understandable, since these theories consider social communication as a crucial factor in L2 learning and development.

The participants also connected with other foreign learners, such as other gamers (Thanh, LD, p. 12) to learn. They not only learned from others but helped other learners in these groups to learn English, as in the cases of Thanh and Quyet. Learning environments featuring CMC provide learners with many features similar to those of face-to-face language classrooms, as well as additional benefits, such as increased participation and enhanced positivity (Chun, 1994; Kern, 1995).

The principles of SCT guided me to look at how the learning and development in these adult learners occurred as a result of their individual interactions with other people at work, and with objects and events in their social and cultural environments (Vygotsky, 1978). In this research, narratives from Hung, My, Nhan and Bach showed that they were more active in connections with foreign professionals for their learning. The social learning groups helped them update their professional knowledge and discipline expertise through learning and interaction. This was clearly reflected in the case of Nhan, a medical doctor. This supports the findings from Murray (2011), in which learners' comments showed that they experienced benefits from mutual participation in a community of learners. The participants in this research often supported and motivated their fellow learners. This finding is in agreement with Dewey (1938, 1963), who stated that concepts and meanings are not constructed in the head alone, but are generalisations of the interactions in practical activities between individuals and their cultural and social environment.

TELL can provide L2 learners with this kind of space, where they can be exposed to a high level of interactions with others and with the environment (Pemberton et al., 2004). In this research, the participants used technical devices and networks to connect for their learning (Warschauer, 2003). Under a social constructivist world view, learning environments using technology provide the potential for learners to socially network and construct knowledge at their own pace as they

solve learning problems through collaborative engagement in their learning (Mesh, 2010; Newby, Lehman, Russell, & Stepich, 2010).

In regard to the collaborative knowledge construction embedded in social constructivism (Chun 1994; Kern 1995), the participants in this research were found to have positive learning experiences because they learned from and with other people (Chun, 1994; Kern, 1995). This finding further supports the study by Yang (2012), who concluded that learners experienced more convenience in technology-enhanced learning environments, since this environment enabled them to learn cooperatively. The lifelong learning experiences of these participants were supported and enhanced. This also agrees with Yang (2012), who found that technologies outside of the classroom strongly facilitated adult learners' personal EFL learning experiences, as well as their language learning processes.

6.4.2. Using social CALL activities

The participants used social CALL activities with both asynchronous and synchronous CMC. However, during their learning, they had their own difficulties and different learning experiences. While some participants had significant communication using both synchronous and asynchronous modes (particularly Thanh, Quyet and My), some tended to use more asynchronous (Xuan and Bach, in the forms of text chat and email). Hung and Nhan also tended to use both modes. While Hung often used Zalo and Viber as mediums of communication for his learning and construction work exchanges, Nhan usually learned medical English and expertise through medical learning groups on Facebook. However, Hung and Nhan used more synchronous text chat than spoken forms, as in the case of Thanh and My. Thanh, Quyet and My were often proactive about finding ways to communicate and to maintain their interactions. For example, while Thanh maintained simultaneous interactions via Facebook and many other learning apps with foreigners, she also asked people for their Skype or Viber details to chat.

In the words of participant My, technology has changed the participants lives. Through synchronous CMC, these participants increased their English-language skills incidentally, while not fully focused on them (Kukulska-Hulme, 2012). For instance, because Thanh had significant involvement in direct conversations with foreigners via various learning apps, she became familiar with different types of accents, and this strongly improved her “ears”, in her words. This incidental learning was also evidenced in the case of My (My, Interview, p. 18).

This might be explained using a sociocultural approach. According to Pemberton et al. (2004), learning can occur informally and incidentally as a result of individuals' interactions with others and with the environment. In this regard, many researchers, particularly those inspired by the work of Dewey (1938) and Vygotsky (1978), see learning as a socially and culturally mediated process where learners have the potential to interact with others and with sociocultural artefacts.

In the field of second-language learning, learners ideally immerse themselves in the language they are learning; for instance, by listening to it as often as possible in order to become familiar to the sounds and intonation. This finding supports earlier research, such as that of Kukulska-Hulme (2012), who found that participants using mobile-phone-assisted language learning greatly appreciated the experience learning of a language while they were not fully focused on it because they were engaged in another task. The current research also values the role of TELL, and specifically synchronous CMC, for incidental learning (Hulstijn, 2003).

In their use of asynchronous CMC, participants (particularly Xuan, Bach and Hung) mostly used text chat and email to interact with their work with colleagues, and to communicate with online teachers and friends. This allowed them to improve their vocabulary and language use. This finding agrees with the results from prior studies on these early forms of CMC, which showed that such text exchanges provided learners with opportunities for negotiation of meaning and provided feedback similar to that obtained from face-to-face communication (Blake, 2000; Meskill, 2005; Warschauer, 1997). In the words of Hung, "through the response of the partners", he received both implicit and explicit feedback from his work colleagues. This uptake of the language (specifically, error correction) was due to the fact that he was, in effect, "paired up" with higher-proficiency learners; in this case, native speakers working with him as foreign colleagues. These writing exchanges had the potential to lead to his learning, since such arrangements have been shown to provide learners with the chance to negotiate for both meaning and form (Abrams, 2003; Heift and Vyatkina, 2017; Loewen & Erlam, 2006). In this study, participants also learned from using text chat and email with peer learners and friends, because research has shown that any peer-to-peer L2 interactions can trigger negotiation for learning (Heift & Vyatkina, 2017; Peterson, 2009).

Although synchronous CMC had benefits for the participants, including providing them with more channels of communication, including voice, this research found that the asynchronous chat helped them reduce stress. For them, interacting by chat was less embarrassing than meeting face to face, since they were not afraid of being laughed at when they made mistakes (My, LD, p. 15); this apprehensiveness is consistent with Vietnamese culture, particularly for those in the age group of this study's participants. Further, the participants in this research acknowledged that asynchronous CMC gave them more processing time while learning and dealing with the language (Chapelle, 2003; Compton, 2004; Roed, 2003). This finding is similar to Blake's (2017) findings that, because of the visual persistence of asynchronous CMC and the fact that learners can respond in their own time, many learners still prefer texting. Similarly, Heift and Vyatkina (2017) found that, compared to traditional face-to-face communication, CMC provides learners with more planning time and creates more opportunities for learners to monitor and revise their learning. This also helps these learners overcome inhibitions and more willingness to take risks in their learning (Warschauer, 1999).

6.5. Challenges during learning

Narratives from the participants in this study showed that they faced a variety of challenges during their learning. In this part, the following challenges will be discussed: (1) age, culture, work and life circumstances; (2) learning strategies and resources; and (3) policies and support.

6.5.1. Challenges regarding age, culture, work and life circumstances

As people age, some decline in physical and mental abilities is probable (Singleton & Ryan, 2004). In this research, the narratives from the participants (particularly Hung, Nhan, Bach and My) showed that there were limitations in their learning in terms of mental and physical ability compared to young people (De Bot & Makoni, 2005). This finding seems to be consistent with Murray's (2011) results, which found that the adult learners in a self-access EFL learning context faced age-related factors such as problems with their eyesight, hearing and memory that influenced on their cognitive and learning abilities.

Culture also had an impact on the current study's participants' language learning: the participants, particularly the more mature ones (Bach and My), hesitated to contact other people and were reserved in communication. They were often afraid of being wrong in communication that could lead to "losing face". This reserved culture is typical for Vietnamese people, particularly those who are now in middle-age or older. This is unlike the younger generations as they are now more confident in communication (Canh, 2014). This can be attributed to these younger people being less affected by Confucian culture.

Vietnamese people also have strong preconceptions about the appropriate age for schooling. In this research, narratives from Hung, My, Nhan and Bach revealed that ideas about age-appropriate activities hindered them from going back to formal learning in face-to-face settings. The participants also showed that they were afraid of learning "together" with younger people, particularly in social settings; thus, they did not want to attend formal classes with them, although these preconceptions no longer apply as strongly in family settings, where parents and children now learn, discuss and work together.

Participants' preconceptions about what subjects were more important to study also affected their learning. In the cases of Hung and Nhan, because during their formal schooling they focused on learning natural science subjects, they did not spend time learning English. Such preconceptions have been more common amongst older people and particularly in rural areas; for example, My was born the same year as Hung, but in the city, as opposed to Hung's rural origins. Although she chose a technical field as her future job, she still learned English from childhood through to university. Hung and Nhan's choices of subjects and occupations were also typical for most other people of their generation in the countryside. Their reason for not choosing English as a main subject was partly that many people in the countryside did not see the point of learning English.

But these biases kept them from becoming interested in learning English, and it was only when they entered universities in large cities that they re-evaluated the importance of English for their professional lives.

The participants' learning was also affected by their work and life circumstances. For example, Nhan, a medical doctor was already overworked, and attending formal classes was out of the question. However, participants could find ways to self-study at their own time and place. Similarly, Murray (2011) found that learners did not have either the opportunity or the environment to speak English, since they were all retired. While the current study's participants were in work-related settings, and thus had the opportunity to use English and apply what they learned to their jobs, they faced workloads and other circumstances that hindered them from learning.

6.5.2. Challenges regarding learning strategies and resources

Learning strategies

The current study's participants faced difficulties in processing information, and in analysing and summarising knowledge. For instance, while Bach could not understand the grammar lessons, Xuan learned words, imitated, and reread, but she did not know if she pronounced correctly. For her, this was due to the absence of a real teacher. To learn vocabulary, Xuan tried to remember words by listening and imitating people in videos many times, as well as writing words and phrases many times, but it was still difficult for her to remember the spelling. These difficulties suggest that the learners had limitations in terms of cognitive learning strategies (Reinders, 2011; Cotterall & Reinders, 2004). Murray (2011) also found that adult learners faced age-related problems regarding cognitive strategies.

The study participants faced challenges in organising, managing and supporting their learning. They were still familiar with traditional learning methods, in which they had strongly depended on teachers and used memorisation as a learning method. While Nhan emphasised the importance of strategies to manage their learning, he did express the need to have a face-to-face teacher. Xuan and other participants also spoke and wrote in ways that showed they were still, to some extent, passive learners who did not feel entirely in control of their own studies. Although the participants were mature learners, they still showed similar learning characteristics to those found in Bailly's (2011) research, in which the participants focused on learning grammar rules, taking notes and learning by heart, and continued to need teachers' help to learn.

They also found it difficult to choose the appropriate programs to improve their English-language skills. For example, although they needed English for their careers, they did not always choose programs that taught English for professional purposes; rather, some of them, such as Xuan, focused on programs aimed at school students (in the case of Xuan). This mismatch between their

learning needs and how they chose to meet them suggests that they needed guidance to locate learning materials for their self-directed leaning (Reinders, 2011). Similarly, the students in Bailly's (2011) study set unrealistic learning goals and did not have clear criteria for finding and choosing resources that matched their learning needs or styles.

The participants faced challenges in determining what areas of language to focus on. For example, Xuan and Hung emphasised grammar, even though they aimed to learn for communication purposes. This, again, showed that their learning strategies strongly supported traditional learning methods based on grammar and translation and focusing on discrete words or parts of language (Bailly, 2011).

The participants faced more difficulties in turning what they learned into functional knowledge. Their comments suggested that, in addition to the cognitive strategies the participants needed to process information for learning, they also needed metacognitive and social-affective learning strategies (Bailly, 2011; Reinders, 2011) to organise, manage and find opportunities to practise to consolidate their learning and incorporate it into their own knowledge. This can be seen clearly in the cases of Xuan and Bach.

Learning resources

While some of the study participants (for instance, My and Quyet) successfully located learning programs and materials, others still faced challenges in finding suitable resources due to too many choices. However, while My initially faced challenges in determining which web sites to use for her study, she eventually managed to refine her choices until she found the appropriate sites. Other participants (particularly Xuan, Hung, Thanh, Nhan and Bach), faced with too much choice, didn't know which materials were suitable for their learning and where to start. This finding revealed that, as in Beatty's (2010) research, the wide scope of web-based learning resources in itself presented challenges for them. The disordered sequence of priorities for their learning and the many, and often confusing, interactive features available can lead to information overload and distractions (Godwin-Jones, 2010). These distractions challenged the learners, even the best ones, for example, in the case of Thanh in the research. The evidence showed that while Thanh is a smart and proactive learner, she still faced difficulties in finding suitable learning apps for her study. She looked for various learning apps but then deleted them and downloaded others.

Thanh faced difficulties in using apps to learn formal language, such as punctuation, full writing and formal structures. She also mentioned challenges finding supportive peer learners from these learning apps. This might be because a TELL setting by its nature could not guide or support them; for instance, in finding peer learners. Beatty (2010) suggests that this might also be due to the challenges of organising team tasks in TELL activities. Studies have also found such difficulties in more-formal learning settings. For instance, Bailly (2011) found that students were

not comfortable with the idea of being responsible for their own learning, and thus left the programs prematurely.

6.5.3. Challenges regarding policies and support

The third and final sub-theme of this part relates to participants' difficulties relating to policies and support, first at schools and universities, and later at their work. The narratives from the participants showed that the language-learning policies and exam-driven curricula at their schools and universities did not give them the opportunity to learn English for communication, but mainly focused on grammar (Hoang, 2008; Nguyen, Warren, & Fehring, 2014, 2015). The tedium of English for specific purposes classes was also apparent in Xuan's narratives. Also, due to the education system's poor infrastructure at that time, they had limited opportunities to access technology, and in any case it was seldom, if ever, used for language learning.

These participants also faced challenges with language learning later during their time at work. In these participants' view, the less encouraging policies did not motivate them to continue learning, even in what might be a more effective setting. Moreover, the language-learning policies and supports from their working environments were not consistent over time. For example, regulations to require speaking compulsorily in English were soon abandoned. Also, the workplaces provided no one to teach or guide their employees in their efforts to learn English. The lack of recommended learning materials or official courses made learning difficult (Reinders, 2011).

Chapter summary

Kolb's experiential-learning model suggests that people learn from their experience in a cyclical way, experiencing or observing something and reflecting on that. Their experience and reflection are then incorporated into their conceptual knowledge. To complete the learning cycle, people must ultimately practise the new knowledge and skills, applying them to new situations (Kolb, 1984; Kolb, 2015). In this research, participants had learning goals and priorities. They explored for learning, practised and reflected on their learning. All these learning activities reflected the principles of experiential-learning pedagogy. Although they faced difficulties in terms of work and life, learning strategies, policies and support, they still had positive attitudes toward learning. They showed determination and self-created what they needed for their learning. Their learning experiences were similar to Zimmerman's (2000, 2011) proposed framework for self-regulated learning. Based on the model of self-directed learning proposed by Reinders (2011), these findings suggest that this study's participants were moving toward self-direction of their learning process. However, the level of involvement in managing their learning differed for each individual learner.

The next chapter discusses the findings relating to the second research question.

CHAPTER 7: DISCUSSIONS PART TWO – IMPACTS OF TELL

This study aimed to investigate the learning experiences of adult EFL learners in TELL environments and the impacts of TELL on their communicative potential and their professional knowledge and practice. The findings from the study showed a variety of issues regarding the participants' learning experiences and their influence. Based on the theoretical framework mentioned in Chapter 3 and the findings that emerged from the LLHs, LDs and semi-structured interviews, the findings from this study will be discussed in the light of experiential-learning pedagogy and sociocultural theory. Specifically, this chapter discusses the findings relating to research question 2.

Research question 2:

What impact has TELL had on the communicative potential and professional knowledge and practice of Vietnamese adult EFL learners?

Communicative potential

In this section, the impacts of TELL on the adult learners' communicative potential in English will be discussed. I will focus on the four components of communicative competence: linguistic, discourse, sociolinguistic and strategic competence (Canale & Swain, 1980, 1983).

7.1. Linguistic competence

7.1.1. Opportunities to learn pronunciation

In this study, the participants had the chance to be exposed to, practice and learn pronunciation. They used vicarious learning and tutorial CALL activities as their main medium for learning. Bandura (2001) asserts that learning by observing (vicarious learning) shortens the process of knowledge acquisition, and that this is essential for survival and self-development.

Through these learning environments, CALL activities first helped the study participants to encounter and recognise the pronunciation differences among accents, and to compare their own voice recordings with those of native English speakers who had different accents (Blake, 2017). This kind of learning and practice helped Quyet and other participants to learn and practice pronunciation and improve their speaking ability. This finding supports Matsuura, Chiba, Mahoney, and Rilling (2014)'s findings that TELL affordances were helpful for listening and pronunciation, particularly when these learners listened to those people they considered as having "heavy" accents.

CALL activities provided features that let them learn and practise skills like emphasis and sound connections. They could rehearse conversations and imitate the intonation. TELL environments allowed the participants to recognise single words or perform particular tasks; for example, practice with individual sounds (as in the case of Quyet) or repetition of short sentences, collocations or phrases (Ehsani & Knodt, 1998). They would bring the most benefits in relation to these clearly linguistic sub-domains (Blake, 2017).

In this research, tutorial CALL activities allowed the participants to interact with software for pronunciation training (in the cases of Thanh and Quyet) as if they were interacting with a real teacher from a face-to-face class (Quyet, LD, p. 4). This software provided the learners with the instructions, feedback and encouragement. It allowed them to produce utterances in a much more 'comprehensible' way. This feedback was particularly useful since it forced them to create better output (Swain, 2000). Such pronunciation software is important in that it can provide diverse speech sounds from different accents, a feature that Thanh in particular found useful for learning. While TELL environments do not involve penalties when learners make errors, they give learners detailed feedback about pronunciation and intonation. The participants in this study used TELL environments to self-regulate their learning in a risk-free environment.

Although some participants (Xuan, Nhan and Bach) still faced difficulties in learning pronunciation, others (Thanh, Quyet, Hung and My) showed that they learned pronunciation effectively, learned faster than they did before and gained more accuracy in pronunciation. For instance, Bach found that her ability to pronounce English words accurately was limited, possibly due to the fact that she was over 50 years old, since research has shown that achieving native-like pronunciation and intonation is particularly difficult for adult learners (Bley-Vroman, 2009; Hulstijn, 2011). This finding supports earlier research in Vietnamese context. For instance, Andrew and Tran (2019) shows that Vietnamese learners often face difficulties in pronouncing English. Because the two sound systems are much different, they struggle to learn to improve accuracy in pronunciation. In contrast, tutorial CALL activities helped Thanh, Quyet, Hung and My reduce errors in pronunciation, through either vicarious learning and interactions on websites or the use of pronunciation software. They eventually became more active in learning and gained confidence in real-life communication because they were no longer afraid of mispronouncing words (Quyet). Quyet's gains in accuracy and confidence in pronunciation can be explained by the ways she interacted with the software and learned from the comments it provided.

7.1.2. Opportunities to improve grammar knowledge

Learning from TELL instruction

Through CALL activities, the participants could access grammar lessons from language-learning websites. They had opportunities to learn about basic grammar and sentence patterns (particularly

Bach), and about tenses, modes and structures in English (e.g., Hung and My). They also learned English collocations (Thanh, My and Nhan). They often followed and interacted vicariously with these learning websites to learn grammar and enhance their practice. This learning and gaining of language knowledge suited their working and learning situations and personal circumstances. In short, their learning and language development were supported by technology that facilitated their learning using an experiential-learning approach (Bandura, 1986) and vicarious participation (Ohta, 2001).

Learning from explicit/implicit feedback

CMC feedback has been shown to be one of the effective ways for learning of L2 grammar. This can best facilitate either expert-to-learner or peer-to-peer interactions (Heift & Vyatkina, 2017). In this research, the participants gained grammar knowledge via their CMC exchanges with other people. While some (particularly Xuan and Bach) connected often with their (online) teachers from learning websites for exchanges and getting feedback for their learning, others (Thanh, Quyet, Hung, My and Nhan) had more connection with peers, foreigners and foreign professionals for learning and practice. Through interactions with others – either through email (Xuan and Bach) or mediums such as Viber Zalo and Skype (Hung, Quyet and My) – their grammar knowledge was significantly improved. This finding supports earlier studies that concluded that CMC exchanges were beneficial for learning grammar (Heift & Vyatkina, 2017). During their learning, the participants had the chance to learn grammar related to English for specific purposes. For example, Nhan learned grammar rules for medical English by attending social learning groups on viet.md. He learned not only vocabulary and pronunciation, but also medical terminology and the origins of medical words.

The findings also showed that participants used the help of other people in refining their English proficiency. My sometimes had her foreign niece directly correct her grammar via Skype, and Hung and Xuan learned grammar and structures incidentally via their email exchanges. Moreover, the email responses from Hung's colleagues helped him recognise his grammatical mistakes, allowing him to self-correct. In other words, the participants gained grammar knowledge by ether explicit correction, as in the case of My, or implicit corrective feedback, as in the case of Hung and Xuan. Based on an interactionist perspective (Chapelle, 1998), the type of implicit corrective feedback (or recast) that Hung and Xuan received via their email exchanges is more salient and less intrusive than that in face-to-face interactions, so learners can learn without disruption to their communication flow, and still pay attention to form. However, this research shows that it is possible to learn from explicit correction, as My did from her niece.

Learning from vicarious interaction and participation

One of the most interesting findings from the narrative data was that TELL significantly facilitated those with reserved Vietnamese cultures in learning grammar through vicarious

interaction and participation. In the case of My, for instance, online lessons helped her overcome her hesitation to ask questions of teachers and other people in face-to-face classes. Now she has her grammar work corrected by teachers from learning websites without the need to meet them in person.

While My expressed that she could learn grammar well and was positive about online interactions, the narratives from other participants (Xuan, Bach, and Thanh) suggested that they would need an in-person teacher in person to specify grammar rules. This finding indicated the participants' different perspectives in terms of learning grammar from these online environments. Thanh, for example, found it difficult to learn formal language with learning apps. This may have been because of an overabundance of choice offered by the large number of learning apps and the abundant access to authentic materials that they facilitated (Liaw & English, 2017), as well as the characteristics of fragmentation presented in these learning environments that make it challenging for learners to locate the right resources with which to learn the language (Godwin-Jones, 2010).

7.1.3. Opportunities to discover and consolidate vocabulary

In this study, TELL provided participants with opportunities to learn general vocabulary. The discussion of this section will be based on Ma's (2014) model of four stages of vocabulary learning.

The participants first had chance to discover word forms and meanings. This happened when they were engaging in reading or listening activities during their out-of-classroom learning activities. They acknowledged the advantages of learning with technology, such as the ability to replay the lesson and look up words. Based on the memory-based strategic framework for vocabulary learning by Ma (2014), the participants indicated that TELL helped them learn vocabulary at stages 1 and 2, where they encountered new words and word forms, then guessed or accessed (e.g., by using dictionaries). Ma (2014) found that the appropriate use of a dictionary is crucial for gaining new vocabulary items in an EFL context. Nation (2001) also highlighted the important role of using dictionary strategies to look for the meaning of a specific item.

Learning in TELL environments helped the participants process and learn words quickly. Their narratives and interviews indicated that, in these environments, they could learn linguistic items better with explanatory help (such as illustrations), from multimedia coding (Danan, 2004; Schmidt, 1993; Plass & Jones, 2005), subtitles and translation. The data indicated that TELL provided the learners with the chance to build word entries: to map the meaning of words with the word form via repetition, imagery and rhyme (Ma, 2014). This is stage 3 of the vocabulary learning process (Ma, 2014, 2017). Further, the participants also learned extended aspects (Ma, 2014) of vocabulary. For example, My looked up phrasal verbs to expand her learning, and Thanh discovered instances of word usage, collocations and other aspects of vocabulary.

The participants consolidated words particularly through virtual interactions and exchanges using CMC with people from different countries. This represented the final stage (stage 4) of Ma's (2014) vocabulary-learning. At this stage, memory traces for new words are gradually strengthened because the words are retrieved for receptive or productive language. First, TELL environments provided the participants with the necessary resources that allowed them to encounter and find the meanings of new words (stages 1, 2). They then also gave them the opportunities to encounter these vocabulary items again (stages 3, 4). These repeated engagements with linguistic items allowed the participants to consolidate and process them at a deeper level (Ma, 2018). Second, TELL provided them with opportunities to converse both synchronously and asynchronously with other people through the use of the computer (more clearly in the cases of Thanh, Quyet, Hung and My). These affordances allowed the learners to have access to ever-expanding resources and share their learning with others.

While the participants (particularly Thanh, Quyet and My) significantly improved vocabulary knowledge and spoken communication skills through using Skype and other mediums, some increased their vocabulary using text chat. Thanh, for example, communicated with many English users from different countries, helping her strengthen her vocabulary. This finding supports earlier research by Motallebzadeh and Ganjali (2011), which found short messaging service (SMS) exchanges via mobile phones to be useful for learning vocabulary, and Alemi and Lari's (2012) findings that both SMS and dictionary strategies were beneficial for vocabulary learning.

In this research, TELL helped these learners in learning specialised professional vocabulary as well. Unlike learning English for general communication, in which they experienced fairly equally all the four stages of vocabulary learning (encountering new words, accessing meanings, building word entries and consolidating the words), experiences learning specialised vocabulary seemed to be mainly at stages 1 and 2. While Thanh, for instance, gained a wide range of vocabulary for general communication, she still faced many challenges when dealing with specialised English vocabulary at work. This is also the reason that these participants still faced difficulties in gaining ESP knowledge for professional contexts. The pattern of specialised vocabulary learning found in this research also fits with the overall strategies in language learning in which learners often receive a great deal of language "input", of which only some becomes "intake", and even less can be used as "output" (Krashen, 1989, 2003). According to Ma (2017), in online learning environment, many learners seem to rely mainly on looking up new words in dictionaries; this is still only at stages 1and 2, not stages 3 and 4 (Ma, 2014). This was true for the participants in the current study, as they mostly used online dictionaries or other search engines to look for the meaning of new lexical items, particularly when they were reading for professional purposes (this was clear in the cases of Xuan, Nhan and Bach).

7.2. Discourse competence

7.2.1. Helping process aural language and improve listening comprehension

A framework on help options developed by Cardenas-Claros and Gruba (2013) can be used to discuss the value of the affordances of technology to listening and language learning. These options provide learners the potential to process content and resources for comprehension and acquire the language in a more meaningful way, since they help them develop listening skills and improve their proficiency in the target language. Through using the help options, learners have a more productive language learning experience using authentic learning materials with audio and video content.

Cardenas-Claros and Gruba (2013) divide help options into the four following categories: operational, regulatory, compensatory, and explanatory. Operational help options provide learners with technical support and training, including but not limited to, user manuals, training modules or introductory-level tutorials so that learners may increase their awareness of using hardware, software or program functions. This is similar to Romeo and Hubbard's (2010) technical training component in their training model for learning listening. Regulatory help provides learners with listening tips, strategies or guidance for specific learning tasks; this kind of help facilitates learners' development of metacognitive strategies and movement toward learner autonomy (Vandergrift & Goh, 2012).

For compensatory help, with the affordances of TELL, learners practised using various audio and video control buttons to repeat phrases, adjust volume, rewind and pause during their listening (Cardenas-Claros & Gruba, 2013). Finally, when learners did not understand, they looked for support from explanatory help such as hints, definitions, glosses, captions/subtitles, dictionaries or transcripts (Cardenas-Claros & Gruba, 2013) as common methods to obtain content elaboration during their learning.

Facilitating the participants' processing of aural language

TELL facilitated the study participants' processing of aural language. From an interactionist perspective, Chapelle (2003) explains the ways that computers aid learners in comprehension of input; for example, the resources can draw learners' attention to specific linguistic forms via the use of the help option. Within the interactionist perspective, enhanced input is strengthened by increasing salience, modification, simplification or elaboration using the help option (Cardenas-Claros & Gruba, 2013).

In this research, the participants explored learning programs and materials for guidance on learning; specifically, through operational and regulatory help options. The regulatory help options, to some extent, facilitated them to become autonomous. In this case, they paid attention

to the input enhancements and improved their metacognitive knowledge when dealing with authentic listening materials (Vandergrift & Goh, 2012). The evidence includes narratives from Quyet and My, but other participants did not mention this aspect to their learning, perhaps because they were not aware of the benefits of the support of operational and regulatory help options available to them.

The participants in this study mostly used compensatory and explanatory help options to aid them in processing the aural language input for more salient learning resources and materials. The participants' narratives showed that compensatory help is critically important in customising the input and making the content more salient (Chapelle, 2003). Similarly, Hung learned with video clips from the Living English website that greatly helped him in dealing with difficulties in listening as he rewound back and forth, stopping when needed.

The participants also employed play-speed controls as compensatory help, particularly when they wanted to listen at lower speeds. This is one of the most notable characteristics of technology that facilitates language learning and listening (Hubbard, 2017). In this research, Thanh and Quyet adjusted the speaking speed as they listened, without changing the pitch in the input (Cardenas-Claros & Gruba, 2013). They highly valued the role of speech-rate control because this feature allowed more processing time thus helping them to increase comprehension (Hubbard, 2017). This finding supports earlier research by Matsuura, Chiba, Mahoney and Rilling (2014), which found that slower speech rates were useful for learners, and Hulstijm (2003a), who found that slowing the speech rate without changing the pitch gives learners more planning time. The finding is positive, but it is new in this field of research, so it should be interpreted with caution.

Another interesting finding in connection with the use of compensatory help option is that some participants in this research (Thanh, Xuan and My) used the recording function to record their conversations for later analysis and practice. They used Skype (My) and other mediums (Thanh and Xuan) to learn from recordings of their own voice, and their conversations with other people including friends, experts and foreign. Although the other participants, particularly the older ones, did not use this strategy, those who did were taking advantage of opportunities to create affordances for their learning and listening. According to Hubbard (2017), this is particularly important as replay is a new source of feedback to learners. This helped the participants who used this strategy to compensate for the flow of speech they could not grab in their conversations (Robin, 2007). This finding has the potential to contribute to the literature of language learning, since in this research the participants themselves employed digital recording to support subsequent analysis. This is an under-researched and underdeveloped area in language-learning research (Hubbard, 2017).

The participants in this study looked for support from explanatory hints, definitions, glosses, captions, dictionaries or transcripts (Cardenas-Claros & Gruba, 2013) for content elaboration

during their learning. Hung, My and Thanh highly valued this form of support for learning. The participants reported being more motivated to learn through the support of explanatory help options. This finding corroborates the work of Winke, Gass and Sydorenko (2010), who valued the role of captions and transcripts in making input more salient and providing learners with reduced forms and showing word boundaries that support them in comprehension and learning linguistic forms.

The study participants benefitted from using captions and dubbing that were in both their first and second languages (Thanh, Hung and Nhan). Thanh, for example, when listening to BBC 6 Minute English from VoiceTube, used both Vietnamese and English subtitles. This finding supports Markham and Peter's (2003) recommendation to use captions first in L1 and then in L2. Hubbard (2017) similarly stated that initially using L1 captions readies learners for subsequent exposures with L2 captions or no captions, particularly for challenging resources.

The participants could also learn with the support of dual coding or parallel processing (Mayer, 2001). This was clearly reflected in the case of Thanh, Quyet, Hung, My and Bach. Hung noted the benefits of both subtitles and dual-mode processing for the learning. Although many studies regarding language learning using multimedia have emphasised vocabulary acquisition (Hubbard, 2017), Hung showed that the multimedia materials helped him more deeply process the learning materials (Mayer, 2001). This finding has potential to contribute to the field of language learning using multimedia learning materials. The materials had stronger effects with visual/annotations. Hung remembered the material better and felt more positive about being able to process it more deeply when he listened while using annotations (Jones, 2006). This finding agrees with the results of Jones and Plass (2002), who found that learners who attended treatment groups that combined written with pictorial annotations scored higher on comprehension tests than those who did not. Plass and Jones (2005) found that dual coding (Mayer, 2001) can strengthen the stages in Chapelle's (1998) L2 acquisition model: (1) noticing an aspect of the input, (2) comprehension, (3) intake and (4) integration in the learner's linguistic system.

Supporting the learners in listening comprehension

In this study, the participants searched for listening materials to support richer and deeper processing (Jones & Plass, 2002), aid listening comprehension and facilitate language acquisition. They used devices such as computers, laptops, smartphones, tablets or mp3 players to access listening materials/resources including audio, videos, films, news and music and listening lessons. These technologies have changed the ways learners, including the study participants, use recorded media for improving listening skills (Hubbard, 2017).

The affordances of digital devices and networks facilitated the participants' language acquisition (Borras & Lafayette, 1994; Leveridge & Yang, 2013). These findings support those in other studies in the field; for instance, captions and transcripts facilitated learners' listening

comprehension (Borras & Lafayette, 1994; Vandergrift & Goh, 2012), instant repetition and speech speed adjustment increased participants' processing time (Hulstijn, 2003); and multimedia coding and parallel processing supported noticing (Plass & Jones, 2005; Schmidt, 1993) and increased perceptual accuracy and improved their pronunciation, grammar and vocabulary (Danan, 2004; Hubbard, 2017).

Since they had many encounters with various sources of people and different speed rate, the participants greatly improved listening comprehension particularly when dealing with accented speech and encountering specific sound connections (Matsuura, Chiba, Mahoney, and Rilling, 2014). In the case of My, for example, as a result of extended listening, she became more aware of sound connections. This corroborates Hubbard (2017) who concluded that speech rate control not only makes words more comprehensible, but also makes connected speech elements more salient including linking and reduced forms. Thus, it helped her be more familiar with different types of accents. This strengthened her listening ability.

This study found that, in addition to the learning that the participants intended in advance to accomplish, they could also learn incidentally during their learning process. Quyet, Hung and My listened repeatedly to audio/video files while doing other things. Similarly, Thanh often listened to music just to familiarise herself with the sounds and intonation of English. This supports Kukulska-Hulme's (2012) findings that learners can benefit from a learning experience even while they are not fully focused on it; thus, they should immerse themselves in the language as often as possible in order to get familiar to the sounds (Kukulska-Hulme, 2012). This is one of the specific characteristics that TELL can support learners in incidental learning through listening (Hulstijn, 2003b).

Although the majority of the participants in this research acknowledged their significant improvement in listening comprehension, as mentioned, the data showed that the participants varied in the extent to which they gained listening-comprehension skill. While Xuan, Nhan and Bach gained much in listening comprehension compared to their prior learning without TELL, they still now faced many difficulties, particularly in achieving proficiency in professional English. Xuan, for example, could easily hold simple conversations, but it was still a problem for her to understand during conversations with strangers. This may be due to their familiarity with and reliance on traditional learning methods that stressed accuracy in grammar and sentence components, rather than taking advantage of the options for help and support that are part of TELL environments. The data showed that the participants who made less use of TELL features did not report extended practice with listening sources as other participants often did. Moreover, during their communication, although these participants had strong connections with other professionals in fairly wide networks, they tended to use more asynchronous CMC, such as text chat and email, for information exchanges, rather than using synchronous CMC for real-time conversations.

Finally, these participants often focused on reading for their disciplines and professional purposes, rather than speaking. These may all contribute to their limitations in this micro language skill.

Technology plays a central role in autonomous learning. In this study, new technologies allowed the participants to learn outside of classroom settings, learn individually and use a variety of strategies for learning and comprehension (Rost & Wilson, 2013). It supported the strategic use of their self-regulated learning with the different types of help options described by Cardenas-Claros and Gruba (2013), and with captions/transcripts of online listening materials, finding new sites to listen to, interacting through online forums and creating a library of online listening materials.

7.2.2. Improving speaking proficiency

There is a common conception that a lack of direct involvement with the teacher in speaking practice hinders learners' L2 development over the long term (Blake, 2017). However, this has been a traditional approach, and in this research, the participants noted that they did not have the chance to learn English for communication in their prior school and university learning, and that when they entered the workplace, they had neither the time nor the circumstances to allow them to attend formal classes. Thus, they had to self-discover resources and strategies for learning using technology. Although the learning outcomes varied with each participant, all of them said that their speaking performance improved through self-study in TELL environments.

Speaking proficiency is seen as consisting of three separate but interrelated components: accuracy, complexity and fluency (Housen & Kuiken, 2009). While they are not always easy to define or measure (Kormos & Dénes, 2004), each generally has a common sense. Accuracy refers to the number of errors in phonology, vocabulary or grammar. Complexity refers to the number of words, clauses or sentences. Fluency is related to relative time measures, including delivery speed, length of utterances and number of repetitions, pauses, discontinuities or interruptions in "spontaneous speech".

TELL activities helped the study participants increase their accuracy. The participants (particularly Hung and Quyet) recognised the importance of practice, which is well supported by information technology, and particularly important for self-directed learning when learners do not have conventional conversational partners or classroom teachers (Blake, 2017), as in this research. The participants also practised pronunciation with software, noting that it provided a chance to receive feedback and focus their practice, rather than attempting to speak correctly through trial and error. This helped them gain confidence in speaking later with foreigners (this was most clearly shown in Thanh's and Quyet's narratives). The participants also gain accuracy by recording their voice and exchanging the recordings with online teachers and classmates so that they could receive feedback and correct their mistakes.

One of this study's most notable findings is that the participants improved their accuracy in speaking mainly from tutorial CALL activities using learning websites, learning apps and YouTube. In these activities, the speaking tasks allowed the learners to compare their own voice recordings with those of native English speakers with different types of accents (Blake, 2017). This was reflected clearly in the case of Quyet when she learned speaking and pronunciation with Elisa Speak, an application similar to that in Plagwitz (2014, 2015). However, using software to facilitate the learning of speaking and pronunciation is another underresearched area in language learning (Blake, 2017). Other participants also improved their accuracy; for instance, My gained accuracy and improved pronunciation when she followed along with video clips to practice speaking.

Through their vicarious interactions and the use of private speech, the learners not only improved their accuracy, but also enhanced their speaking ability in general. This is understandable, since within these tutorial CALL activities, the learners can either subvocalise or speak out loud during their learning tasks (Arispe, 2012). The participants found this to be valuable, particularly when they encountered heavy morphological words and or unfamiliar sounds (Arispe, 2012).

Through their vicarious learning and interactions with learning websites and online conversations, all the participants enhanced their language with more words, clauses and sentences, and thus increased the complexity of their speaking and communication skills. Some (particularly Xuan and Hung) developed language complexity by imitating the online conversations and applying them later in their work and daily lives. The participants also enhanced the complexity of their language through interactions with others including peers and colleagues. This finding has some similarities to the findings of Kern (1995) and Blake (2017), although in Kern's research, text-message exchanges were used as the medium for learners to interact. In the current study, the participants gained complexity by both vicarious learning through interaction with websites and online conversations, and with other people through online learning groups using synchronous and asynchronous CMC.

Like complexity, fluency is considered an extended linguistic proficiency that can only be attained by advanced study of the target language (Hulstijn, 2011); thus, gaining fluency is difficult for learners. In this research, the participants (particularly Thanh and Hung) confirmed that they found it challenging.

As mentioned, TELL helped these participants develop fluency in speaking. While these skills were not well evidenced in Xuan, Nhan or Bach, they were more obvious in the cases of Thanh, Quyet, Hung and My. These participants gained fluency mostly via interactions with other people using social TELL activities with both synchronous and asynchronous CMC. In this research, the participants used text chat with many people, and this was showed to support the sub-vocalisation of the language they texted. The words in Thanh's comments "I must have vocabulary in mind"

and "must have the imagination of how to say [things]" indicate that when she chatted (in writing), she also needed to sub-vocalise what she wanted to write. This suggests that she would text the same way as what she intended to speak. Similarly, Hung often whispered when he texted. Kern (1995) stated that there are many linguistic similarities between text chat and oral speech production. This also corroborates the claim that sub-vocalisation occurs when people write using asynchronous CMC (Blake, 2017). However, this has not yet been sufficiently researched.

The participants (particularly Thanh, Hung and My) often used synchronous text chat with quite a lot of people, which improved their English. This finding agrees with Payne and Whitney's (2002) research, in which synchronous CMC writing (keyboarding) was found to significantly improve L2 speaking proficiency. The real-time texting activities in which the participants in my research engaged included the use of laptops and other mobile devices to generate texts in Viber, Skype, Zalo and other social-networking sites. The affordances of these digital devices and networks allowed them to learn within their "social learning space", a term used by sociocultural researchers, and created more meaningful engagement and interactions with their community of practice.

The study participants had considerable interaction with foreigners using simultaneous communication, including audio/video calls (O'Dowd, 2007). This significantly improved their fluency, and thus their overall communicative capacity. This showed that, as Blake (2017) asserted, the participants could gain fluency through such videoconferencing tools. Thanh, Quyet and My found them useful tools to connect and communicate with other people (particularly with foreigners) via synchronous videos. This helped them learn in a form of tandem exchanges (Guillén, 2014) and interact on social-networking sites. This type of synchronous video communication allowed the participants to experience a similar kind of learning as in face-to-face classroom environments.

Social CALL activities today incorporate different types of asynchronous and synchronous CMC using text chats as well as sound and video (Lafford & Lafford, 2005). Fully synchronous videos provide learners with a communicative experience very similar to face-to-face communication (Blake, 2017). Skype, Google Meet and Zoom, for example, all of which are free of cost, facilitate conversation in pairs, as well as small and much larger groups, of native and non-native speakers nearly anywhere in the world. In videoconference sessions, learners can take turns speaking in the target language, which helps learners develop not only fluency but discourse competence, a fundamental component of speaking proficiency (Blake, 2017). This kind of back-and-forth conversation with geographically disperse people (native or non-native speakers) approximates a face-to-face environment (Lomicka & Lord, 2011).

While it has been shown to facilitate L2 speaking process, the use of such simultaneous communication with audio/video calls to strengthen L2 speaking competence has not been well

studied or tracked (Blake, 2017). Although this finding from the current study was preliminary, it has potential to contribute to the current literature of language learning (particularly speaking) beyond the classroom using TELL.

7.2.3. Changing ways to read and enhance reading comprehension

The widespread availability of reading materials has been the result of the integration of technology and globalisation policies in many countries (Leu, Kinzer, Coiro, & Cammack, 2004). In the current study, TELL helped the participants change how they read and accessed new forms of English-language reading materials (Leu, 2002) using the affordances of technology, which allowed them to interact with text in different ways (Godwin-Jones, 2010).

These participants mostly used free learning websites and affordable commercial learning programs (Stockwell, 2007); for instance, in this study, one of the most commonly used learning programs tienganh123.com. They also used open educational resources (such as the BBC and VOA) for their studies (Godwin-Jones, 2017). Their online reading activities (Stockwell, 2007) were usually supported by digital scaffolding tools (Liew & English, 2017), such as dictionaries, glosses and annotation**.** These affordances of technology helped the participants develop metacognitive skills by allowing them to find ways to support their learning and manage what they were doing while reading (Block, 1992; Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007).

Overall, the study participants reported fairly positive experiences with this new way of reading. However, they also met difficulties. Some found it challenging to locate reading materials at the appropriate difficulty level for them; the prevalence of de-contextualized, short, and informal texts may have hindered their progress in reading more sophisticated material (Liew & English, 2017). The participants also needed to deal with the distractions and information overload characteristic of online environments (Godwin-Jones, 2010). This suggests that learners should be provided with "learners' training" components to support their reading and learning in general, and particularly in online learning environments (Gonglewski & Dubravac, 2006).

TELL facilitated the study participants not only in reading comprehension but also in improving their other language knowledge and skills. They acknowledged that the improvement in both reading comprehension and language knowledge, particularly vocabulary, was greatly supported by dictionaries, glosses and annotation during multimedia online reading activities (Liew & English, 2017). For instance, although Nhan was still limited in other skills, he reported that he improved reading comprehension and vocabulary; other participants showed similar improvements. This seems to comply with the principles of L2 acquisition in which vocabulary knowledge is viewed as the key for reading and comprehension (Liew & English, 2017). This

means that when learners achieved comprehension, they would normally have mastered the vocabulary.

Interestingly, this study found that reading online resources helped My and Nhan to incidentally improve their productive language skills; that is, their ability to speak and express themselves in English. Other participants did not report similar results, but this finding suggests that online reading activities can offer significant benefits for language learning.

While the early-career participants in this study tended to use Facebook to find reading material, and to read for fun or recreation (e.g., Facebook and games in the case of Thanh), the mid- and late-career participants (Hung, My, Nhan and Bach), who worked in the fields of engineering and medicine, read more often for professional purposes. They prioritised their reading to obtain discipline knowledge and specialised materials to serve their professional activities. The time spent searching for and reading these materials not only helped them learn professional vocabulary, but also helped them improve their reading comprehension, writing and professional knowledge.

Specialised websites helped these participants increase their profession knowledge. Hung and My found they could learn better using dual processing; that is, text accompanied by pictures and images from professional websites. This finding agrees with the principles of cognitive theory of multimedia learning (Mayer, 2005), which asserts that dual-channel reading facilitates learners' retention of information in long-term memory. Also, as most professional documents available online were in English, this provided the opportunity to improve their English along with their professional knowledge.

The participants also used background knowledge to support their reading (Smith, 2011). For instance, when reading medical news on the VOA website, Bach often used professional knowledge to guess the meaning of the words. This is a crucial strategy for cognitive inferencing (Smith, 2011) that was also used by Hung, Nhan, Bach and My. The use of background knowledge helped these learners in reading comprehension, professional vocabulary and professional knowledge (Block, 1992). This is also in line with Chapelle's (2009) assertion that the activation of background knowledge is important for understanding the written material, as well as for gaining professional knowledge and skills.

Although their English for communication was still limited (particularly for Nhan and Bach), the older study participants reported some success in reading professional documents (Chapelle, 2009). However, the younger participants (particularly Thanh), who had good general communication skills, nevertheless found professional reading and communication difficult. Even so, the data suggested that they were working to become autonomous learners in terms of reading. The success in professional reading in the senior participants might be due to their

improved skills in reading comprehension (Block, 1992), plus they already got good background knowledge for their disciplines.

7.2.4. Changing writing habits and improve writing performance

TELL helped the participants change their writing habits and practices (Li, Dursun, & Hegelheimer, 2017), since they were now using text chat via Zalo, Viber, Skype or Messenger as platforms for their writing, learning and communication. While Nhan used Facebook as a platform for his learning, updating and communicating about his professional work, Hung employed Zalo as a main medium for exchanging and updating professional knowledge, and Xuan often used Viber to write in English and interact with colleagues. In addition to the use of text chat, the participants (particularly Xuan, Quyet, Hung, My and Bach) used emails as a normal medium for their writing. This channel of communication helped them improve their writing.

Although participants in this research used very basic applications with Web 2.0 tools, because these were what was available to them, they still had opportunities to learn to improve their writing accuracy. For instance, as she wrote emails, Xuan could double-check the words; similarly, Hung often checked the spelling of words while he responded via email to his colleagues. This finding provides more insights on the use of Web 2.0 applications to increase the meaningful interactions and enhance accuracy for writing (Lee, 2010), and supports several other studies focusing on the use of social networking sites and wiki-type tools for writing enhancement in language courses. For instance, Kessler, Bikowski and Boggs (2012) found that Google Docs increased grammatical accuracy in writing collaboratively in an L2 writing course. Similarly, collaborative writing has been found to increase the accuracy of written pieces (for instance, in Storch, 2011, 2012; Wigglesworth & Storch, 2012). In the current study, the participants had chance to interact with other people, including professionals, mainly in their workplace settings. They gained accuracy by writing emails and interacting on social-networking sites. They could experiment with real audiences, making these communications authentic, useful and practical, rather than confined to classroom environments (Li, Dursun & Hegelheimer, 2017).

The learning experience helped them not only gain accuracy, but also develop the complexity of their written language. For My and Hung, this helped them use technical English more correctly and improve their language skills overall. This finding is similar Chen's (2014) that using Web 2.0 tools including email, social networking sites, blog websites and forums helped enhance learners' interactions, motivate learners in learning and gain more flexibility in discourse patterns and language use.

New technology has changed how L2 learners practice writing (Li, Dursun & Hegelheimer, 2017). In this research, TELL facilitated the learners in their overall writing performance. The data showed that Quyet, Hung and My were strongly motivated by, and benefitted from, email

interactions in English for their everyday work, and thus finally found that they could learn English in a way they could not during their school and university years. This finding supports Chen's (2014) research, which showed that Web 2.0 tools, including email, was found to motivate students' writing performance and provision of feedback to their peers.

The participants also reported improvement in writing performance when they used Facebook as a medium for both learning and communication. While Thanh and Quyet expressed the intention to gain more language competence and writing skills due to their learning with the WELE learning group, Nhan reported gaining more writing competence through learning groups for medical doctors. This finding supports earlier studies. For example, Shih (2010) used Facebook as a platform for a writing course for L2 learners majoring in English in Taiwan, finding that the learners' writing performance improved significantly. Shih (2010) also showed that the learners had positive attitudes toward learning using Facebook, which Thanh and Quyet in the current study also expressed. While Thanh, Quyet and Nhan combined Facebook learning groups with other mediums for learning and interactions, similar to the learners in Shih's study, other participants (Xuan, Hung, My and Bach) used Facebook and other social-networking sites as a medium for communication exchanges and said that this also facilitated their learning. However, this has not yet been fully researched (Manca & Ranieri, 2013).

While Quyet, Hung, My and Bach reported significant improvement in writing performance, other participants still considered that their skills were limited. For example, Xuan and Nhan reported being better at reading comprehension than at writing skills, and that they faced difficulties regarding professional writing. However, they were continuing to find ways to write in English and expressed positive feelings about the use of writing.

7.3. Sociolinguistic competence

TELL learning experiences helped these learners improve their sociolinguistic competence and cultural awareness. They first learned how to use appropriate language for formal and informal situations at work (e.g., Thanh, Xuan, Hung, My and Nhan). They learned appropriate ways to communicate with people in different sociocultural contexts. While this ability was evidenced in almost all participants, it was more clearly reflected in Thanh's and My's narratives.

Since Thanh was young and very interested in games and communication, she became deeply involved in many activities, including playing games with foreign friends. Through this, she learned how to use English to communicate with them. When communicating with these western foreigners, she also learned about how to think and behave in accordance with their cultures, including social conventions about appropriate (and inappropriate) terms of address and questions (such as asking about age).

My learned how to appropriately use English in different social and cultural situations. She learned how to avoid cultural shocks in communication, and also how to make jokes, which she

did both “for the purpose of humour” and to make her foreign relatives “feel closer” to her. This helped create a warm atmosphere for them all and strengthened the familial bond between her and her foreign nephew. In another situation, when she went to Malta, she could safely experience the life and culture in this quite distant foreign country with successful cultural practices. For her, learning about this new culture resulted from her learning and interactions using the Internet and social-networking sites with others, particularly foreign friends. Similarly, Thanh considered that such interactions were why she could learn well and improve her language.

7.4. Strategic competence

The study participants learned the skills to maintain conversations, to compensate for breakdowns in communication and to enhance the effectiveness of communication. This helped them gain what My termed “smooth communication at work”. They learned how to reduce pauses and avoid being interrupted in conversation, which previously had been major weaknesses. Overall, learning in a TELL environment helped them improve their ability to request clarification or repetition, paraphrase, use reference sources and incorporate body language into their speaking.

For example, Thanh learned ways to request clarification when she experienced a communications breakdown at work. To clarify the information and find out why the guest “hung up the phone” and refused to work with her, she “felt restless, sat down and texted him, begged him to add Zalo [so they could communicate by message] and ask what he wanted and what he needed …” (Thanh, Interview, pp. 27-29).

The study participants learned how to ask speakers to explain in a different way so that they could understand (Xuan, Quyet and My). The data also revealed that they gained this competence partly because they had already gained confidence in their ability to speak English more generally, and thus to ask speakers to rephrase their point.

When they did not know what to say, the study participants often paraphrased what they wanted to communicate so that they could find the right words for different communicative situations. They noted that this was a complete change from before studying English in a TELL environment, because now they could control a conversation or a particular communication. This also suggests that confidence played an important role in their success in communication.

The participants also used reference sources as a strategy for maintaining their communications with others. Xuan often noted, then looked up, the words to continue her writing exchanges. Thanh also searched to find words and topics she could use to chat with people. My highly valued that text chat reduced her hesitation, common in Vietnamese culture, compared to what she felt in face-to-face communications. This finding is in line with the results from earlier studies. For instance, text chat was found to provide learners with more planning time and opportunities for making changes in writing (Heift & Vyatkina, 2017). Similarly, text chat was found to support negotiation of both meaning and form, and to give learners the chance to trigger feedback in a

similar form to that of in-person interactions (Blake, 2000; Loewen & Erlam, 2006; Shekary & Tahririan, 2006).

Professional knowledge and practice

7.5. Facilitating professional knowledge, activities, and development

The findings from this research showed that learning English in a TELL environment helped the participants update their professional knowledge, as it helped them gain the specific English skills required to search for and understand professional materials in English. For example, Nhan said, "I updated the approach, the ways, and principles to diagnose, the signs and images of bones, from CT scans or magnetic resonance imaging" (Nhan, Interview, p. 16). Learning professional English helped the participants in everyday work as well as professional activities. It also helped them gain the competence and confidence to attend workshops and seminars, both in Vietnam and overseas, and communicate in English with foreigners.

The learning experience with TELL also helped these participants enhance their professional networks and development. Thanh and Quyet even found more promising jobs or higher positions. The learning experience helped Hung connect with foreign professionals and learn and work with them in English in a community of practice of those who worked in the same construction field. Similarly, Nhan joined many professional forums to exchange and improve his expertise in medicine and improved both his expertise and his medical English. Several participants used the improvement in their English to facilitate their pursuit of overseas professional developments (as in the case of Bach, who attended a marine-medicine training course in Australia, and My, who attended a technical training program in the Netherlands) and did overseas professional volunteer work (as in the case of Thanh).

7.6. Helping gain new perspectives and skills for lifelong learning

While some of the participants focused on gaining accuracy in language learning (Thanh, Xuan and Bach), emphasising learning isolated linguistic elements, other participants, particularly Quyet and My, gained new perspectives regarding the learning and using of English in communication situations. This readied them to take risks and participate in communicative situations, learn new things and overcome the shyness and hesitance characteristic of Vietnamese culture (as in the case of My). Quyet gained success in learning and using English for communication. She learned that the ability to communicate in English depended less on one's level of language competence than on one's attitude toward English. This insight helped her gain exceptional competence in English. She and My also tended to look with optimism at their current language expertise and at their potential for future success.

This learning experience helped these participants gain skills for lifelong learning. For instance, Nhan spoke about the impact of his language learning on his professional development and lifelong learning, noting that technology had helped him gain autonomy as a learner and professional. Although he did not have the chance at his medical university to study English effectively, he could now study using current technology to update his professional knowledge and skills, as well as his English-language ability. Bach similarly regarded learning as a non-stop process. The four mid- and late-career professionals (Hung, My, Nhan and Bach) gained more competence in professional communication using both English and Vietnamese, which was in accordance with the European Community's proposed expectations regarding competences for lifelong learning.

The next chapter summarises the key issues of the research and concludes the thesis.

CHAPTER 8: CONCLUSION

This study aimed to investigate the learning experiences of adult Vietnamese EFL learners in TELL environments in their lifelong learning contexts. It also aimed to discover how these learning environments influenced the participants' potential to communicate in English, as well as their professional knowledge and practice.

Underpinned by a social constructivist worldview, a narrative approach using SCT and experiential-learning pedagogy as a theoretical framework was used to gain understanding of the participants' learning experiences in these lifelong learning contexts and their influence. The study used language-learning histories, learners' diaries and semi-structured interviews for data collection. The data was analysed using both Pokinghorne's (1995) and Barkhuizen et al.'s (2013) analysis approaches, and Ryan and Bernard's (2003) "word-based" and "scrutiny-based" techniques.

This chapter first summarises the key findings. It then covers the study's contributions to knowledge and their implications. The chapter next reflects on the epistemological and methodological adoption in this research including the ethical dilemmas incurred. The final section sets out the study's limitations along with suggestions for future research.

8.1. Key findings

The findings from the study show that learners had had little or no chance to experience foreign-language learning using technology in their previous education settings. To adapt to work and life changes, they had to explore on their own for learning resources and ways to learn using TELL. The early-career participants tended to use computers as a tool to engage in conversations with other people for their learning (social CALL activities), whereas the mid- and late-career professionals tended to engage with language learning through interacting with the computer itself and using the computer as a tutor (tutorial CALL activities) for their vicarious learning and participation. The results showed the potential of TELL both to enhance the learners' linguistic competence and spoken discourse ability and to support these adult learners' professional activities, professional networking and lifelong learning skills. The study points to a gap between the strong vision that informs the national policies (English education, ICT use and lifelong learning) and the constraints and limitations in terms of practical support, learning guidance and learning strategies posed by the adult learners who are expected to learn regularly to turn their language competence into a competitive advantage for the Vietnamese people, as set out by those policies. Although the study participants have faced many challenges, they have given ample evidence of their desire to learn and to belong to particular imagined English-speaking communities.

8.2. Contribution to knowledge

8.2.1. Theoretical contribution

There is a long history of studies on technology and language learning in developed countries and in the Asia-Pacific region (Kung, 2016; Martins, 2015; Mateo, 2012; Shih & Yang, 2008). Recently in Vietnam, researchers have implemented various empirical studies in this field (Long, 2011b; Pham, 2015; Pham, Thalathoti, & Dakich, 2014; Phuong, 2016; Tan & Robertson, 2010). However, the majority of studies focus on conventional students, who either aim to complete their first university or college degree or are pre-service English-language teachers. My research adds to the current literature by investigating the lifelong learning contexts of adult language learners in Vietnam. The research contributes to filling the gaps in language-education research in Vietnamese contexts by adding the voices of participants from various workplaces. Investigating their experiences contributes to the broad field of research in English-language teaching and learning in Vietnam, as well as to the developing domain of technology use in Vietnamese adult language education. This study adopted a social constructivist research paradigm using sociocultural theory and experiential-learning pedagogy to interpret the adult learners' learning experiences and the influence of these experiences on the learners' careers. This framework has recently been widely applied by researchers (Alborno & Gaad, 2012; Barak, 2017; Blaj-Ward, 2017). However, using it to look at learners' learning experiences in lifelong learning contexts is infrequent in Vietnam.

The study adds to the existing literature by using a narrative approach underpinned by a social constructivist worldview as mentioned to interpret the lifelong learning contexts of Vietnamese adult learners in their professional and lifelong learning settings. This approach is new in language-education research (Barkhuizen, Benson & Chik, 2013), and it has seldom been applied in Vietnamese language teaching and learning contexts. Moreover, using narrative inquiry as research design in the EFL learning context is far from traditional; for instance, Barkhuizen (2014) states that "narrative research has emerged only relatively recently in language teaching and learning research" (p. 450). Further, Barkhuizen and his colleagues point out that while there is a rich tradition of narrative studies of second- and foreign-language teachers' lives, there have been "far fewer narrative inquiry studies of learners and learning in the field of education" (Barkhuizen, Benson, & Chik, 2013, p. 11). Thus, by conducting research into the adult learners' EFL learning experiences, the researcher would make a distinctive contribution (Barkhuizen et al., 2013). This study offers new insights that can potentially improve other Vietnamese adult learners' EFL learning experiences using TELL environments. Its results can potentially be applied to contexts with similar backgrounds to those of Vietnam.

This study has the capacity to add to the broader understanding of using technology in general, assisting Vietnamese educators and educational institutions in updating and building relevant

curricula for language learners, particularly those that aim to cater to the learning needs of adult learners. Thus, this study holds the potential to support and contribute to the achievement of governmental and local goals for language education in current Vietnamese contexts. The study provided new insights into adult learners' learning experiences and their impacts. Understanding these learning experiences helps contribute to assisting Vietnamese learners in their lifelong learning journey, supporting their learning approaches to enhance their communicative potential and contributing to their quest for high-quality and robust resources.

The study also adds to a growing literature of online language learning. Particularly, it focuses on adult learners' learning experiences in their professional and lifelong learning settings. The findings provide new perspectives on how adults' learning experiences can be supported to help enhance their potential to communicate in English. This study has the potential to contribute to the literature of language learning regarding using the recording of activities for later analysis to support learning. In this research, the participants themselves employed digital recording as a medium for them to subsequently analyse their performance for their repeated practice. This is an under-researched and underdeveloped area in language teaching and learning research (Hubbard, 2017).

The findings from the study also revealed that vicarious learning and participation using educational learning websites and learning apps/software significantly helped the learners to develop linguistic competence, including pronunciation, grammar and vocabulary. Through tutorial TELL activities, this kind of learning also helped them improve speaking competence through the use of speech-practice activities. Although self-study using vicarious learning and participation, along with speech practice, is now more common in Vietnam as ICT infrastructures have broadened, there is little empirical research on this aspect. Thus, this study also contributes to research in this field.

8.2.2. Practical contribution

To the Vietnamese government and the Ministry of Education and Training

My study is significant at the Vietnamese national level, since it makes a practical contribution to the implementation of government policies on education in general and foreign-language education in particular. First, the research contributes to meeting the aims of the National Project (period 2017-2025) on foreign-language teaching and learning in the national educational system (Prime Minister of Vietnam, 2008a, 2017). In addition, the study contributes to the understanding of methodologies and approaches regarding English teaching and learning to enhance learners' capacity to communicate in English for the current high-demand labour market. Also, the study is particularly useful for building curricula for continuing education, blended learning and lifelong learning, and for suggesting ways to undertake learning outside classrooms, including in the workplace. Although I never intended to make a contribution to COVID-era online education, it

is likely that an exploration of TELL experiences contributes to the emerging sub-field of COVID-age pedagogy.

This study also contributes to meeting the aims of the National Foreign Language Project, particularly the period 2017-2025, on developing and replicating the model of self-study and self-improvement of foreign-language skills (Article 1, Clause 3, Section 4-5, Decision No. 2080/QD-TTg by the Prime Minister on the approval of the Revised National Foreign Language Project, with adjustment and supplementation for the period of 2017-2025; Prime Minister of Vietnam, 2017). The study has responded to government policies requiring the increased use of technology in education. It concurs with MOET policies on ICT use in education and in foreign-language teaching and learning (MOET, 2007, 2008a, 2008b, 2008c). It has potential to contribute to Vietnamese government policies on learners' autonomy and lifelong learning. The study also contributes to the process of raising the awareness of community and other stakeholders toward the model of "a lifelong learning society" and innovation in education in Vietnam (Christian, Reena, Kevin, David, & Jan, 2014; Hossain, 2016; Phạm, 2013).

To Vietnamese educational institutions, educators and learners

The study has the potential to facilitate stakeholders' understanding of the advantages and hindrances of adults as they learn in TELL environments. It helps stakeholders further understand the possibilities, advantages and challenges of creating and participating in (self-study) online language learning groups, as set out in the goals of the National Foreign Language project, new period (2017-2025). One of the main goals of the new period of this project is to encourage Vietnamese people, including school and university students and adult (professional) learners, to create and multiply online self-study learning groups and participate in these groups for learning (Prime Minister of Vietnam, 2017). In this regard, Vietnamese people in general are encouraged to use technology to learn at any time and place to improve their potential to communicate in English, and thus to meet the new requirements of social and economic development tasks in Vietnam (MOET, 2020b; Prime Minister of Vietnam, 2020).

The research offers insights for educators in the field of adult language education. Through the application of TELL, the participants had potential to collaborate thus facilitated their learning (Golshan & Tafazoli, 2014; Kung, 2016). These experiences also helped the participants build necessary technology literacy into language learning. Although there are difficulties in implementing language learning using technology, TELL environments are being increasingly used by these adults (Cercone, 2008). The learning format was convenient, and it enabled the participants to learn anytime, anywhere, at their own pace, not only during their in-class time (Huffaker & Calvert, 2003). This facilitated their self-learning process (Hafner & Miller, 2011; Lin, 2010).

In this research, the participants joined the online learning groups to learn English. Some of them participated in, co-organised and worked as co-admins of these online learning forums (for instance, Quyet used to work as an admin with WELE). They also participated in professional online learning groups to exchange information, learn about English and their profession and update discipline knowledge (as in the case of Hung with Zalo professional learning groups, and My, Nhan and Bach with learning groups from Viber, Facebook and other social-networking sites). Their participation was shown to significantly facilitate their learning of English in general as well as English for their professional purposes, and to improve their professional knowledge and experience. This study has proven that learners, and here they are adults, can gain success from creating and participating in these online learning groups to learn English, although the learning outcomes were different for individual learners. The study, therefore, can provide stakeholders with evidence-based suggestions regarding the implementation of these government policy goals.

The application of TELL also helped adult learners with reserved Vietnamese cultures (particularly those born before the 1980s) to overcome their hesitation when they felt embarrassed to ask others face-to-face about the lessons. In this case, they still learned with online teachers without meeting with them in person. The research on TELL learning environments is also particularly helpful and practical in the current context of the COVID-19 pandemic. This would contribute to boosting the implementation of online learning in Vietnam in general, and for language learning in particular. This can support Vietnamese educators by providing them with more research results to which to refer when determining their courses of action in educational activities.

8.3. Implications

This research investigated the EFL learning experiences within TELL environments and their impacts on the participants' potential to communicate in English. The overall findings from the research showed that, while improvement varied for each participant, all the participants improved their language knowledge and skills, particularly linguistic competence and spoken discourse ability. Also, they acknowledged the learning experience had strong influence on their professional knowledge and practice. However, this is a new area in the research context of Vietnam, particularly with adult learners studying English beyond the classroom, in their lifelong learning contexts. Thus, more studies are needed to gain a deeper understanding of these learning environments.

The research findings suggest some courses of action that would help improve the learning experiences of language learners, particularly those in professional and lifelong learning settings, such as the adult participants in this research. These include the issues in relation to policies and pedagogy.

First, policies should be issued to further support adult learners to help them overcome the many challenges they face during their learning, particularly for those learners engaged in self-study, as with the participants in this research, which itself illustrates many of these challenges. For instance, the mature learners showed an "inverse direction" of the socialisation of literacy skills in English and IT – that is, younger people were helping older people. In this research, Hung had to ask his younger brother for setting up a Viber account for him although he used to employ this as one of the mediums for communication; My needed help and guidance from her son in year 8 for general IT use, such as to set up a Zalo account; and Nhan was compelled to use his daughter's Skype nick for the interviews for this research due to his inability to install his own; and Bach's daughter suggested that she uses HBO movies as a channel to learn English for communication. These instances indicate that adult learners need more support than conventional students. Meeting this need can also help learners develop learning strategies. One way to accomplish this is to introduce training for learners in how to direct their own learning and use the technologies that can help them.

Second, this study proposes the establishment of learning-support divisions, particularly at local universities and colleges, to facilitate adult learners in their lifelong learning contexts including language learning beyond the classroom using TELL. These divisions can also help all the general public to attend and learn or to have support for learning (Murray, 2009); this initiative will have the potential to contribute to the government's policy of building a learning society in Vietnam (MOET, 2017, 2020a; Prime Minister of Vietnam, 2020). These new divisions could also strongly support other types of formal learners in the Vietnamese context, including university students. Guidance on learning structures, learning environments and advice to professionals based on Murray's (2009) model of learning-support divisions at university would be a good reference to apply in the Vietnamese context.

This research also found that the participants faced many challenges in identifying learning strategies and resources. For instance, Bach met difficulties in setting learning goals, and Xuan was used to memorising as a learning strategy, and was strongly focused on accuracy and isolated language items while she wished to learn English for communication. They met challenges in locating learning materials and finding good resources and peer learners for cooperative learning. Even Thanh, who was exceptionally capable academically, could not always find suitable learning materials and could not find people to learn with within "tandem", or partner-based, learning apps. Moreover, many of the study participants showed a strong need for the guidance of an in-person teacher.

Third, for the facilitation of processing aural language skills and improvement of the listening comprehension, the research findings showed that the support of "help options" significantly increased learners' competence. Although the research on the benefits of "help options" in language learning is new in the current literature (Hubbard, 2017), these features have been shown

to strongly support learning. Thus, learners should be encouraged and guided to better use this kind of support. This would be particularly useful for other adult learners as those in this research.

Fourth, to enhance overall listening skills, this study's findings suggest that learners should take opportunities to connect with, and thus have more opportunities to listen to and practise with, different English speakers through the support of computer or other digital devices and the Internet. Such activities would allow them to experience various types of accents from different speakers and thus improve their listening. The findings also indicate that listening competence can be strongly enhanced by involving in social CALL activities. The participants in this research also show that language learning could occur incidentally while listening to news, music or discussions (Thanh, Quyet, My). So, listening to these resources and participate in these activities would also be a good suggestion for other learners to learn to improve this ability.

Fifth, regarding the improvement of speaking skills, the findings from this research suggested that recording their own voice and using the recordings for later analysis and further practice significantly helped the participants improve their speaking ability and increase confidence in communication. In this regard, learners in general, and adult learners in particular, should be encouraged to record conversations for later analysis and practice. Because this aspect of the current study has not previously been examined in the language-learning literature (Blake, 2018), further research is recommended to find out its real affordances and hinders.

Finally, the experiences of the study participants, whose pronunciation skills increased considerably with the use of pronunciation software to compare their voice recordings with those from native speakers of English, suggest that to improve pronunciation, learners can use free or affordable commercial pronunciation software. However, this is another under-researched area in Vietnam, and so further research into this topic is recommended.

8.4. Reflections on epistemological and methodological adoption and ethical dilemmas encountered in this research

8.4.1. Epistemological and methodological adoption

Narrative approach can cast the net that captures the rich and unanticipated complexities of data (Canagarajah, 2021). Through a fine-grained examination of narrative, it can become "very much valid and powerfully related to our research topic" (Barkhuizen & Consoli, 2021, p. 4). For Consoli, by adopting storytelling as an epistemological and analytical framework, we have the opportunities to maintain the integrity and authenticity of our participants' voices while recognise our beliefs and positionalities as human researchers engaged organically with and represented ecologically other humans' experiences. This "narrative relationship between the storyteller, their story, and the researcher" (p. 6) is congruent with and strengthen my initial social constructivist epistemology on knowledge construction.

From the perspective of naturalist, interpretive, or social constructivist (Beuving & de Vries, 2015), I see that "meaningful knowledge is very close to real life in the sense that it is multifaceted, nuanced, and fuzzy" (Mirhosseini, 2020, p. 8). From such an epistemological standpoint, meaningful understanding particularly on human beings cannot be empty of subjectivities. To pursue a narrative approach, researchers need to "fully detach themselves from sediments of quantitative mentalities of objectivity and generalizability" (Mirhosseini, 2020, p. 159). This requirement is crucial, since narrative inquiry is based on stories, while stories have long been viewed as unscientific method and even worthless knowledge in the modern era (Mirhosseini, 2020). For Mirhosseini, "research is searching for knowledge and meaning" (p. 159) and "lived stories are full of meaning and knowledge". Further, narrative researcher's epistemological stance is to seek "contextual and lifelike rather than objective knowledge", so what we need to do is trying to make sense of stories and retell them in researchers' language (Mirhosseini, 2020).

Narrative inquiry is not just about the stories that narrators talk about their life experiences (Barkhuizen, 2020), but it is "much more than the telling of stories" (Clandinin, Pushor, & Orr, 2007, p. 21). There is different information about narrative enquiry within this rapidly expanding literature of applied linguistics research. This includes constructive and instructive information, but it is often contradictory and thus potentially create confusing (Davis & Dwyer, 2017). It is sometimes considered "lack" of a consistent or definitive approach, but this is also the strength of the method, since it allows opportunities for methodological creativity, particularly in the field of language education and TESOL (Davis & Dwyer, 2017).

Narrative inquiry is a research paradigm that organically engages with human experiences (Consoli, 2021). It studies "real people living real lives" (Rigg, 1991, p. 536). For Consoli, "people's lives are unique, complex, and unpredictable and researching people means dealing with their 'life capital' (Barkhuizen & Consoli, 2021, p. 4), so doing a narrative study would easily be a 'messy' endeavour at a practical level (McKinley, 2019). This notion of 'messy' endeavour would lead to all important debate regarding the validity and rigour of narrative study: "There still appears to be resistance from research institutions to accept narrative inquiry as a 'valid' empirical approach to social research" (Barkhuizen & Consoli, 2021, p. 4). This may result in a sense of insecurity when adopting narrative inquiry as a research approach, since it may be viewed as "less rigorous or less generalisable". Because it is difficult to represent the "systematic" nature of the processes regarding empirical storytelling, the concept of story as an epistemological and methodological frame for meaning making in social science research is often criticized for the lack of academic credibility. According to Prior and Talmy (2021), "Every narrative project presents its own unique insights and challenges" (p.9). Any features such as research questions or methodological approaches may differ from study to study or change over time. Thus, there is no single or best way to do narrative research (Prior & Talmy, 2021).

One of the questions and concerns narrative scholars often met is the 'reporting' of narrative inquiry findings "reporting narrative inquiry findings are still massively constrained by the conventions of academic writing and report genres" (Gary's reflection) (Barkhuizen & Consoli, 2021, p. 3). The co-construction of story between narrative researchers and research participants can also raise the ethical tension of how to (re)present these stories (Macalister, 2012; Menard-Warwick, 2004; Wyatt & Marquez, 2016). Because there is no single way to do narrative inquiry research as mentioned, at the early stage of study, I intended to represent each individual story for each participant, but finally I decided to incorporate the narratives from all the participants into one whole story to ensure the timeline of the research as well as to focus on highlighting the commonalities and the differences of the participants (Macalister, 2012). This was also one of the limitations in my adoption of narrative research approach. The data collected from my research participants were mostly in the form of non-story data (particularly those from interviews and learning diaries). This form of data would hardly fit conventional criteria of story (Barkhuizen, 2020). However, the data from learning experiences of the participants in my research covered an extended period of time, from the past to the imagined future (Barkhuizen, 2016; Benson, 2021) including reflective and evaluative commentary on those experiences, so the narratives from the participants were coded, analysed and arranged in chronological order and configured into a coherent storied whole (Barkhuizen, 2020; Polkinghorne, 1995).

Citing the work of Cortazzi (1993), Menard-Warwick (2004) mentions "narrative research recounts human experience in a way that is not necessarily factual but that is true to the teller's perspectives on that experience and shaped by the teller's perception of the listeners" (p. 298). As it is narrative research, the data in my study were co-constructed with the collaboration of and the interaction between the research participants and the researcher (Prior & Talmy, 2021). This means that I was not only passively listening to the participants' stories but was actively involved in the process of constructing them (Barkhuizen, 2011). Also, when reflecting the work of narrative inquiry, Barkhuizen and Consoli (2021) comment that "there is a need to recognise the researcher's presence in the empirical processes of 'performing' the social practice of narrative inquiry" (p.6). They argue that "recognising the researcher's voice and its idiosyncratic impacts on the participants and their stories will add to the richness of insights and meanings about the phenomena under investigation" (p.6).

Doing narrative research is performing the co-construction processes of data collection, data analysis and representation as mentioned. So, in these processes, researchers (together with research participants) write and re-write for more "coherent and condensed" stories (Xu, 2014, p. 246). These processes can create the best of knowledge (Barkhuizen & Consoli, 2021), but it can also raise the ethical concerns of the participants' voice (de Fina & Georgakopoulou, 2012) or authorial intervention (Macalister, 2012). According to de Fina and Georgakopoulou (2012), stories are co-constructed and co-authored, so when researchers construct and co-construct the

stories, write and re-write their participants' accounts of lived experience, they seem to own and re-own the participants' stories and that the voice of their participants might not be heard. Echoing this concern, De Costa, Randez, Her, and Green-Eneix (2021) argue that "in the process of retelling participants stories, L2 narrative researchers run the ethical risk of devoicing them as they revoice participants through a retelling of the latter's stories" (p6).

While strongly supporting the "concern for rigour and quality" in narrative research, Consoli (2021) recommends that, narrative approaches should be adopted in the alignment with the concept of the 'person-centred turn' (Benson, 2019) and 'reflexive turn' (Archer, 2012; Dean, 2017) to recognise the complex role of humans in research and to promote "reflexivity" to produce more inclusive research with more important subjective elements (Barnard & Wang, 2021; Canagarajah, 2021; Rabbidge, 2017). The practice of reflexivity "aligns well with the need for narrative researchers to acknowledge their presence, voice and actions in all the processes of narrative work" (Barkhuizen & Consoli, 2021, p. 8). Reflexive approach to narrative inquiry not only "helps researchers illustrate more clearly the systematic steps undertaken to execute their investigations" but "lets them depict the processes of co-construction and (re)storying that bind narrative researchers so intimately to their topics, their participants and their stories" (p. 8).

The aforementioned recommendation concerning the human dimensions is in agreement with De Costa et al.'s (2021) reminder that, narrative researchers need to become sensitive about their interactions and relationships with their participants as well as the decisions they make to (re)present their stories and research findings. In other words, there need to be a recognition of the researcher' presence in doing narrative research (Barkhuizen & Consoli, 2021; Kayi-Aydar, 2021). Recognising the researchers' voice and their impacts on "the participants and their stories" will create richer and more meaningful insights about the "phenomena under investigation" (Barkhuizen & Consoli, 2021, p. 8). For Barkhuizen and Consoli (2021), "what makes narrative inquiry such a strong research methodology is its close relationship to the human dimensions of our research", so they call for "the need to fully accept and openly recognise the 'messiness' of doing narrative inquiry and embrace this feature as a testimony to the richness ensuing from our engagement with stories whether through elicitation, analysis, and/or (re)presentation" (p. 8). By doing these well, narrative methodologies can bring more benefits in such a way that it "truly values the human stories behind our data" and that it encourages the participants to share their unique experiences (Barkhuizen & Consoli, 2021, p. 4).

8.4.2. Ethical dilemmas

Narrative researcher is much part of research activity, both during data collection, data analysis and representation of the findings processes (Clandinin & Connelly, 2000). During these processes, researchers could not avoid uncontrollable data variables and messiness (Rose & McKinley, 2017). Narrative inquiry involves the lives of research participants. This is the essence

of engagement in narrative inquiry in which researchers influence "the quality of the data collected and consequently the trustworthiness of the data analysis" (Barkhuizen & Consoli, 2021, p. 6). According to Josselson (2007), "Narrative inquiry is inherently a relational endeavour. Every aspect of the work is touched by the ethics of the research relationship" (p. 537). It involves stories of life experience that is of deep interest to participants (Chase, 2003). The stories can be confidential and cover ethically delicate topics (Dwyer & Emerald, 2017). They can be extremely personal and sensitive, so they need to be handled carefully by researchers (Barkhuizen & Consoli, 2021).

To preserve the ethical values such as respect for persons, yielding optical benefits, minimizing harm, and the preservation of justice (De Costa, 2014, 2015), researchers must enact ethical research practices (De Costa, Lee, Rawai, & Li, 2020). Researchers must adhere to professional codes of conduct and follow macro ethical principles that are approved by ethical review boards (De Costa, Randez, Her, & Green-Eneix, 2021). Also, they must implement micro-ethical practices that are not listed in the protocols of ethical review boards to manage everyday ethical dilemmas such as coerced relationships or professional misconduct (Anderson, 2017; De Costa, 2016; De Costa et al., 2021) when working with their participants in specific research contexts.

Following these principles, during the data collection process, data analysis and representation, I expanded my ethical responsibilities to work with these adult learner participants, who are well aware of what they are doing but highly sensitive in terms of their personal information and/or keeping face with others (Carson, 2017; Zimman, 2013), by adopting a reflexive approach when accessing and interacting with them. I collected LLHs and learning diaries via emails, collecting interviews via Skype, not in person, the mediums in which there would be easier for data breach, for instance, the personal information would be compromised and thus potentially create ethical issues (Tao, Shao, and Gao, 2017). Because I collected data online, I had to carefully plan and mentioned in the documentation/paperwork for the approval from the university ethical board. I also learnt to keep updated with digital knowledge (Carrier & Nye, 2017) to improve the ways to keep confidentiality and protect the information of the participants, to handle the digital data (Tagg, Lyons, Hu, and Rock, 2017) and improve the awareness to address emergent ethical dilemmas and the dynamics surrounding (Tagg, Lyons, Hu, and Rock, 2017) during the research.

As the situated nature of narrative research, my study was conducted in a specific research context that pursued to understand the life experience of adult participants in their work and LLL context. To ethically conduct this research, I considered the discursive relations with my research participants to deal with everyday ethical dilemmas emerging from these relations (De Costa, Randez, Her, & Green-Eneix, 2021). Adopting the microethical approach by De Costa et al. (2021), I built rapport with and gave back to my participants (Oxford, 1995). To do these, I first talked about my life, sharing my interests in life and particularly my own English learning experience with both strengths and weaknesses. This not only engaged the participants to share

their learning experience in a willingness manner, but also acted as a general suggestion for them on how to tell their own stories. I assured them that we all had good and bad language learning experience, success and not success in language learning. This means I tried to show them that I was not seeking to evaluate their own language learning experiences. In addition, during the data collection process, I was always willing to support the participants, for instance, giving suggestions and advice on learning resources or ways to learn. The language we shared in conversations and during the data collection process was in Vietnamese - our native language, and I saw that this allowed them to be more open. I could feel that we did not have any power differential during the research (Menard-Warwick, 2004; Norton & Early, 2011).

Having conducted the research, I can reaffirm that it is appropriate to adopt narrative inquiry to investigate the adult professional learners' self-study learning experiences (Experiential learning, Kolb, 1984, 2015) within particular social and cultural contexts (Sociocultural theory, Vygotsky, 1978; Lantolf, Thorne, & Poehner, 2015; Lantolf, Poehner, & Swain, 2018) in their lifelong learning journey. This appropriateness agrees with Benson's (2021) arguments that narrative inquiry has the capacity to capture change and development over time and that narrative research can "tap into areas of experience outside the laboratory or classroom that would otherwise be inaccessible to research" (p. 1). The use of sociocultural theory principles can help revisit the epistemological view of learning in experiential learning that emphasizes the role of learners, but not considers its connection to the "philosophical, anthropological, sociological and psychological studies of learning and thought" (Miettinen, 2000, p. 71). On the other hand, the use of experiential learning has the potential to help overcome the limitations of sociocultural theory which is sometimes viewed as to "disregard the role of the individual, but regard the collective" (Ameri, 2020, p. 1533). For Ameri, this view is reconfirmed by Vygotsky's assertion that "the mind is not considered separate from the group" (p. 1533). Because of this, SCT just emphasizes the social factors of learning, not the role of learners themselves (Ameri, 2020).

8.5. Limitations and suggestions of the study

While this study successfully investigated the learning experiences of adult learners and their impacts, it did not reveal many new insights into the influence of TELL on the participants' sociolinguistic and strategic competence. Although the findings showed that sociolinguistic competence was strengthened in some participants, it was not in others. This might be due to the fact that the participants lacked the confidence to talk about it, although the researcher had tried to explain its meaning both during talks with the participants and in the written documents sent to each participant. Future research should pursue a greater understanding of sociolinguistic competence. Similarly, the research showed that some participants showed improvements in strategic competence, while others did not; this merits further research attention.

The findings from this study showed that the participants were changing the ways they read and wrote, increasing their use of emails and text chats, but did not reveal significant insights into the effects of TELL on their writing performance in their professional activities. This aspect of research, therefore, should also be further studied, particularly as previous research in Vietnamese contexts has focused on the learners' learning experiences and the impacts of technology on writing activities in conventional university and college students in formal educational settings, as opposed to adult learners outside the classroom. This research investigated, but it did not gain significant insight into the influence of TELL on professional activities in general and on lifelong learning skills; future research should also address this matter.

The study's research design also had a number of limitations. First, the study was conducted with a small number of participants, all of whom were well-educated, and thus the results from the study might be difficult to apply to other learning contexts in Vietnam, including adult learners who were less well-educated or from regions with more difficulties for further learning. This suggests that future research should be conducted with greater numbers of participants from more-diverse social, educational and professional backgrounds. Also, this research needed much time to translate the participants' documents including interview transcripts into English, although this helped the researcher gain more information about, and thus a deeper understanding of, the participants' learning experiences.

Further, the data collection for this study required over ten months, from July 2018 to March 2019, then with follow-up interview sessions in April and May 2019, because these adult participants could not usually arrange time for learning regularly, or for writing learning diaries, which needed to be finished before the participants were interviewed. This also indicates that stakeholders should seek ways to support adult learners (including professionals) regarding time and condition for learning; this could ameliorate declines in the mental and physical health in adult learners from the stress of trying to fit learning into their already demanding lives, as reported by the participants in this study.

In conclusion, English has now become increasingly important in the current Vietnamese context. Improvements in the country's ICT infrastructure have helped many language learners to learn, and to gain success in their learning, whether in formal classroom settings or beyond the classroom. However, learning in these informal environments also brings a variety of challenges for learners, particularly for mature learners or mid- and late-career professionals like those in this research. This study, which provides opportunities for language experts to look at the learning experiences of learners in this context, can help policy-makers make informed decisions regarding the implementation of the national foreign-language project during its 2020-2025 stage and beyond.

REFERENCES

Abraham, L. B. (2007). Second-language reading comprehension and vocabulary learning with multimedia. *Hispania, 90*(1), 98–108. Retrieved from http://www.jstor.org/stable/20063468.

Abrams, Z. (2003). The effects of synchronous and asynchronous CMC on oral performance. *Modern Language Journal, 87*(2), 157–167.

Alborno, N., & Gaad, E. (2012). Employment of young adults with disabilities in Dubai – A case study. *Journal of Policy and Practice in Intellectual Disabilities, 9*(2), 103–111.

Alderson, J. C. (2009). *The politics of language education: Individuals and institutions* (Vol. 13). Bristol, UK: Multilingual Matters.

Alemi, M., & Lari, Z. (2012). SMS vocabulary learning: A tool to promote reading comprehension in L2. *International Journal of Linguistics, 4*(4), 275–287.

Alkhasawneh, S. S., Rahman1, F. A., Ayub, A. F. M., & Daud, S. M. (2012). Developing multimedia text for reading comprehension based on Cognitive Theory of Multimedia Teaching." *International Journal of Innovative Ideas, 12*(4), 11–19.

Al-Shamsi, A., Al-Mekhlafi, A. M., Al-Busaidi, S., & Hilal, M. M. (2020). The effects of mobile learning on listening comprehension skills and attitudes of Omani EFL adult learners. *International Journal of Learning, Teaching and Educational Research, 19*(8), 16-39.

Ameri, M, (2020). Criticism of the Sociocultural Theory. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal) 3*(3), 1530-1540. e-ISSN: 2615-3076 (Online), p-ISSN: 2615-1715(Print).

Anderson, C. (2017). Ethics in qualitative language education research. In S. Mirhosseini (Ed.), *Reflections on qualitative research in language and literacy education* (pp. 59–73). New York, NY: Springer.

Andrew, M. (2020a). Building Vietnamese English Teachers' Evaluation Capability: Filling Needs via Training Programs. *Electronic Journal for English as a Second Language, 24*(3), 1–17.

Andrew, M. (2020b). Action research to build TESOL teacher capacity in Vietnamese master-level programmes. *New Zealand Studies in Applied Linguistics, 26*(1). Retrieved from https://www.alanz.org.nz/journals/261-2020/.

Andrew, M. (2017). Using innovation and action research to build TESOL teacher capacity in Vietnam. *International Journal of Language Education, 1*(2), 17–28. Retrieved from http://ojs.unm.ac.id/index.php/ijole/article/view/4311ojs.unm.ac.id/index.php/ijole/article/view/4311.

Andrew, M., & Tran, L. H. (2019). Using weekly group political presentations to enhance the phonological learning of second-year English major students at a university in Vietnam. *International Journal of Language Education, 3*(2), 115-127.

Anh, D. T. K., & Marginson, S. (2013). Global learning through the lens of Vygotskian sociocultural theory. *Critical Studies in Education, 54*(2), 143–159.

Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.

Arispe, K. (2012). *Why Vocabulary Still Matters: L2 Lexical Development and Learner Autonomy as Mediated through an ICALL Took, Langbot*. Doctoral dissertation, University of California Davis.

Arnold, J. (2011). The self as data: A qualitative methodology. *Journal of Educational and Developmental Psychology, 1*(1), 65–73. doi:10.5539/jedp.v1n1p65.

Askildson, L. R. (2011). A review of CALL and L2 reading: Glossing for comprehension and acquisition. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 1*(4), 49–58.

Aspin, D. N., & Chapman, J. D. (2000). Lifelong learning: Concepts and conceptions. *International Journal of Lifelong Education, 19*(1), 2–19.

Auer, N. (2015). Promoting strategic reading using the iBooks author application. In J. Keengwe & M. B. Maxfield (eds), *Advancing Higher Education with Mobile Learning Technologies: Cases, Trends, and Inquiry-based Methods*. Hersey, PA: IGI Global.

Aydin, Z., & Yildiz, S. (2014). Using wikis to promote collaborative EFL writing. *Language Learning & Technology, 18*(1), 160–180.

Bachman, L. F. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press.

Bachman, L. F., & Palmer, A. S. (1996). *Language testing in practice: Designing and developing useful language tests* (Vol. 1). Oxford: Oxford University Press.

Baddeley, A., Eysenck, M. W., & Anderson, M. C. (2009). *Memory*. Hove: Psychology Press.

Bagarić, V., & Djigunović, J. M. (2007). Defining communicative competence. *Metodika, 8*(1), 94–103.

Bailly, S. (2011). Teenagers learning languages out of school: What, why and how do they learn? How can school help them? In P. Benson and H. Reinders (eds), *Beyond the language classroom* (pp. 119–131). Basingstoke, UK: Palgrave Macmillan Press.

Bandura, A. (1965). Vicarious processes: A case of no-trial learning. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology* (Vol. 2, pp. 1–55). New York: Academic Press.

Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart and Winston.

Bandura, A. (1977). *Social learning theory* (2nd edn). Englewood Cliffs, NJ.: Prentice Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*: Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (2001). Social cognitive theory of mass communication. *Media Psychology, 3*(3), 265–299. doi:10.1207/S1532785XMEP0303_03.

Barak, M. (2017). Science teacher education in the twenty-first century: A pedagogical framework for technology-integrated social constructivism. *Research in Science Education, 47*(2), 283–303.

Barkhuizen, G. P. (2011). Narrative knowledging in TESOL. *TESOL Quarterly, 45*(3), 391–414. https://doi.org/10.5054/tq.2011.261888

Barkhuizen, G. P. (2014). Narrative research in language teaching and learning. *Language Teaching, 47*(04), 450–466.

Barkhuizen, G. P. (2016). A short story approach to analyzing teacher (imagined) identities over time. *TESOL Quarterly, 50*(3), 655–683.

Barkhuizen, G. P. (2020). Core dimensions in narrative inquiry. In J. McKinley & H. Rose (Eds.), *The Routledge handbook of research methods in applied linguistics* (pp. 188–198). London: Routledge.

Barkhuizen, G. P., & Consoli, S. (2021). *Pushing the edge in narrative inquiry*. Article 102 (2021). https://doi.org/10.1016/j.system. 102656. System.

Barkhuizen, G. P., & Wette, R. (2008). Narrative frames for investigating the experiences of language teachers. *System, 36*(3), 372–387. doi:10.1016/j.system.2008.02.002.

Barkhuizen, G. P., Benson, P., & Chik, A. (2013). *Narrative inquiry in language teaching and learning research*. New York: Routledge.

Barnard, R., & Wang, Y. (Eds.) (2021). *Research ethics in second language education: Universal principles, local practices*. Routledge.

Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research, 5*(4), 1-9.

Beatty, K. (2010). *Teaching and researching computer-assisted language learning* (2nd edn). Harlow, UK: Longman.

Bell, J. S. (2002). Narrative inquiry: More than just telling stories. *TESOL Quarterly, 36*(2), 207–213. doi:10.2307/3588331.

Benson, P. (2011). Language learning careers as a unit of analysis in narrative research. *TESOL Quarterly, 45*(3), 545–553.

Benson, P. (2019). Ways of seeing: The individual and the social in applied linguistics research methodologies. *Language Teaching, 52*(1), 60–70. https://doi.org/10.1017/S0261444817000234.

Benson, P. (2021). *Space in narrative inquiry on second language learning*, Article 102602. https://doi.org/10.1016/j.system.2021.102602. System.

Benson, P., Barkhuizen, G. P., Bodycott, P., & Brown, J. (2012). Study abroad and the development of second language identities. *Applied Linguistics Review, 3*(1), 173–193.

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research, 15*(2), 219–234. doi:10.1177/1468794112468475.

Beuving, J., & de Vries, G. (2015). *Doing qualitative research: The craft of naturalistic inquiry* (2nd ed.). Amsterdam: Amsterdam University Press.

Blaj-Ward, L. (2017). From language learner to language user in English-medium higher education: Language development brokers outside the language classroom. *Journal of Research in International Education, 16*(1), 55–64.

Blake, R. (2000). Computer-mediated communication. A window on L2 Spanish interlanguage. *Language Learning & Technology, 4*(1), 120–136.

Blake, R. (2005). Bimodal chatting: The glue of a distant learning course. *CALICO Journal, 22*(3), 497–511.

Blake, R. (2015). CALL research and practice: Quo vadis? *International Journal of LASSO, 32*(1), 1–7.

Blake, R. (2017). Technologies for teaching and learning L2 speaking. In C. A. Chapelle and S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 107–117). Hoboken, NJ: John Wiley & Sons, Inc.

Bley-Vroman, R. (2009). The evolving context of the fundamental difference hypothesis. *Studies in Second Language Acquisition, 31*(2), 175–198.

Block, E. L. (1992). See how they read: Comprehension monitoring of L1 and L2 readers. *TESOL Quarterly, 26*(2), 319–343.

Borras, I., & Lafayette, R. C. (1994). Effects of multimedia subtitling on the speaking performance of college students of French. *Modern Language Journal, 78*(1), 61–75.

Boulware-Gooden, R., Carreker, S., Thornhill, A., & Joshi, R. M. (2007). Instruction of metacognitive strategies enhances reading comprehension and vocabulary achievement of third-grade students. *The Reading Teacher, 61*(1), 70–77.

Bowles, M. A. (2004). L2 glossing: To CALL or not to CALL," *Hispania, 87*(3), 541–552.

Brantmeier, C. (2003). Technology and second language reading at the university level: Informed instructors' perceptions. *The Reading Matrix, 3*(3), 50–74.

Brown, H. D. (2000). *Principles of language learning and teaching* (4th edn). White Plains, NY: Pearson Education (Longman).

Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Bruner, J. (2004). Life as narrative. *Social Research, 71*(3), 691–710.

Bui, T. T. N., & Nguyen, H. T. M. (2016). Standardizing English for educational and socio-economic betterment – A critical analysis of English language policy reforms in Vietnam. In R. Kirkpatrick (ed.), *English language education policy in Asia* (Vol. 11, pp. 363–368). Cham, Switzerland: Springer.

Bui, T. X. T., Ha, Y. N., Nguyen, T. B. U., Nguyen, V. U. T., & Ngo, T. C. T. (2021). A study on collaborative online learning among EFL students in Van Lang university (VLU). *AsiaCALL Online Journal, 12*(3), 9-21. Retrieved from https://asiacall.info/acoj/index.php/journal/article/view/32.

Canagarajah, S. (2021). *Materializing narratives: The story behind the story*, Article 102610. https://doi.org/10.1016/j.system.2021.102610. System.

Canale, M. (1983). From communicative competence to communicative language pedagogy. *Language and communication, 1*(1), 1-47.

Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics, 1*(1), 1–47.

Canh, L. V. (2000). Language and Vietnamese pedagogical contexts. In J. Shaw, D. Lubelska, & M. Noullet (eds). *Partnership and interaction. Proceedings of the fourth international conference on language and development, Hanoi, Vietnam* (pp. 73–80).

Canh, L. V. (2002). Sustainable professional development of EFL teachers in Vietnam. *Teacher's Edition, 10*, 32–37.

Canh, L. V. (2007). A historical review of English language education in Vietnam. In Y. H. Choi & B. Spolsky (eds.), *English education in Asia: History and practice* (pp. 167–179). Seoul Asia TEFL.

Canh, L. V. (2011). *Form-focused instruction: A case study of Vietnamese teachers' beliefs and practices.* PhD dissertation, the University of Waikato, New Zealand.

Canh, L. V. (2014). Motivation as a language learning condition re-examined: Stories of successful Vietnamese EFL students. In K. Sung & B. Spolsky (eds.), *Conditions for English language teaching and learning in Asia* (pp. 17–36). Newcastle-upon-Tyne, UK: Cambridge Scholars Publishing.

Canh, L. V., & Barnard, R. (2009a). Curricular innovation behind closed classroom doors: A Vietnam case study. *Prospect: An Australian Journal of TESOL, 24*(2), 20–33.

Canh, L. V., & Barnard, R. (2009b). Teaching grammar: A survey of teachers' attitudes in Vietnam. *Journal of ASIA TEFL, 6*(3), 245–273.

Canh, L. V., & Ngoc, N. T. (2017). What can the national foreign language project learn from its Asian experience? (Đề án Ngoại ngữ quốc gia có thể học được gì từ kinh nghiệm châu Á?). *VNU Journal of Foreign Studies*. doi:10.25073/2525-2445/vnufs.4166.

Cardenas-Claros, M. S., & Grurba, P. A. (2009). Help options in CALL: A systematic review. *CALICO Journal, 27*(1), 69–90.

Cardenas-Claros, M. S., & Gruba, P. A. (2013). Decoding the 'CoDe': A Ffamework for conceptualizing and designing help options in computer-based second language listening. *ReCALL, 25*(2), 250–271.

Cardullo, V., Wang, C., Burton, M., & Dong, J. (2021). K12 teachers' remote teaching self-efficacy during the pandemic. *Journal of Research in Innovative Teaching & Learning, 14*(1), 32-45. Retrieved from https://doi.org/10.1108/JEIT-10-2020-0005.

Carrier, M., & Nye, A. (2017). Empowering teachers for the digital future: What do 21st-century teachers need? In M. Carrier, R. M. Damerow, & K. M. Bailey (Eds.), *Digital language learning and teaching: Research, theory, and practice*. New York, NY: Routledge.

Carson, L. (2017). Realities of doing research in applied linguistics. In J. McKinley & H. Rose (Eds.), *Doing research in applied linguistics* (pp. 114–123). New York, NY: Routledge.

Celce-Murcia, M. (2008). Rethinking the role of communicative competence in language teaching. In E. A. Soler & M. P. Safont Jordà (eds), *Intercultural language use and language learning* (pp. 41–57). Springer.

Centeno-Cortés, B. (2003). *Private speech in the second language classroom: Its role in internalization and its link to social production.* (Unpublished doctoral dissertation). University Park PA: Pennsylvania State University.

Central Executive Committee. (2007). *Directive 11-CT/TW of the Central Committee, dated April 13, 2007 on strengthening the leadership of the Party in study promotion, talent promotion, building a learning society [Chỉ thị 11-CT/TW của Ban Chấp hành Trung ương ngày 13/4/2007 về tăng cường sự lãnh đạo của Đảng đối với công tác khuyến học, khuyến tài, xây dựng xã hội học tập]*. Retrieved from https://tulieuvankien.dangcongsan.vn/he-thong-van-ban/van-ban-cua-dang/chi-thi-so-11-cttw-ngay-1342007-cua-bo-chinh-tri-ve-tang-cuong-su-lanh-dao-cua-dang-doi-voi-cong-tac-khuyen-hoc-khuyen-2127.

Central Executive Committee. (2013). *Resolution 29-NQ / TW dated 14/11/2013 on fundamental and comprehensive renovation of education and training, meeting the requirements of industrialization and modernization in the market economy and international integration (Ban Chấp hành trung Ương (2013). Nghị quyết 29-NQ/TW ngày 14/11/2013 về đổi mới căn bản, toàn diện giáo dục và đào tạo, đáp ứng yêu cầu công nghiệp hóa, hiện đại hóa trong điều kiện kinh tế thị trường định hướng xã hội chủ nghĩa và hội nhập quốc tế).*

Central Executive Committee. (2019). *Conclusion 49-KL/TW of the Central Committee, dated May 10, 2019 on continuing to implement the Directive No. 11-CT/TW of the 10th Politburo on strengthening the Party's leadership in promoting learning, promoting talents, and building a learning society [Kết luận 49-KL/TW của Ban Chấp hành Trung ương ngày 10/5/2019 về tiếp tục thực hiện chỉ thị số 11-CT/TW của Bộ Chính trị khóa 10 về tăng cường sự lãnh đạo của Đảng đối với việc khuyến học, khuyến tài, và xây dựng xã hội học tập]*. Retrieved from https://thuvienphapluat.vn/van-ban/Giao-duc/Ket-luan-49-KL-TW-2019-thuc-hien-Chi-thi-11-CT-TW-khuyen-hoc-khuyen-tai-xay-dung-xa-hoi-hoc-tap-421176.aspx.

Cercone, K. (2008). Characteristics of adult learners with implications for online learning design. *AACE Journal, 16*(2), 137–159.

Chapelle, C. (1998). Multimedia CALL: Lessons to be learned from research on instructed SLA. *Language Learning & Technology, 2*(1), 21–39.

Chapelle, C. (2003) *English language learning and technology, lectures on applied linguistics in the age of information and communication technology*. Amsterdam: John Benjamins Pub. Co.

Chapelle, C. A. (2009). The relationship between second language acquisition theory and computer-assisted language learning. *Modern Language Journal, 93*, 741–753.

Chase, S. E. (2003). Taking narrative seriously: Consequences for method and theory in interview studies. In Y. Lincoln & N. Denzin (Eds.), *Turning points in qualitative research: Tying knots in a handkerchief* (pp. 273–296). Oxford: Altamira Press.

Chase, S. E. (2011). Narrative inquiry: Still a field in the making. In N. K. Denzin & Y. S. Lincoln (eds), *The Sage handbook of qualitative research* (4th edn, pp. 421-434). Thousand Oaks, CA: Sage.

Chen, T. (2014). Technology-supported peer feedback in ESL/EFL writing classes: A research synthesis. *Computer Assisted Language Learning, 29*(2), 365–397.

Christian, B., Reena, B.-M., Kevin, M., David, N., & Jan, R. (2014). *Skilling up Vietnam : Preparing the workforce for a modern market economy*. Washington, DC: The World Bank.

Chun, D. (1994). Using computer networking to facilitate the acquisition of interactive competence. *System, 22*(1), 17–31.

Chun, D., & Plass, J. L. (1997). Research on text comprehension in multimedia environments. *Language Learning and Technology*, *1*(1), 60–81.

Clandinin, D. J., & Connelly, F. M. (2000). *Narrative inquiry: Experience and story in qualitative research* (1st edn). San Francisco: Jossey-Bass.

Clandinin, D. J., Pushor, D., & Orr, A. M. (2007). Navigating sites for narrative inquiry. *Journal of Teacher Education, 58*(1), 21–35.

Cobb, T. (2017). "Technology for teaching reading" In *TESOL Encyclopedia of English Language Teaching*, Editor-in Chief John I. Liontas Wiley.

Coffey, S., & Street, B. (2008). Narrative and identity in the "language learning project". *Modern Language Journal, 92*(3), 452–464. doi:10.1111/j.1540-4781.2008.00757.x.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th edn). London & New York: Routledge, Taylor & Francis Group.

Cole, A. L., & Knowles, J. G. (2001). *Lives in context: The art of life history research*. Lanham, MD: Rowman Altamira.

Compton, L. (2004). From chatting to oral fluency: Using chat to improve self-confidence and increase willingness to communicate. *Teaching English with Technology*, *4*(1).

Consoli, S. (2021). *Uncovering the hidden face of narrative analysis: A reflexive perspective through MAXQDA*, Article 102611. https://doi.org/10.1016/j.system.2021.102611. System.

Cortazzi, M. (1993). *Narrative analysis*. London: Falmer.

Coryell, J. E., Clark, M. C., & Pomerantz, A. (2010). Cultural fantasy narratives and heritage language learning: A case study of adult heritage learners of Spanish. *Modern Language Journal, 94*(3), 453–469. doi:10.1111/j.1540-4781.2010.01055.x.

Cotterall, S., & Reinders, H. (2004). *Learner strategies: A guide for teachers*. Singapore: RELC.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd edn). Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th edn). Boston: Pearson.

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd edn). Thousand Oaks, CA: SAGE Publications.

Crick, R. D. (2008). Key competencies for education in a European context: Narratives of accountability or care. *European Educational Research Journal, 7*(3). Retrieved from www.wwwords.eu/EERJ.

Cross, R. (2012). Creative in finding creativity in the curriculum: The CLIL second language classroom. *Australian Educational Researcher, 39*(4), 431–445.

Cui, Y., & Bull, S. (2005). Context and learner modelling for the mobile foreign language learner. *System, 33*(2), 353–367. doi:https://doi.org/10.1016/j.system.2004.12.008.

Danan, M. (2004). Captioning and subtitling: Undervalued language learning strategies. *Meta: Translators Journal, 49*(1), 67–77.

Dang, X. T. (2014). *Implementing E-learning in Vietnamese universities: A configurational approach.* Doctoral dissertation, University of Sheffield.

Dang, X. T., Nicholas, H., & Lewis, R. (2013). ICT training and ICT use among Vietnamese foreign language teachers. *Ubiquitous Learning: An International Journal, 5*(3), 13-24.

Dau, T. T. L. (2021). Remote teaching amid the Covid-19 pandemic in Vietnam: Primary school EFL teachers' practices and perceptions. *AsiaCALL Online Journal, 13*(1), 1-21. EOI: http://eoi.citefactor.org/10.11251/acoj.13.01.001.

Davis, I., & Dwyer, R. (2017). The power and possibility of narrative research: Challenges and opportunities. In R. Dwyer, I. Davis, & E. Emerald (Eds.), *Narrative research in practice: Stories from the field* (pp. 225–238). Singapore: Springer.

De Bot, K., & Makoni, S. (2005). *Language and aging in multilingual contexts.* Clevedon, UK: Multilingual Matters.

De Costa, P. I. (2014). Making ethical decisions in an ethnographic study. *TESOL Quarterly*, *48*, 413–422.

De Costa, P. I. (2015). Ethics and applied linguistics research. In B. Paltridge & A. Phakiti (Eds.), *Research methods in applied linguistics: A practical resource* (pp. 245–257). London: Bloomsbury.

De Costa, P. I. (2016). *Ethics in applied linguistics research: Language researcher narratives*. New York, NY: Routledge.

De Costa, P. I., Lee, J., Rawai, H., & Li, W. (2020). Ethics in applied linguistics research. In J. McKinley & H. Rose (eds), *The Routledge Handbook of Research Methods in Applied Linguistics* (pp. 122-130). Routledge Talor & Francis Group, London & New York.

De Costa, P. I., Randez, R. A., Her, L., & Green-Eneix, C. A. (2021). *Navigating ethical challenges in second language narrative inquiry research*. System, 102 (2021). http://doi.org/10.1016/j.system.2021.102599.

De Fina, A., & Georgakopoulou, A. (2012). *Analyzing narrative: Discourse and sociolinguistic perspectives.* Cambridge: Cambridge University Press.

De Fina, A., & Georgakopoulou, A. (Eds.). (2015). *The handbook of narrative analysis*. Malden, MA: Blackwell.

De Ridder, I. (2002). Visible or invisible links: Does the highlighting of hyperlinks affect incidental vocabulary learning, text comprehension, and the reading process? *Language Learning & Technology, 6(*1), 123–146.

Dean, J. (2017). *Doing reflexivity*: An introduction. Bristol: Policy Press.

Denham, P. (1992). English in Vietnam. *World Englishes*, *11*(1), 6169.

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.

Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research* (4th edn). Thousand Oaks, CA: Sage.

Denzin, N. K., & Lincoln, Y. S. (2018). *The SAGE handbook of qualitative research* (5th edn)/ Los Angeles: Sage.

Dewey, J. (1938). *Experience and education*. New York: MacMillan.

Dewey, J. (1963). *Experience and education*. New York: Collier.

Dooly, M. (2017). Telecollaboration. In C. A. Chapelle and S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 169–183). Hoboken, NJ: John Wiley & Sons, Inc.

Duff, P. A. (2007). Second language socialization as sociocultural theory: Insights and issues. *Language Teaching*, *40*(4), 309–319. doi:10.1017/S0261444807004508.

Dwyer, R. & Emerald, E. (2017). Narrative Research in Practice: Navigating the Terrain. In R. Dwyer, I. Davis, & E. Emerald (eds), *Narrative Research in Practice. Stories from the Field* (pp. 1-26). DOI 10.1007/978-981-10-1579-3. Springer.

Educational Media Center (2020). ASEAN experts discuss developing applied learning programs on an employment basis. Retrieved from http://icd.edu.vn/372/chuyen-gia-asean-ban-ve-xay-dung-chuong-trinh-hoc-tap-ung-dung-tren-co-so-viec-lam.html/BPF/vi-VN/CMS_Cat/Thong-Tin-Hop-Tac-Quoc-Te/CMS_Detail/1900.

Educational Media Center (2021). Vietnam International Conference on Education 2011-2020. Retrieved from http://icd.edu.vn/372/hoi-thao-quoc-te-giao-duc-viet-nam-20112020.html/BPF/vi-VN/CMS_Cat/Hoi-Nghi-Hoi-Thao/CMS_Detail/1961; https://translate.google.com/translate?hl=en&sl=auto&tl=en&u=http%3A%2F%2Ficd.edu.vn.

Efriana, L. (2021). Problems of online learning during Covid-19 pandemic in EFL classroom and the solution. *JELITA*, 38-47. Retrieved from https://jurnal.stkipmb.ac.id/index.php/jelita/article/view/74.

Ehsani, F., & Knodt. E. (1998). Speech technology in computer-aided language learning: Strengths and limitations of a new CALL paradigm. *Language Learning & Technology, 2*(1), 54–73.

Ellis, R. & Sheen, Y. (2006). Re-examining the role of recasts in second language acquisition. *Studies in Second Language Acquisition, 28*, 575–600.

Field, J. (2001). Lifelong education. *International Journal of Lifelong Education, 20* (1), 3–15.

Field, J. (2005). *Social Capital and Lifelong Learning*. Bristol: Policy Press.

Fishbane, L., & Tomer, A. (2020). As classes move online during COVID-19, what are disconnected students to do? *Brookings institute, 20 March 2020*. Retrieved from https://www.brookings.edu/blog/the-avenue/2020/03/20/as-classes-moveonline-during-covid-19-whatare-disconnected-students-to-do/.

Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education, 22*(2), 219–232. doi:https://doi.org/10.1016/j.tate.2005.09.002.

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquire, 12*(2), 219–245.

Frawley, W. (1997). *Vygotsky and cognitive science. Language and the unification of the social and computational mind*. Cambridge, MA: Harvard University Press.

Freeman, M. (2017). *Modes of thinking for qualitative data analysis*. London: Routledge.

Fu, Y-J., Chen, S-H., Wey, S-C., & Chen, S-C. (2014). The effects of reading strategy instruction via electronic storybooks on EFL young readers' reading performance. *International Journal of Contemporary Educational Research, 1(*1), 9–20.

Gao, F. (2013). A case study of using a social annotation tool to support collaborative learning. *The Internet and Higher Education, 17*, 76–83.

Garrett-Rucks, P., Howles, L., & Lake, W. M. (2015). Enhancing L2 reading comprehension with hypermedia texts: Student perceptions." *CALICO Journal, 32*(1), 26–51.

Gass, S. M. (1997). *Input, interaction, and the second language learner*. Mahwah, NJ: Lawrence Erlbaum Associates.

Gedvilienė, G., & Bortkevičienė, V. (2013). *The important of key competences in the context of lifelong learning*. Proceedings of ICERI2013 Conference, 18th-20th November, Seville, Spain.

Genc, H. (2011). Paper and screen: Reading strategies used by low-proficient EFL learners. *Sino-US English Teaching, 8(*10), 648–658.

Gheytasi, M., Azizifar, A. & Gowhary, H. (2015). The effect of smartphone on the reading comprehension proficiency of Iranian EFL learners. *Procedia – Social and Behavioral Sciences*, 199, 225–230.

Gillies, D. (2011). State education as high-yield investment: Human capital theory in European policy discourse. *Journal of Pedagogy, 2*, 224–245.

Godwin-Jones, R. (2010). Emerging technologies literacies and technologies revisited. *Language Learning and Technology, 14*(3), 2–9.

Godwin-Jones, R. (2017). Authoring language-learning courseware. In C. A. Chapelle & S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 348–363). Hoboken, NJ: John Wiley & Sons.

Golshan, N., & Tafazoli, D. (2014). Technology-enhanced language learning tools in Iranian EFL context: Frequencies, attitudes and challenges. *Procedia – Social and Behavioral Sciences, 136*, 114–118. doi:10.1016/j.sbspro.2014.05.299.

Gonglewski, M., & DuBravac, S. (2006). Multiliteracy: Second language literacy in the multimedia environment. In N. Arnold & L. Ducate (eds), *Present and future promises of CALL: From theory and research to new directions in language teaching* (pp. 43–68). San Marcos, TX: CALICO.

Govinda, R. (2017). The status of adult learning and education in Asia and the Pacific. Hamburg, Germany: UNESCO Institute for Lifelong Learning.

Grabe, W. (2014). Key issues in L2 reading development. In X. Deng & R. Seow *(eds), The 4th CELC Symposium Proceedings*, 8–18. National University of Singapore.

Grgurović, M., & Hegelheimer. V. (2007). Help options and multimedia listening: Students' use of subtitles and the transcript. *Language Learning & Technology, 11*(1), 45–56.

Guba, E. G. (1990). *The paradigm dialog*. Newbury Park, CA: Sage Publications.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (eds), *The SAGE handbook of qualitative research* (pp. 105–117). Thousand Oaks, CA: Sage.

Guba, E. G., & Lincoln, Y. S. (2005). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln, *The SAGE handbook of qualitative research* (3rd edn) (pp. 191–215). Thousand Oaks, CA: Sage. (3rd ed.).

Gubrium, J. F., & Holstein, J. A. (2009). *Analyzing narrative reality*. Thousand Oaks, CA: Sage.

Guerrero, M. C. M. (2005). *Inner speech – L2. Thinking words in a second language*. New York: Springer.

Guerrero, M. C. M. (2018). Private and inner speech in L2 learning: The impact of Vygotskyan sociocultural theory. In J. P. Lantolf, M. E. Poehner, & M. Swain (eds), *The Routledge handbook of sociocultural theory and second language development* (pp. 152–164). Milton, UK: Routledge.

Guichon, N., & McLornan, S. (2008). The effects of multimodality on L2 learners: Implications for CALL resource design. *System, 36*, 85–93.

Guillén, G. (2014). *Expanding the language classroom: Linguistic gains and learning opportunities through e-tandems and social networks.* PhD dissertation, University of California Davis.

Guillén, G., & Blake, R. (2017). Can you repeat, Please? L2 complexity, awareness, and fluency development in the hybrid classroom. In I. Sanz- Sánchez, S. Rivera-Mills, & R. Morin (eds), *Online Language Teaching Research: Pedagogic, Academic and Institutional Issues*, Corvallis, OR: OSU Press.

Ha, G. L., & Ngo, T. C. T. (2021). Challenges in learning listening comprehension via Microsoft Teams among English majors at Van Lang University. *International Journal of TESOL & Education, 1*(3), pp. 142-175. EOI: http://eoi.citefactor.org/10.11250/ijte.01.03.009.

Hafner, C. A., & Miller, L. (2011). Fostering learner autonomy in English for science: A collaborative digital video project in a technological learning environment. *Language Learning & Technology, 15*(3), 68–86.

Halász, G., & Michel, A. (2011). Key competences in Europe: Interpretation, policy formulation and implementation. *European Journal of Education, 46(*3), 289–306.

Hanna, P. (2012). Using internet technologies (such as Skype) as a research medium: A research note. *Qualitative Research, 12*(2), 239–242. doi:10.1177/1468794111426607.

Hauck, M., & Youngs, B. L. (2008). Telecollaboration in multimodal environments: The impact on task design and learner interaction. *Computer Assisted Language Learning, 21*(2), 87–124. doi:10.1080/09588220801943510.

Hegelheimer, V. & Chapelle, C. A. (2000). Methodological issues in research on learner-computer interactions in CALL. *Language Learning and Technology, 4*(1), 41–59.

Heift, T., & Vyatkina, N. (2017). Technologies for teaching and learning L2 grammar. In C. A. Chapelle & S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 27–44). Hoboken, NJ: John Wiley & Sons.

Hesse-Biber, S. J., & Leavy, P. (2004). *Approaches to qualitative research : A reader on theory and practice*. New York & Oxford: Oxford University Press.

Hiep, P.H. (2007). Communicative language teaching: Unity within diversity. *ELT Journal, 61*(3), 193–201.

Higgs, J. (2001). Charting standpoints in qualitative research. In H. Byrne-Armstrong, J. Higgs, & D. Horsfal (Eds.), *Critical moments in qualitative research* (pp. 44–67): Oxford: Butterworth-Heinemann.

Higgs, J., & Trede, F. (2009). Framing research questions and writing philosophically: The role of framing research questions. In J. Higgs, D. Horsfall, & S. Grace (eds), *Writing qualitative research on practice* (pp. 13–26). Rotterdam: Sense Publishers.

Hoa, N. T. M., & Tuan, N. Q. (2007). Teaching English in primary schools in Vietnam: an overview. *Currrent Issues in Language Planning, 8*(2), 162-173.

Hoang, N. T., & Le, D. H. (2021). Vocational English teachers' challenges on shifting towards virtual classroom teaching. *AsiaCALL Online Journal, 12*(3), 58-73. Retrieved from https://asiacall.info/acoj/index.php/journal/article/view/39.

Hoang, V. V. (2008). Những yếu tố ảnh hưởng đến chất lượng đào tạo tiếng Anh không chuyên ở Đại học Quốc gia Hà Nội. *Tạp chí Khoa học ĐHQGHN, Ngoại ngữ 24*, 22-37. [Factors influencing English educational quality for non-English major students at Vietnam National University, Hanoi. *Science journal VNUH, Foreign Languages 24*, 22-37.]

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause*. Retrieved from: https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teachingand-online-learning.

Hofer, B. K. (2004). Epistemological understanding as a metacognitive process: Thinking aloud during online searching. *Educational Psychologist, 39*(1), 43–55.

Hofstede, G. (1986). Cultural differences in teaching and learning. *International Journal of Intercultural Relations, 10*(3), 301-320.

Holt, A. (2010). Using the telephone for narrative interviewing: A research note. *Qualitative Research, 10*(1), 113–121. doi:10.1177/1468794109348686.

Holzman, L. (2018). Zones of Proximal Development: Mundane and magical. In J. P. Lantolf, M. E. Poehner, & M. Swain (eds), *The Routledge handbook of sociocultural theory and second language development* (pp. 42–55). Milton, UK: Routledge.

Hoover, J. D., & Giambatista, R. C. (2009). Why have we neglected vicarious experiential learning? *Developments in Business Simulation and Experiential Learning, 36*, 33–37.

Hoover, J. D., Giambatista, R. C., & Belkin, L. Y. (2012). Eyes on, hands on: Vicarious observational learning as an enhancement of direct experience. *Academy of Management Learning & Education, 11*(4), 591–608. doi:10.5465/amle.2010.0102.

Hossain, Z. (2016). Towards a lifelong learning society through reading promotion: Opportunities and challenges for libraries and community learning centres in Viet Nam. *International Review of Education/Internationale Zeitschrift für Erziehungswissenschaft, 62*(2), 205–219. doi:10.1007/s11159-016-9552-y.

Housen, A., & Kuiken, F. (2009). Complexity, accuracy and fluency in second language acquisition. *Applied Linguistics, 30*(4), 461–473.

Hozjan, D. (2009). Key competences for the development of lifelong learning in the European Union. *European Journal of Vocational Training, 46*(1), 196–207.

Hubbard, P. (2017). Technologies for teaching and learning L2 listening. In C. A. Chapelle and S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 93–106). Hoboken, NJ: John Wiley & Sons.

Hubbard, P., & Siskin, C. B. (2004). Another look at tutorial CALL. *ReCALL, 16*(2), 448–461.

Huber, S. G., & Helm, C. (2020). COVID-19 and schooling: evaluation, assessment and accountability in times of crises - reacting quickly to explore key issues for policy, practice and research with the school barometer. *Educational Assessment, Evaluation and Accountability*, 1-34.

Huffaker, D. A., & Calvert, S. L. (2003). The new science of learning: Active learning, metacognition, and transfer of knowledge in e-learning application. *J. Educational Computing Research, 29*(3), 325-334.

Hulstijn, J. H. (2003a). Connectionist models of language processing and the training of listening skills with the aid of multimedia software. *Computer Assisted Language Learning, 16*(5), 413–425.

Hulstijn, J. H. (2003b). Incidental and intentional learning. In C. J. Doughty and M. H. Long (eds), *Handbook of Second Language Acquisition* (pp. 349–381). Oxford: Blackwell.

Hulstijn, J. H. (2011). Language proficiency in native and non-native speakers: An agenda for research and suggestions for second-language assessment. *Language Assessment Quarterly, 8*(3), 229–249.

Hung, N. T. (2007). Understanding lifelong learning: A perspective on the world today and Vietnam. *KEDI Journal of Educational Policy, 4*(2), 9–16.

Huynh, N. M. K., & Pham, T. T. N. (2018a). ICT use of teachers in teaching English in Vietnam. Proceeding: *2nd International Conference on Social Sciences, Humanities and Technology* (ICSHT 2018), Global Academic Excellence, 310-315.

Huynh, N. M. K. & Pham, T. T., N. (2018b). Teachers' perception towards the use of ICT in Vietnam: Using activity theory to identify contradictions. *The University of Danang, Journal of Science and Technology, 6* (127), 55-58.

Ilin, G. (2019). Sustainability in lifelong learning: Learners' perceptions from a Turkish distance language education context. *Sustainability* 2019 (*11)*, 1–17. doi:10.3390/su11195284.

Illeris, K. (2018). A comprehensive understanding of human learning. In K. Illeris (ed.), *Contemporary theories of learning: Learning theorists…in their own words* (2nd edn). Abingdon, UK: Routledge.

Irene van der, S., Omid, N., Ellen, S., & Stan van, G. (2020). Teachers' online teaching expectations and experiences during the Covid19-pandemic in the Netherlands. *European Journal of Teacher Education, 43* (4), 623-638, DOI: 10.1080/02619768.2020.1821185.

James, D. (2020): Is lifelong learning still useful? Disappointments and prospects for rediscovery. *Journal of Education and Work*, doi: 10.1080/13639080.2020.1852509.

Jarvis, P. (2018). Learning to be a person in society: Learning to be me. In K. Illeris (ed.), *Contemporary theories of learning: Learning theorists…in their own words* (2nd edn). Abingdon, UK: Routledge.

Jay, J. K., & Johnson, K. L. (2002). Capturing complexity: A typology of reflective practice for teacher education. *Teaching and Teacher Education, 18*(1), 73–85. doi:10.1016/S0742-051X(01)00051-8.

Jones, L. C. (2006). Listening comprehension in multimedia environments. In L. Ducate & N. Arnold (eds), *Calling on CALL: From theory and research to new directions in foreign language education* (pp. 99–125). San Marcos, TX: CALICO.

Jones, L. C., & Plass, J. L. (2002). Supporting listening comprehension and vocabulary acquisition in French with multimedia annotations. *Modern Language Journal, 86*(4), 546–561.

Josselson, R. (2007). The ethical attitude in narrative research: Principles and practicalities. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 537–566). Thousand Oaks, CA: Sage.

Jung, H. J. (2005). Advantages and disadvantages from opportunities in classroom environments. *The Reading Matrix, 5*(1), 57-72.

Juffs, A., & Friedline, B. E. (2014). Sociocultural influences on the use of a web- based tool for learning English vocabulary. *System, 42*, 48–59.

Kaur, J., & Hegelheimer, V. (2005). ESL students' use of concordance in the transfer of academic word knowledge: An exploratory study. *Computer Assisted Language Learning, 18*(4), 287–310.

Kayi-Aydar, H. (2021). *A framework for positioning analysis: From identifying to analyzing (pre)positions in narrated story lines*. Article 102 (2021) 102600. System.

Kern, R. (2006). Perspectives on technology in learning and teaching languages. *TESOL Quarterly, 40*(1), 183–210.

Kern, R. G. (1995). Restructuring classroom interaction with networked computers: Effects on quantity and characteristics of language production. *Modern Language Journal, 79*(4): 457–476.

Kessler, G., Bikowski, D., & Boggs, J. (2012). Collaborative writing among second language learners in academic web-based projects. *Language Learning & Technology, 16*(1), 91–109.

Khadimally, S. (2018). Role of the social constructivist theory, andragogy, and computer-mediated instruction (CMI) in adult ESL learning and teaching environments: How students transform into self-directed learners through mobile technologies. In S. Khadimally (ed.), *Technology-assisted ESL acquisition and development for nontraditional learners* (pp. 1–37). Hershey, PA: IGI Global. Retrieved from http://services.igi-global.com/resolvedoi/resolve.aspx?doi=10.4018/978-1-5225-3223-1.ch001. doi:10.4018/978-1-5225-3223-1.ch001.

Khadimally, S. (2019). *Technology-assisted ESL acquisition and development for nontraditional learners.* Hershey, PA: IGI Global.

Kim, H-S. (2014). Effects of using mobile devices in blended learning for English reading comprehension. *Multimedia-Assisted Language Learning, 17*(2), 64–85.

Kim, J. (2020). Learning and teaching online during Covid-19: Experiences of student teachers in an early childhood education practicum. *International Journal of Early Childhood, 52*, 145–158.

Kirkpatrick, A. (2014). Teaching English in Asia in non-Anglo cultural contexts: Principles of the 'lingua franca approach'. In R. Marlina & R. A. Giri (eds), *The pedagogy of English as an international language. English Language Education* (Vol. 1, pp. 23-34). Cham, Switzerland: Springer.

Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education, 4*(2), 193–212. doi:10.5465/AMLE.2005.17268566.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice Hall.

Kolb, D. A. (2015). *Experiential learning: Experience as the source of learning and development* (2nd edn). Upper Saddle River, NJ: Pearson Education.

Kormos, J., & Dénes, M. (2004). Exploring measures and perceptions of fluency in the speech of second language learners. *System, 32*(2), 145–164.

Kozulin, A. (1999). *Vygotsky's psychology: A biography of ideas*. Cambridge, MA: Harvard University Press.

Kozulin, A. (2018). Mediation and internalization: Conceptual analysis and practical applications. In J. P. Lantolf, M. E. Poehner, & M. Swain (eds), *The Routledge handbook of sociocultural theory and second language development* (pp. 23–41). Milton, UK: Routledge.

Krashen, S. (1988). *Second language acquisition and second language learning.* Englewood Cliffs, NJ: Prentice-Hall International.

Krashen, S. (1989) We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The Modern Language Journal 73* (4), 440-464.

Krashen, S. (2003) *Explorations in language acquisition and use: The Taipei lectures.* Portsmouth, NH: Heinemann

Kukulska-Hulme, A. (2012). Language learning defined by time and place: A framework for next generation designs. In J. E. Díaz-Vera (ed.), *Left to my own devices: Learner autonomy and mobile assisted language learning* (pp. 1–13): Bingley, UK: Emerald Group Publishing Limited.

Kukulska-Hulme, A., Lee, H., & Norris, L. (2017). Mobile Learning Revolution: Implications for Language Pedagogy. In C. A. Chapelle and S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 217-233). Hoboken, NJ: John Wiley & Sons, Inc.

Kung, F.-W. (2016). Facilitating learners' second language communicative competence through the development of media literacy: A conversation analytic approach. *Asia-Pacific Education Researcher, 25*(2), 337–346. doi:10.1007/s40299-015-0268-8.

Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the craft of qualitative research interviewing* (2nd edn). Los Angeles: Sage Publications.

Laal, M. (2011). Lifelong learning: What does it mean? *Social and Behavioral Sciences, 28,* 470–474. doi:101016/jsbspro.2011.11.090.

Lan, N. T. T. (2019). *Using ICT to foster collaborative writing for EFL university students in Vietnam.* Doctoral dissertation, Edith Cowan University.

Lantolf, J. (1997). Language play and the acquisition of L2 Spanish. In W. R. Glass & A.T.PerezLeroux (eds), *Contemporary perspectives on the acquisition of Spanish: Vol. 2. Production, processing and comprehension* (pp. 3–35): Somerville, MA: Cascadilla Press.

Lantolf, J. (2003). Intrapersonal communication and internalization in the second language classroom. In A. Kozulin, B. Gindis, V. S. Ageyev, & S. M. Miller (eds), *Vygotsky's educational theory in cultural context* (pp. 349–370). Cambridge, UK: Cambridge University Press.

Lantolf, J. (2006). Sociocultural theory and L2: State of the art. *Studies in Second Language Acquisition, 28*(1), 67–109.

Lantolf, J. (2007). Sociocutural source of thinking and its relevance for second langauge acquisition. *Billingualism: Language and Cognition, 10*(1), 31-33. Doi: 10.1017/S1366728906002768.

Lantolf, J. (2010). Sociocultural theory and the pedagogical imperative. In R. B. Kaplan (ed), *The Oxford Handbook of Applied Linguistics*, (2nd edn) (pp. 163–177). New York: Oxford University Press.

Lantolf, J. (2011). The sociocultural approach to second language acquisition: Sociocultural theory, second language acquisition, and artificial L2 development. In D. Atkison (ed.),

Alternative approaches to second language acquisition (pp. 36–59). Abigdon, UK: Routledge.

Lantolf, J., & Genung, P. B. (2002). "I'd rather switch than fight": An activity-theoretic study of power, success, and failure in a foreign language. In C. Kramsch (ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 175–196). London: Continuum.

Lantolf, J., & Poehner, M. (2011). Dynamic assessment in the classroom: Vygotskian praxis for second language development. *Language Teaching Research, 15*(1), 11–33. doi:10.1177/1362168810383328.

Lantolf, J., & Thorne, S. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press.

Lantolf, J., & Thorne, S. (2007). Sociocultural theory and second language learning. In B. VanPatten & J. Williams (eds), *Theories in Second Language Acquisition* (pp. 201–224). Mahwah, NJ: Lawrence Erlbaum.

Lantolf, J., & Yáñez, M.-d.-C. (2003). Talking yourself into Spanish: Intrapersonal communication and second language learning. *Hispania, 86*(1), 97–109. doi:10.2307/20062818.

Lantolf, J., Poehner, M., & Swain, M. (2018). *The Routledge handbook of sociocultural theory and second language development*. Milton, UK: Routledge.

Lantolf, J., Thorne, S., & Poehner, M. (2015). Sociocultural theory and second language development. In B. van Patten & J. Williams (eds), *Theories in second language acquisition* (pp. 207–226). New York: Routledge.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Le, D. M., Nguyen, H. T. M., & Burns, A. (2017). Language teacher proficiency and reform of English language education in Vietnam, 2008–2020. In D. Freeman & L. LeDréan (eds), *Developing classroom English competence: Learning from the Vietnam experience* (pp. 19–33). Cambodia: IDP Education, Ltd.

Le, S. T. (2011). *Teaching English in Vietnam: Improving the provision in the private sector.* Doctoral dissertation, Victoria University, Australia. Retrieved from http://0-search.ebscohost.com.library.vu.edu.au/login.aspx?direct=true&db=cat02404a&AN=vic.b2237480&site=eds-live; http://eprints.vu.edu.au/16055/ Available from EBSCOhost cat02404a database.

Leavy, P. (2014). *The Oxford handbook of qualitative research*. New York: Oxford University Press.

Lee, L. (2010). Exploring wiki-mediated collaborative writing: A case study in an elementary Spanish course. *CALICO Journal, 27*(2), 260–276.

Leu, D. J. (2002). The new literacies: Research on reading instruction with the Internet and other digital technologies. In A. E. Farstrup & S. J. Samuels (eds), *What research has to say*

about reading instruction (3rd edn) (pp. 310–336). Newark, DE: International Reading Association.

Leu, D. J., Kinzer, C. K., Coiro, J. L., & Cammack, D. W. (2004). Toward a theory of new literacies emerging from the Internet and other ICT. In R. B. Ruddell and N. Unrau (eds), *Theoretical models and processes of reading* (5th edn) (pp. 1568–1611). Newark, DE: International Reading Association.

Leung, C. (2005). Convivial communication: Recontextualizing communicative competence. *International Journal of Applied Linguistics, 15*(2), 119–144. doi:10.1111/j.1473-4192.2005.00084.x.

Leveridge, A. N., & Yang, J. C. (2013). Testing learner reliance on caption supports in second language listening multimedia environments. *ReCALL, 25*(2), 199–214.

Levy, M. (2009). Technologies in use for second language learning. *Modern Language Journal*, *93*(1), 769–782.

Levy, M. (1997). *Computer-Assisted Language Learning: Context and Conceptualisation*. Oxford: Oxford University Press.

Li, C-H. (2014). An alternative to language learner dependence on L2 caption- reading input for comprehension of sitcoms in a multimedia learning environment. *Journal of Computer Assisted Learning, 30,* 17–29.

Li, Z., Dursun, A., & Hegelheimer, V. (2017). Technology and L2 writing. In C. A. Chapelle & S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 77–92). Hoboken, NJ: John Wiley & Sons, Inc.

Liaw, M., & English, K. (2017). Technologies for teaching and learning L2 reading. In C. A. Chapelle & S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 63–76). Hoboken, NJ: John Wiley & Sons, Inc.

Lin, C-H, Warschauer, M. & Blake, R. (2017). Language learning through social networks: Perceptions and reality. *Language Learning & Technology, 20*(1).

Lin, L. F. (2010). English learners' incidental vocabulary acquisition in the video-based CALL program. *Asian EFL Journal, 12*(4), 51–66.

Linn, P. L., Howard, A., & Miller, E. (2004). *Handbook for research in cooperative education and internships*. Routledge.

Liu, Y., & Xu, Y. (2011). Inclusion or exclusion? A narrative inquiry of a language teacher's identity experience in the 'new work order' of competing pedagogies. *Teaching and Teacher Education, 27*(3), 589–597. doi:http://doi.org/10.1016/j.tate.2010.10.013.

Loewen, S., & Erlam, R. (2006). Corrective feedback in the chatroom: An experimental study. *Computer Assisted Language Learning, 19*(1), 1–14.

Lomicka, L., & Lord, G. (2011). A tale of tweets: Analysing microblogging among language learners. *System, 40*(1), 48–63.

London, J. D. (2006). Vietnam: The political economy of education in a “Socialist” periphery. *Asia Pacific Journal of Education, 26*(1), 1–20. doi:10.1080/02188790600607770.

Long, M., & Robinson, P. (1998). Focus on form: Theory, research, and practice. In C. Doughty & J. Williams (eds), *Focus on Form in Classroom Second Language acquisition* (pp. 15–41). Cambridge: Cambridge University Press.

Long, N. V. (2008). Technology-enhanced EFL syllabus design and materials development. *English Language Teaching, 1*(2), 135–142.

Long, N. V. (2011a). *Computer-mediated collaborative learning in a Vietnamese tertiary EFL context: Process, product, and learners' perceptions.* Doctoral dissertation, Massey University, Palmerston North, NZ.

Long, N. V. (2011b). Learners' reflections on and perceptions of computer-mediated communication in a language classroom: A Vietnamese perspective. *Australasian Journal of Educational Technology, 27*(8), 1413–1436.

Lord, G., & Lomicka, L. L. (2004). Developing collaborative cyber communities to prepare tomorrow's teachers. *Foreign Language Annals, 37*(3), 401–408.

Loucky, J. P. (2006). Maximizing ocabulary Dedvelopment by systemically using a depth of lexical processing taxonomy, CALL resources, and effective strategies. *CALICO Journal, 23*(2), 363–399.

Ly, T. N. L., Nguyen, T. L., & Nguyen, H. N. (2021). Using E-learning platforms in online classes: A survey on tertiary English teachers' perceptions. *AsiaCALL Online Journal, 12*(5), 34-53. EOI: http://eoi.citefactor.org/10.11251/acoj.12.05.004.

Lyons, N., & LaBoskey, V. K. (2002). *Narrative inquiry in practice: Advancing the knowledge of teaching* (Vol. 22). New York: Teachers College Press.

Ma, Q. (2014). A contextualised study of EFL learners’ vocabulary learning approaches: Framework, learner type and degree of success. *Asia TEFL, 11*(3), 33–71.

Ma, Q. (2017). Technologies for teaching and learning L2 vocabulary. In C. A. Chapelle & S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 45–61). Hoboken, NJ: John Wiley & Sons.

Macalister, J. (2012). Narrative frames and needs analysis. *System, 40*(1), 120–128. https://doi.org/10.1016/j.system.2012.01.010.

Mackiewicz, W. (2002). *Lifelong foreign language learning*. Paper presented at the European Seminar on Foreign Language Learning Needs in Education Systems.

Manca, S., & Ranieri, M. (2013). Is it a tool suitable for learning? A critical review of the literature on Facebook as a technology-enhanced learning environment. *Journal of Computer Assisted Learning, 29*(6), 487–504.

Manz, C. C., & Sims, J. H. P. (1981). Vicarious learning: The influence of modeling on organizational behavior. *Academy of Management Review, 6*(1), 105–113. doi:10.5465/AMR.1981.4288021.

Mardiah, H. (2020). The use of e-learning to teach English in the time of the Covid-19 Pandemic. *English Teaching and Linguistics Journal, 1* (2), 49-55.

Markham, P., & Peter, L. (2003). The influence of English language and Spanish language captions on foreign language listening/reading comprehension. *Journal of Educational Technology Systems, 31*, 331–341.

Martins, M. D. L. (2015). How to effectively integrate technology in the foreign language classroom for learning and collaboration. *Procedia – Social and Behavioral Sciences, 174*, 77–84. doi:10.1016/j.sbspro.2015.01.629.

Masilamani, C., & Sundarsingh, J. (2018). Enhancing the English language proficiency of undergraduate engineering students through experiential learning. *IUP Journal of English Studies, 13*(3).

Mateo, R. M. (2012). An experience on the integration of ICT into a teaching-learning methodology of English as a foreign language. *Journal of Language Teaching & Research, 3*(2), 289–294. doi:10.4304/jltr.3.2.289-294.

Matsuura, H., Chiba, R., Mahoney, S., & Rilling. S. (2014). Accent and speech rate effects in English as a lingua franca. *System, 46*, 143–150.

Mayer, R. E. (2001). *Multimedia learning*. New York: Cambridge University Press.

Mayer, R. E. (2005). Cognitive theory of multimedia learning. In R. E. Mayer (ed.), *The Cambridge handbook of multimedia learning* (pp. 31–48). New York: Cambridge University Press.

Mcgregor, J., & Fernandez, J. (2019). Theorizing qualitative interviews: Two autoethnographic reconstructions. *The Modern Language Journal, 103*(1), 227–247.

McKinley, J. (2019). Evolving the TESOL teaching research nexus. *Tesol Quarterly, 53*(3), 875–884. https://doi.org/10.1002/tesq.509.

Menard-Warwick, J. (2004). "I always had the desire to progress a little": Gendered narratives of immigrant language learners. *Journal of Language, Identity, and Education, 3*(4), 295–311. https://doi.org/10.1207/s15327701jlie0304_5.

Merriam, S. B. (2018). Adult learning theory: Evolution and future directions. In K. Illeris (ed.), *Contemporary theories of Learning: Learning theorists…in their own words* (2nd edn). Abingdon, UK: Routledge.

Merriam, S. B., & Bierema, L. L. (2013). *Adult learning: Linking theory and practice*. San Francisco: John Wiley & Sons.

Merriam, S. B., & Brockett, R. G. (2011). *The profession and practice of adult education: An introduction*. San Francisco: John Wiley & Sons.

Mertens, D. M. (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (3rd edn). Thousand Oaks, CA: Sage Publications.

Mesh, L. J. (2010). Collaborative language learning for professional adults. *Electronic Journal of e-Learning, 8*(2), 161–172.

Meskill, C. (2005). Triadic scaffolds: Tools for teaching English language learners with computers. *Language Learning & Technology, 9*(1), 46–59.

Miettinen, R. (2000). The concept of experiential learning and John Dewey's theory of reflective thought and action. *International Journal of Lifelong Education, 19*(1), 54–72. doi:10.1080/026013700293458.

Minh, N. T. T., Pham, T. H., & Pham, T. M. (2012). The relative effects of explicit and implicit form-focused instruction on the development of L2 pragmatic competence. *Journal of Pragmatics, 44*(4), 416–434. doi:10.1016/j.pragma.2012.01.003.

Minh, N. T. T., Pham, T. H., & Pham, T. M. (2017). The effects of input enhancement and recasts on the development of second language pragmatic competence. *Innovation in Language Learning and Teaching, 11*(1), 45–67.

Mirhosseini, S-A. (2020). *Doing qualitative research in language education*. Springer Nature Switzerland AG. ISBN 978-3-030-56492-6 (eBook). https://doi.org/10.1007/978-3-030-56492-6_3.

Miyazoe, T., & Anderson, T. (2010). Learning outcomes and students' perceptions of online writing: Simultaneous implementation of a forum, blog, and wiki in an EFL blended learning setting. *System, 38*(2), 185–199. doi:https://doi.org/10.1016/j.system.2010.03.006.

MOET. (2007). *Decision of the minister of education and training (MOET) on 15 April, 2007 on the establishment of the steering committee of the project on "Reforming and improving the effectiveness of English teaching and learning in the national education system"*. Hanoi: MOET.

MOET. (2008a). *The 14th draft strategy for education development of Vietnam for the period 2009-2020*. Hanoi: MOET.

MOET. (2008b). *Directive No.55/2008/CT-BGDĐT on 30 September, 2008 of the Ministry of Education and Training on strengthening ICT use in teaching and training in the educational system for the period 2008-2012*. Hanoi: MOET.

MOET. (2008c). *Decision on the approval of the project on "Reforming and improving the effectiveness of English teaching and learning in the national education system"*. Hanoi: MOET.

MOET. (2016). *Quyết định số 6200/QĐ-BGDDT của Bộ Giáo dục và Đào tạo ngày 30/12/2016 phê duyệt kế hoạch ứng dụng công nghệ thông tin [Decision No. 6200/QD-BGDĐT of the Ministry of Education and Training dated December 30, 2016 approving the plan for information technology application]*. Hanoi: MOET.

MOET. (2017). *Quyết định số 2161/QĐ-BGDDT của Bộ Giáo dục và Đào tạo ngày 26/6/2017 về ban hành kế hoạch thực hiện mục tiêu phát triển bền vững lĩnh vực giáo dục và đào tạo đến năm 2025 và định hướng đến năm 2030 [Decision No. 2161/QB-BGDDT of the*

Ministry of Education and Training dated June 26, 2017 on promulgating a plan to implement sustainable development goals in the field of education and training up to 2025 and orientation to 2030]. Hanoi: MOET.

MOET. (2020a). *Quyết định số 1420/QĐ-BGDĐT của Bộ Giáo dục và Đào tạo ngày 01/6/2020 ban hành kế hoạch tiếp tục thực hiện và tăng cường sự lãnh đạo của Đảng đối với công tác khuyến học, khuyến tài, xây dựng xã hội học tập [Decision No. 1420/QD-BGDĐT of the Ministry of Education and Training dated June 1, 2020 promulgating a plan to continue implementing and strengthening the leadership of the Party in study promotion, talent promotion, and building learning society]*. Hanoi: MOET.

MOET. (2020b). *Quyết định số 1696/QĐ-BGDĐT của Bộ Giáo dục và Đào tạo ngày 26/6/2020 về kế hoạch đổi mới căn bản, toàn diện giáo dục và đào tạo đáp ứng yêu cầu công nghiệp hóa, hiện đại hóa trong điều kiện kinh tế thị trường định hướng xã hội chủ nghĩa và hội nhập quốc tế [Decision No. 1696/QD-BGDĐT of the Ministry of Education and Training dated June 26, 2020 on a plan to fundamentally and comprehensively renovate education and training to meet the requirements of industrialization and modernization in the context of socialist-oriented market economy and international integration]*. Hanoi: MOET.

MOET. (2020c). *Quyết định số 4919/QĐ-BGDĐT ngày 31/12/2020 phê duyệt kế hoạch ứng dụng công nghệ thông tin giai đoạn 2021-2025 của Bộ Giáo dục và đào tạo [Decision No. 4919/QD-BGDDT dated December 31, 2020 approving the information technology application plan for the period 2021-2025 of the Ministry of Education and Training]*. Hanoi: MOET.

MOET. (2020d). The information and communications going along with education and training in the preventing Covid-19. Retrieved from https://en.moet.gov.vn/news/Pages/events.aspx?ItemID=3933.

Motallebzadeh, K., & Ganjali, R. (2011). SMS: Tool for L2 vocabulary retention and reading comprehension ability. *Journal of Language Teaching and Research, 2*(5), 1111–1115.

Muhammad Aslam, S. (2013). Fostering communicative competence through technology. *International Journal of Applied Linguistics and English Literature*, *2*(3), 124–128. doi:10.7575/aiac.ijalel.v.2n.3p.124.

Murray, G. (2009). Self-access language learning: Structure, control and responsibility. In F. Kjisik, P. Voller, N. Aoki & Y. Nakata (eds), *Mapping the terrain of learner autonomy: Learning environments, learning communities and identities* (pp. 118–142): Tampere, Finland: Tampere University Press.

Murray, G. (2011). Older language learners, social learning spaces and community. In P. Benson & H. Reinders (eds), *Beyond the language classroom* (pp. 132–145). Basingstoke, UK: Palgrave Macmillan Press.

Nafukho, F. M. (2007). The place of E-learning in Africa's institutions of higher learning. *Higher Education Policy, 20*(1), 19-–43.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.

Newby, T. J., Lehman, J., Russell, J., & Stepich, D. A. (2010). *Instructional technology for teaching and learning: Designing instruction, integrating computers, and using media* (4th edn). Boston: Allyn & Bacon.

Newman, F., & Holzman, L. (1993). *Lev Vygotsky: Revolutionary scientist*. London: Routledge.

Newman, F., & Holzman, L. (2013). *Lev Vygotsky: Revolutionary scientist [electronic resource]*: Hoboken: Taylor and Francis. (Originally published 1993, London: Routledge).

Ngo, V. G. (2016). *Toward an effective integration of ICT in an EFL setting in a Vietnamese higher education context*. Doctoral dissertation, the University of Adelaide.

Nguyen, B. V., & Ngo, T. C. T. (2021). Using the internet for self-study to improve translation for English-majored seniors at Van Lang University. *International Journal of TESOL & Education, 1*(2), 110-147. EOI: http://eoi.citefactor.org/10.11250/ijte.01.02.007.

Nguyen, H. T., Warren, W., & Fehring, H. (2014). Factors affecting English language teaching and learning in higher education. *English Language Teaching*, 7(8), 94–105. Retrieved from http://dx.doi.org/10.5539/elt.v7n8p94.

Nguyen, T. H., Warren, W., & Fehring, H. (2015). EFL Teaching and learning at a Vietnamese university: What do teachers say? *English Language Teaching, 8*(1), 31–43. Retrieved from http://dx.doi.org/10.5539/elt.v8n1p31.

Nguyen, T. N. M., Tra, V. D., & Nguyen, P. H. (2021). Difficulties and some suggested solutions in studying online of the students in Van Lang University during the Covid-19 pandemic. *AsiaCALL Online Journal, 12*(4), 9-17. Retrieved from https://asiacall.info/acoj/index.php/journal/article/view/58.

Nguyen, V. M. (2021). English language-learning environments in COVID-19 era: EFL contexts, English-language environments, technology-based approach, English language learning. *AsiaCALL Online Journal, 12*(3), 39-46. Retrieved from https://asiacall.info/acoj/index.php/journal/article/view/21.

Nhan, N. T. (2017). Thirty years of English language and English education in Vietnam. *English Today, 33*(1), 33–35. doi:10.1017/S0266078416000262.

Nhan, N. T., & Ho Thi, L. (2012). The enhancement of learner autonomy and the growth of English language proficiency. *Language in India, 12*(4), 436–448.

Norton, B. (2013). *Identity and language learning: Extending the conversation* (2nd edn). Bristol: Multilingual Matters.

Norton, B., & Early, M. (2011). Researcher identity, narrative inquiry, and language teaching research. *TESOL Quarterly, 45*(3), 415–439. https://doi.org/10.5054/ tq.2011.261161

O'Brien, M. G. (2006). Teaching pronunciation and intonation with computer technology. In L. Ducate & N. Arnold (eds), *Calling on CALL: From Theory and Research to New*

Directions in Foreign Language Teaching (pp. 127–148). San Marcos, TX: Computer Assisted Language Instruction Consortium.

O'Dowd, R. (2007). *Online intercultural exchange: An introduction for foreign language teachers.* Clevedon: Multilingual Matters.

Ohta, A. S. (2001). *Second language acquisition processes in the classroom: Learning Japanese*. Mahwah, NJ: Routledge.

Omar, N. A. (2014). Online metacognitive reading strategies use by postgraduate Libyan EFL students. Inter*national Journal of Social, Behavioral, Educational, Economic and Management Engineering, 8*(7), 2259–2262.

Osborne, M., & Borkowska, K. (2017). A European lens upon adult and lifelong learning in Asia. *Asia Pacific Education Review*, *18*, 269–280. doi 10.1007/s12564-017-9479-4, 269-280.

Otto, S. K. (2017). From past to present: A hundred years of technology for L2 learning. In C. A. Chapelle & S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 10–25). Hoboken, NJ: John Wiley & Sons.

Oxford, R. L. (1995). When emotion meets (meta)cognition in language learning histories. *International Journal of Educational Research, 23*(7), 581–594. https://doi. org/10.1016/0883-0355(96)80438-1.

Palfreyman, D. (2006). Social context and resources for language learning, *System*, *34*, 352–370.

Palfreyman, D. (2011). Family, friends, and learning beyond the classroom: Social networks and social capital in language learning. In P. Benson & H. Reinders (eds), *Beyond the Language Classroom* (pp. 17–34). Basingstoke, UK: Palgrave Macmillan Press.

Panitsidou, E., Griva, E., & Chostelidou, D. (2012). European Union policies on lifelong learning: In-between competitiveness enhancement and social stability reinforcement. *Social and Behavioral Sciences, 46,* 548–553. doi: 10.1016/j.sbspro.2012.05.158.

Park, G. (2012). "I am never afraid of being recognized as an NNES": One teacher's journey in claiming and embracing her nonnative-speaker identity. *TESOL Quarterly, 46*(1), 127–151.

Park, J., Jae-Seok Yang, J-S., & Hsieh, Y. C. (2014). University level second language readers' online reading and comprehension strategies. *Language Learning and Technology, 18*(3), 148–172.

Pavlenko, A. (2002). Narrative study: Whose story is it, anyway? *TESOL Quarterly, 36*(2), 213–218.

Payne, J. S., & Whitney, P. J. (2002). Developing L2 oral proficiency through synchronous CMC: Output, working memory, and interlanguage development. *CALICO Journal*, *20*(20), 7–32.

Peeraer, J., & Van Petegem, P. (2012). The limits of programmed professional development on integration of information and communication technology in education. *Australian Journal of Educational Technology, 28*(6), 1039-1056.

Pemberton, L., Fallahkhair, S., & Masthoff, J. (2004). Towards a theoretical framework for informal language earning via interactive television. *Proceedings of the IADIS International Conference on Cognition & Exploratory Learning in Digital Age*, Lisbon, 27–34.

Pérez, M. M., Peters, E., & Desmet, P. (2014). Is less more? Effectiveness and perceived usefulness of keyword and full captioned video for L2 listening comprehension." *ReCALL, 26*, 21–43.

Peterson, M. (2009). Learner interaction in synchronous CMC: A sociocultural perspective. *Computer Assisted Language Learning, 22*(4), 303–321.

Phạm, T. D. (2013). Xây dựng xã hội học tập-một xu hướng đổi mới phát triển của giáo dục thế kỉ XXI (Building a learning society – A tendency to renovate the development of the 21th century education). *Tạp chí Khoa học ĐHQGHN, Nghiên cứu Giáo dục, Tập 29, Số 1 (2013) 57-66* [*Journal of Science, Hanoi National University, 29*(1), 57–66].

Pham, T., Thalathoti, V., & Dakich, E. (2014). Frequency and pattern of learner-instructor interaction in an online English language learning environment in Vietnam. *Australasian Journal of Educational Technology, 30*(6), 686–698.

Pham, T. (2015). *Interpersonal interaction: A study of an online English language learning environment at a Vietnamese university.* Doctoral dissertation, Victoria University.

Pham, T. T. N., Tan, C. K. & Lee, K. W. (2019). Issues and challenges in using ICT for teaching English in Vietnam. *CALL-EJ, 20*(3), 140-155.

Phung, X. N. (2018). Vietnamese education in the context of the fourth industrial revolution. *The Central Propaganda Department.* Retrieved from http://tuyengiao.vn/nghien-cuu/ly-luan/giao-duc-viet-nam-trong-boi-canh-cuoc-cach-mang-cong-nghiep-lan-thu-tu-114162; https://hcma.vn/english/news/Pages/features.aspx?CateID=200&ItemID=9159.

Phuong, T. (2016). Training learners to use Quizlet vocabulary activities on mobile phones in Vietnam with Facebook. *JALT CALL Journal, 12*(1), 43–56.

Pillow, W. S. (2003). Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research. *International Journal of Qualitative Studies in Education, 16*(2), 175–196. doi:10.1080/0951839032000060635.

Pirriea, A., & Thoutenhoofd, E. D. (2013). Learning to learn in the European Reference Framework for lifelong learning. *Oxford Review of Education*. *39*(5), 609–626. Retrieved from http://dx.doi.org/10.1080/03054985.2013.840280.

Plagwitz, T. (2014). 'Mira, Mamá! Sin Manos!' Can speech recognition tools be soundly applied for L2 speaking practice? ICT for Language Learning 2014, Florence. Conference Proceedings. Retrieved from https://conference.pixel-online.net/ICT4LL/files/ict4ll/ed0007/FP/1240-SLA773-FP-ICT4LL7.pdf.

Plagwitz, T. (2015). Speech Recognition tools for Oral Proficiency. The FLTMAG, March 2015. *Retrieved from* https://fltmag.com/speech-recognition-tools/.

Plass, J. L., & Jones, L. C. (2005). Multimedia learning in second language acquisition. In R. E. Mayer (ed.), *The Cambridge handbook of multimedia learning* (pp. 467–488). Cambridge: Cambridge University Press.

Pokrivcakova, S. (2019). *Preparing teachers for the application of AI-powered technologies in foreign language education*. Doi: https://doi.org/10.2478/jolace-2019-0025. Sciendo, 135-153.

Polkinghorne, D. E. (1988). *Narrative knowing and the human sciences*. Albany, NY: SUNY Press.

Polkinghorne, D. E. (1995). Narrative configuration in qualitative analysis. *International Journal of Qualitative Studies in Education, 8*(1), 5–23.

Pomerantz, A., & Kearney, E. (2012). Beyond 'write-talk-revise-(repeat)': Using narrative to understand one multilingual student's interactions around writing. *Journal of Second Language Writing, 21*(3), 221–238.

Powers, S. M., & Jablonski, M. (2015). *The real cyber war: The political economy of internet freedom*. Urbana: University of Illinois Press.

Prime Minister of Vietnam. (2008a). *Decision No.1400/QD-TTg on 30 September, 2008 of the Prime Minister of Vietnam on the approval of the project "Teaching and learning foreign languages in the national education system for the period 2008-2020"*. Hanoi: Government. Retrieved from http://www.chinhphu.vn/portal/page/portal/chinhphu/hethongvanban?class_id=1&_page=18&mode=detail&document_id=78437.

Prime Minister of Vietnam. (2008b). *Directive No. 02/2008 / CT-TTG of the Prime Minister, dated 8 January, 2008 on promoting the movement to encourage study, promoting talent and building a learning society*. Hanoi: Government. Retrieved from http://vanban.chinhphu.vn/portal/page/portal/chinhphu/hethongvanban?class_id=1&_page=1&mode=detail&document_id=55136.

Prime Minister of Vietnam. (2013). *Decision 89-QD/TTg of the Prime Minister dated January 9, 2013 approving the project "building a learning society for the period 2012 -2020" [Quyết đinh 89-QĐ/TTg của thủ tướng chính phủ ngày 09/1/2013 phê duyệt đề án "xây dựng xã hội học tập giai đoạn 2012 -2020"]*. Hanoi: Government. Retrieved from https://thuvienphapluat.vn/van-ban/Giao-duc/Quyet-dinh-89-QD-TTg-nam-2013-phe-duyet-De-an-Xay-dung-xa-hoi-hoc-tap-giai-doan-164222.aspx.

Prime Minister of Vietnam. (2017). *Decision No. 2080/QD-TTg dated 22 December 2017 of the Prime Minister on Approving the adjustment and supplementation of the project on teaching and learning foreign languages in the national education system for the period of 2017-2025*. Hanoi: Government. Retrieved from http://vanban.chinhphu.vn/portal/page/portal/chinhphu/hethongvanban?class_id=2&_page=1&mode=detail&document_id=192343.

Prime Minister of Vietnam. (2020). *Decision No. 489/QD-TTg of the Prime Minister, dated 8 April, 2020 on the implementation of the movement to encourage study, promoting talent*

and building a learning society [Quyết định số 489 của Thủ tướng Chính phủ ngày 08 tháng 4 năm 2020 về kế hoach thực hiện công tác khuyến học, khuyến tài, xây dựng xã hội học tập]. Hanoi: Government. Retrieved from https://thuvienphapluat.vn/van-ban/Giao-duc/Quyet-dinh-489-QD-TTg-2020-thuc-hien-Ket-luan-49-KL-TW-cong-tac-khuyen-hoc-khuyen-tai-439453.aspx.

Prior, M. T., & Talmy, S. (2021). *A discursive constructionist approach to narrative in language teaching and learning research*, Article 102595. https://doi.org/10.1016/j. system.2021.102595. System.

Punch, K. F. (2014). *Introduction to social research: Quantitative & qualitative approaches* (3rd edn). London: SAGE Publications.

Rabbidge, M. (2017). Embracing reflexivity: The importance of not hiding the mess. *Tesol Quarterly, 51*(4), 961–971. https://doi.org/10.1002/tesq.397

Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during Pandemic Covid-19. *Jurnal Penelitian Pendidikan, 20* (3), 392-406.

Rasmitadila, Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies, 7* (2), 90-109. Retrieved from http://dx.doi.org/10.29333/ejecs/388.

Ratner, C. (2002). *Cultural psychology: Theory and method*. New York: Kluwer Academic/Plenum.

Razagifard, P. (2013). The impact of text-based CMC on improving L2 oral fluency. *Journal of Computer Assisted Learning, 29*(3), 270–279.

Reinders, H. (2011). Materials development for learning beyond the classroom. In P. Benson & H. Reinders (eds), *Beyond the language classroom* (pp. 175–189). Basingstoke, UK: Palgrave Macmillan Press.

Relles, S. R., & Tierney, W. G. (2013). Understanding the writing habits of tomorrow's students: Technology and college readiness. *Journal of Higher Education, 84*(4), 477–505.

Renes, S. L. (2015). Increasing access to higher education through e-learning. *E-learning Instructional design, organizational strategy and management, 10*, 60906. DOI: https://dx.doi.org/10.5772/60906.

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge, UK: Cambridge University Press.

Riessman, C. K. (2008). *Narrative methods for the human sciences*. Thousand Oaks, CA : Sage Publications.

Rigg, P. (1991). Whole language in TESOL. *Tesol Quarterly, 25*(3), 521–542. https://doi.org/10.2307/3586982.

Ritchie, J & Lewis, J (2003). Generalizing from qualitative research. *Qualitative research practice: A guide for social science students and researchers, 2*, 347-362.

Roberts, D. (2010). Vicarious learning: A review of the literature. *Nurse Education in Practice, 10*(1), 13–16. doi:10.1016/j.nepr.2009.01.017.

Robin, R. (2007). Learner-based Listening and Technological Authenticity. *Language Learning & Technology, 11*(1), 109–115.

Roed, J. (2003). Language learner behaviour in a virtual environment, *Computer Assisted Language Learning, 16*(2/3), 155–172.

Rojabi, A. R. (2020). Exploring EFL students' perception of online learning via Microsoft Teams: University level in Indonesia. *English Language Teaching Educational Journal, 3*(2), 163-173. Retrieved from https://files.eric.ed.gov/fulltext/EJ1268365.pdf.

Romeo, K., & Hubbard, P. (2010). Pervasive CALL learner training for improving listening proficiency. In M. Levy, F. Blin, C. B. Siskin, & O. Takeuchi (eds), *WorldCALL: International perspectives on computer-assisted language learning* (pp. 215–229). New York: Routledge.

Rose, H., & McKinley, J. (2017). Realities of doing research in applied linguistics. In J. McKinley & H. Rose (Eds.), *Doing research in applied linguistics* (pp. 21–32). New York, NY: Routledge.

Rosenthal, T. L., & Zimmerman, B. J. (1978). *Social learning and cognition*. London: Academic Press.

Rost, M., & Wilson, J. J. (2013). *Active listening*. New York: Routledge.

Roulston, K. (Ed.). (2019). *Interactional studies of qualitative research interviews*. Amsterdam: John Benjamins.

Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods, 15*(1), 85–109.

Sad, S. N. (2008). Using mobile phone technology in EFL classes. *English Teaching Forum, 46*(4), 34–40.

Sarfraz, S., Mansoor, Z., & Tariq, R. (2015). Teachers' and students' perceptions of the communicative language teaching methodology in the CALL environment: A case study. *Procedia – Social and Behavioral Sciences, 199*, 730–736. doi:10.1016/j.sbspro.2015.07.604.

Saville-Troike, M. (1988). Private speech: Evidence for second language learning strategies during the 'silent'period. *Journal of Child Language, 15*(3), 567–590.

Schmidt, R. (1993). Awareness and second language acquisition. *Annual Review of Applied Linguistics, 13,* 206–226.

Schulze, M., and Heift, T. (2013). "Intelligent CALL." In M. Thomas, H. Reinders, & M. Warschauer (eds), *Contemporary Computer- Assisted Language Learning* (pp. 249–265). London and New York: Continuum.

Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers College Press.

Serhan, D. (2020). Transitioning from face-to-face to remote learning: Students' attitudes and perceptions of using zoom during COVID-19 pandemic. *International Journal of Technology in Education and Science, 4*(4), 335-342. Retrieved from https://doi.org/10.46328/ijtes.v4i4.148.

Shattuck-Hufnagel, S. (2019). Toward an (even) more comprehensive model of speech production planning. *Lanuage, Cognition and Neuroscience, 39*(9), 1202-1213. doi: 10.1080/23273798.2019.1650944.

Shedivy, S. L. (2004). Factors that lead some students to continue the study of foreign language past the usual 2 years in high school. *System, 32*(1), 103–119. doi:http://doi.org/10.1016/j.system.2003.09.008.

Shekary, M., & Tahririan, M. H. (2006). Negotiation of meaning and noticing in text-based online chat. *Modern Language Journal, 90*(4), 557–573.

Shih, R. C. (2010). Can Web 2.0 technology assist college students in learning English writing? Integrating 'Facebook' and peer assessment with blended learning. *Australasian Journal of Educational Technology, 27*(5), 829–845.

Shih, Y. C., & Yang, M. T. (2008). A collaborative virtual environment for situated language learning using VEC3D. *Journal of Educational Technology & Society*, *11*(1), 56–68.

Singleton, D., & Ryan, L. (2004). *Language acquisition: The age aactor* (Vol. 9) (2nd edn). Clevedon, UK: Multilingual Matters.

Skulmowski, A., & Rey, G. D. (2020). Subjective cognitive load surveys lead to divergent results for interactive learning media. *Human Behaviour and Emerging Technologies*, *2*, 149-157.

Smith, F. (2004). *Understanding reading*, 6th edn. Hillsdale, NJ: Erlbaum.

Smith, F. (2011). *Understanding reading: A psycholinguistic analysis of reading and learning to read* (6th edn). London: Taylor & Francis Group.

Smith, H. J. (2007). The Social and Private Worlds of Speech: Speech for Inter-and Intramental Activity. *The Modern Language Journal*, *91*(3), 341-356.

Snape, D., & Spencer, L. (2003). The foundations of qualitative research. In J. Ritchie & J. Lewis (eds., *Qualitative research practice: A guide for social science students and researchers* (pp. 1–23). London: Sage.

Sokolova, E. Y., Golovacheva, E. A., & Chernaya, A. A. (2015). Professionally-oriented communicative language teaching approach by the design of a computer assisted ESP course: Analysis of results. *Procedia – Social and Behavioral Sciences, 215*, 191–195. doi:10.1016/j.sbspro.2015.11.619.

Srichanyachon, N. (2014). The barriers and needs of online learners. *Turkish Online Journal of Distance Education, 15*(3), 50-59. DOI: https://doi.org/10.17718/tojde.08799.

Stenning, K., McKendree, J., Lee, J., Cox, R., Dineen, F., & Mayes, T. (1999). Vicarious learning from educational dialogue. Proceedings, Computer Support for Collaborative Learning, Palo Alto, CA.

Stickler, U., & Emke, M. (2011). Tandem learning in virtual spaces: Supporting non-formal and informal learning in adults. In P. Benson & H. Reinders (eds), *Beyond the Language Classroom* (pp. 146–160). Basingstoke, UK: Palgrave Macmillan Press.

Stockwell, G. (2007a). A review of technology choice for teaching language skills and areas in the CALL literature, *ReCALL, 19*(2), 105–120.

Stockwell, G. (2007b). Vocabulary on the move: Investigating an intelligent mobile phone-based vocabulary tutor. *Computer Assisted Language Learning, 20*(4), 365–383.

Stockwell, G. (2010). Using mobile phones for vocabulary activities: Examining the effect of platform. *Language Learning and Technology, 14*(2), 95–110.

Storch, N. (2011). Collaborative writing in L2 contexts: Processes, outcomes, and future directions. *Annual Review of Applied Linguistics, 31*(1), 275–288.

Storch, N. (2012). Collaborative writing as a Site for L2 learning in face-to-face and online modes. In G. Kessler, A. Oskoz, & I. Elola (eds), *Technology across writing contexts and tasks* (pp. 113–130). San Marcos, TX: CALICO.

Strobl, C. (2014). Affordances of web 2.0 technologies for collaborative advanced writing in a foreign language. *CALICO Journal, 31*(1), 1–18.

Sutton, L. A. (2000). Vicarious interaction: A learning theory for computer-mediated communications. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 24-28, 1–33.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (ed.), *Sociocultural theory and second language learning* (pp. 97–114). Oxford: Oxford University Press.

Swain, M., & Lapkin, S. (2002). Talking it through: two French immersion learners' response to reformulation. *International Journal of Educational Research 37*, 285–304.

Tagg, C., Lyons, A., Hu, R., & Rock, F. (2017). The ethics of digital ethnography in a team project. *Applied Linguistics Review, 8*(2–3), 271–292.

Taki, S. (2015). Metacognitive online reading strategy use: Readers' perceptions in L1 and L2. *Journal of Research in Reading*. DOI:10.1111/1467-9817.12048.

Tan, D. T., & Robertson, M. (2010). Pedagogical lessons from students' participation in Web 2.0. *TESOL in Context, 20*(2), 5–26.

Tao, J., Shao, Q., & Gao, X. (2017). Ethics-related practices in Internet-based applied linguistics research. *Applied Linguistics Review, 8*(4), 321–353.

Teixeira, A. (2015). *The role of keyboarding in the development and retention of L2 Spanish vocabulary*. PhD dissertation, University of California Davis.

Thanh, V. T., & Duong, N. A. (2009). Vietnam after two years of WTO accession: What lessons can be learnt? *ASEAN Economic Bulletin, 26*(1), 115–135.

Thomas, L., & Beauchamp, C. (2011). Understanding new teachers' professional identities through metaphor. *Teaching and Teacher Education, 27*(4), 762–769. doi:https://doi.org/10.1016/j.tate.2010.12.007.

Thorne, S. L. (2003). Artifacts and cultures-of-use in intercultural communication. *Language Learning and Technology, 7*(2), 38–67.

Thorne, S. L., & Tasker, T. (2011). Sociocultural and cultural-historical theories of language development. In J. Simpson (ed.), *Routledge handbook of applied linguistics* (pp. 487–500). New York: Routledge.

Thu, D. X. (2013). *ICT in foreign language teaching in an innovative university in Vietnam: Current practices and factors affecting ICT use*. Doctoral dissertation, La Trobe University.

Tien, Đ. N. P. (2014). Obstacles to lifelong learning in Vietnam and some suggested solutions. *VNU Journal of Education 30*(1), 21–30.

Todd, R. (2020). Teachers' perceptions of the shift from the classroom to online teaching. *International Journal of TESOL Studies, 2* (2), 4-16.

Tomasello, M. (1999). *The cultural origins of human cognition*. CambridgeMA: Harvard University Press.

Tomasello, M. (2003). *Constructing language: A usage-based theory of language acquisition*. Cambridge, MA: Harvard University Press.

Tran, V. D., & Lewis, R. (2012). Effects of cooperative learning on students at An Giang University in Vietnam. *International Education Studies, 5*(1), 86–99.

Truong, T. H. T. & Qalati, S. A. (2020). Preschool teacher's attitude towards the integration of information technology into English teaching for young children in Vietnam. *International Journal of Economics, Commerce and Management, 8* (2), 279- 294.

Tsui, A. B. M. (2007). Complexities of identity formation: A narrative inquiry of an EFL teacher. *TESOL Quarterly, 41*(4), 657–680. doi:10.1002/j.1545-7249.2007.tb00098.x.

Tuan, V. V. (2017). Communicative competence of the fourth year students: Basis for proposed English language program. *English Language Teaching, 10*(7), 104–122.

Tuong, H. N. (2002). Vietnam: Cultural background for ESL/EFL teachers. *The Review of Vietnamese Studies, 2*(1),1-6.

UNESCO & Institute for Lifelong Learning (2016). *The recommendation on adult learning and education.* Paris: UNESCO.

Van, L. K., Dang, T. A., Pham, D. B. T., Vo, T. T. N., & Pham, V. P. H. (2021). The effectiveness of using technology in learning English. *AsiaCALL Online Journal, 12*(2), 24-40. Retrieved from https://asiacall.info/acoj/index.php/journal/article/view/26.

Vandergrift, L., & Goh, C. C. M. (2012). *Teaching and learning second language listening: Metacognition in action.* New York: Routledge.

VanPatten, B., & Williams, J. (2015). *Theories in second language acquisition : An introduction* (2nd edn). New York: Routledge.

Varghese, M., Morgan, B., Johnston, B., & Johnson, K. A. (2005). Theorizing language teacher identity: Three perspectives and beyond. *Journal of Language, Identity, and Education, 4*(1), 21–44.

Vietnam Central Association for Study Promotion (2021). *Công dân học tập trong quốc gia chuyển đổi số [Citizens studying in a country of digital transformation]*. Retrieved from http://www.hoikhuyenhoc.vn/modules.php?name=News&op=viewst&sid=4810.

Vocate, D. R. (1994). *Intrapersonal Communication : Different Voices, Different Minds.* Routledge (Electric Source). Retrieved from http://ebookcentral.proquest.com/lib/vu/detail.action?docID=1099017.

Vu, N. T., & Burns, A. (2014). English as a medium of instruction: Challenges for Vietnamese tertiary lecturers. *The Journal of Asia TEFL, 11*(3), 1–31.

Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, eds); Cambridge, MA: Harvard University Press.

Vygotsky, L. (1981). *The genesis of higher mental functions. The concept of activity in Soviet psychology* (J. Wertsch, ed.): Armonk, NY: M.E. Sharpe.

Vygotsky, L. (1987). *The collected works of L. S. Vygotsky, Volume 1. Problems of general psychology* (R. Reiber & A. Carton Eds.). New York: Plenum Press.

Wahab, S., & Iskandar, M. (2020). Teacher's performance to maintain students' learning enthusiasm in the online learning condition. *JELITA, 1*(2), 34-44. Retrieved from https://jurnal.stkipmb.ac.id/index.php/jelita/article/view/63.

Wang, L., Bruce, C., & Hughes, H. (2011). Sociocultural theories and yheir application in information literacy research and education. *Australian Academic & Research Libraries, 42*(4), 296–308.

Warschauer, M. (1997). Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal, 13*(2), 7–26.

Warschauer, M. (1999). *Electronic literacies: Language, culture and power in online education*. London: Lawrence Erlbaum Associates.

Warschauer, M. (2000). The death of cyberspace and the rebirth of CALL. *English Teachers' Journal, 53*(1), 61–67.

Warschauer, M. (2003). Changing currents in second language writing research: A colloquium. *Journal of Second Language Writing, 12 (*2), 151–179.

Watt, D. (2007). On becoming a qualitative researcher: The value of reflexivity. *Qualitative Report, 12*(1), 82–101.

Webster, L., & Mertova, P. (2007). *Using narrative inquiry as a research method: An introduction to using critical event narrative analysis in research on learning and teaching*. Abingdon, UK & New York: Routledge.

Wei, L. (2020). Ethnography: Origins, features, accountability and criticality. In J. McKinley & H. Rose (Eds.), *The Routledge handbook of research methods in applied linguistics* (pp. 154–164). London: Routledge.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.

Wertsch, J. V. (1985). *Vygotsky and the social formation of mind. [electronic resource]*. Cambridge, MA: Harvard University Press.

White, C. J. (2017). Distance Language Teaching with Technology. In C. A. Chapelle and S. Sauro (eds), *The handbook of technology and second language teaching and learning* (pp. 134–148). Hoboken, NJ: John Wiley & Sons, Inc.

Wigglesworth, G., & Storch, N. (2012). Feedback and writing development through collaboration: A socio-cultural approach. In R. Manchón (ed.), *L2 writing development: Multiple perspectives* (pp. 69–102). Boston: De Gruyter, Water Inc.

Willig, C. (2001). *Introducing qualitative research in psychology: Adventures in theory and method*. Buckingham: Open University Press.

Winegar, L. (1997). Can internalization be more than a magical phrase? Notes toward the constructive negotiation of this process. In C. Lightfoot & B. Cox (Eds.), *Sociogenetic perspectives on internalization*: Mahwah, NJ: Erlbaum.

Winke, P., Gass, S., & Sydorenko, T. (2010). The Effects of Captioning Videos Used for Foreign Language Learning Activities. *Language Learning & Technology, 14*(1), 65–86.

World Bank (2003). *Lifelong learning in the global knowledge economy. Challenges for developing countries*. Washington, DC: World Bank.

Wyatt, M., & Marquez, C. P. (2016). Helping first-year undergraduates engage in language research. *Language Teaching Research, 20*(2), 146–164. https://doi.org/ 10.1177/1362168814562013.

Xu, Y. (2014). Becoming researchers: A narrative study of Chinese university EFL teachers' research practice and their professional identity construction. *Language Teaching Research, 18*(2), 242–259. https://doi.org/10.1177/1362168813505943.

Xu, Y., & Liu, Y. (2009). Teacher assessment knowledge and practice: A narrative inquiry of a Chinese college EFL teacher's experience. *TESOL Quarterly, 43*(3), 493–513.

Yang, H-Y. (2014). Does multimedia support individual differences? – EFL learners' listening comprehension and cognitive load." *Australasian Journal of Educational Technology, 30*(6), 699–713.

Yang, S. H. (2012). Exploring college students' attitudes and self-efficacy of mobile learning. *Turkish Online Journal of Educational Technology, 11*(4), 148–154.

Yang, X. (2020). Teachers' perceptions of large-scale online teaching as an epidemic prevention and control strategy in China. *ECNU Review of Education, 3*(4) 739–744.

Yi, Y. & Jang, J. (2020). Envisioning possibilities amid the COVID-19 pandemic: Implications from English language teaching in South Korea. *TESOL Journal, 11*, 543.

Zeng, G., & Takatsuka, S. (2009). Text-based peer–peer collaborative dialogue in a computer-mediated learning environment in the EFL context. *System, 37*(3), 434–446. doi:https://doi.org/10.1016/j.system.2009.01.003.

Zhao, Y. (1997). The effects of listeners' control of speech rate on second language comprehension. *Applied Linguistics, 18*, 49–68.

Ziegler, N. (2013). *Synchronous computer- mediated communication and interaction: A research synthesis and meta-analysis*. Doctoral dissertation, Georgetown University.

Zimman, L. (2013). Working with transgender communities. In C. Mallinson, B. Childs, & G. Van Herk (Eds.), *Data collection in sociolinguistics: Methods and applications* (pp. 49–52). New York, NY: Routledge.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (eds), *Handbook of self-regulation, research, and applications* (pp. 13–39). Orlando, FL: Academic Press.

Zimmerman, B. J. (2011). Motivational sources and outcomes of self-regulated learning and performance. In B. J. Zimmerman and D. H. Schunk (eds), *Handbook of self-regulation of learning and performance* (pp. 49–64). New York: Routledge.

APPENDICES

Appendix 1: Ethics approval

Quest Ethics Notification - Application Process Finalised - Application Approved

quest.noreply@vu.edu.au

Mon 6/4/2018 12:39 PM
To: Martin.Andrew@vu.edu.au
Cc: Cuong Duc Le; Oksana.Razoumova@vu.edu.au

Dear DR MARTIN ANDREW,

Your ethics application has been formally reviewed and finalised.

» Application ID: HRE18-076
» Chief Investigator: DR MARTIN ANDREW
» Other Investigators: MR Duc (Cuong) Le, DR OKSANA RAZOUMOVA
» Application Title: Using Technology-Enhanced Language Learning Environments to Influence the Communicative Potential of Adult Learners of English as a Foreign Language in Vietnam
» Form Version: 13-07

The application has been accepted and deemed to meet the requirements of the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007)' by the Victoria University Human Research Ethics Committee. Approval has been granted for two (2) years from the approval date; 04/06/2018.

Continued approval of this research project by the Victoria University Human Research Ethics Committee (VUHREC) is conditional upon the provision of a report within 12 months of the above approval date or upon the completion of the project (if earlier). A report proforma may be downloaded from the Office for Research website at: http://research.vu.edu.au/hrec.php.

Please note that the Human Research Ethics Committee must be informed of the following: any changes to the approved research protocol, project timelines, any serious events or adverse and/or unforeseen events that may affect continued ethical acceptability of the project. In these unlikely events, researchers must immediately cease all data collection until the Committee has approved the changes. Researchers are also reminded of the need to notify the approving HREC of changes to personnel in research projects via a request for a minor amendment. It should also be noted that it is the Chief Investigators' responsibility to ensure the research project is conducted in line with the recommendations outlined in the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007).'

On behalf of the Committee, I wish you all the best for the conduct of the project.

Secretary, Human Research Ethics Committee
Phone: 9919 4781 or 9919 4461
Email: researchethics@vu.edu.au

Appendix 2: Information to participants involved in research

INFORMATIONTO PARTICIPANTS INVOLVED IN RESEARCH

You are invited to participate

You are invited to participate in a research project entitled "Using Technology-Enhanced Language Learning Environments to Influence the Communicative Potential of Adult Learners of English as a Foreign Language in Vietnam".

This project is being conducted by a student researcher Le Duc Cuong as part of a PhD study at Victoria University under the supervision of Dr. Martin Andrew and Dr. Oksana Razoumova from College of Arts and Education, Victoria University.

Project explanation

The study aims to explore how Vietnamese adult English-as-a-Foreign-Language (EFL) learners experience the trajectory of enhancing their English communicative capacity in Technology-Enhanced Language Learning (TELL) environments. The study also aims to discover how these learning experiences influence the development of the learners' capacity to communicate in English as well as the improvement of their professional knowledge and skills. In other words, the research will explore the real learning environment, the learners' experiences and reflections, and the influence of these experiences on the learners' professional knowledge and capacity development.

What will I be asked to do?

You are invited to participate in the project, firstly by reading and signing a consent form to show your willingness. Your participation is expected to be around five months, from July to November 2018.

You are expected to provide your language learning histories (LLHs) and your learners' diaries (LDs), and participate in semi-structured interviews to give your EFL learning experiences, your perceptions and reflections regarding TELL-based learning environments. Both LLHs and LDs will be collected using email; thus, you should send your works back to student researcher Le Duc Cuong via email at le.le3@live.vu.edu.au and leduccuonghp@gmail.com, while semi-structured interviews will be conducted through Skype and all interview sessions will be audio-recorded for analysis.

Regarding LLHs, narrative frames will be provided as a guidance/form for you to fill in the information regarding your English language learning histories including the histories of your learning using TELL environments. LLHs are expected to complete in July 2018. For learners' diaries, you are encouraged to continue to study English using TELL-based learning environments by your own pace and time and write learner' diaries concurrently with your self-study every day. You are provided with instructions and are encouraged to write your learning diaries entries every single day over a period of three months, from August to October 2018. You will not have to send your diaries to the researcher daily, but you are expected to send every week. Before you send your work, you are expected to write and reflect more on your whole-week study.

For interviews, you are expected to participate in semi-structured, conversation-like, in-depth interviews and then might be follow-up sessions regarding your EFL learning experiences and

reflections in TELL learning environments. The interviews will be conducted in November 2018. Each interview session will last around 45 minutes, and not exceed one hour to avoid tiredness from both participants and researcher. All interview sessions will be conducted via Skype as mentioned, with your chosen convenience time and place, and will be recorded for analysis.

You are expected to be available to be contacted so we can check the accuracy of your comments.

What will I gain from participating?

The project offers an opportunity for you to share your experience in your learning using TELL so that your fellow learners, your colleagues, your organisation, and others can learn from.

As the adult learners/teachers/professionals, you also have chance to:

- Experience data collection and the research process in action
- Use your own learning experiences to advance your English communicative competence as well as your knowledge and skills in your field
- Reflect on your own progress in the spirit of professional development

How will the information I give be used?

The information you give will be anonymized. It will be analysed to identify your learning experiences, the opportunities and challenges, and the influence of TELL learning environments on the developments of your English communicative competence as well as your professional knowledge and skills. The final results will contribute to the fulfilment of a thesis of a Doctor of Philosophy degree in education and may be submitted for publication.

What are the potential risks of participating in this project?

The risk of the study is minor since your names and those of your organisations are kept anonymous and your personal details are regarded as strictly confidential. All data collection regarding your individual participation and your learning experiences will be collected in a manner in which confidentiality can be strictly maintained. All data collected will then be de-identified prior to analysis and presentation of findings. All data will be kept in either a password protected computer or a locked cabinet, so there is minimal risk of data being lost.

You have the right to withdraw from the project at any time.

How will this project be conducted?

The project will gather qualitative data regarding learners' EFL learning experiences in TELL environments.
Participants will be invited to provide your language learning histories (LLHs), your learners' diaries (LDs), and participate in interviews. Data collection will occur via email (for LLHs and LDs) and Skype (for Interviews) as mentioned earlier.

All contacts before, during, and after interviews will be conducted via telephone, email, and/or other means of communication.
There will be an opportunity for you to make changes if necessary.

Who is conducting the study?

The research is conducted by:

Dr. Martin Andrew, Senior Lecturer in TESOL, Chief Investigator, College of Arts and Education, Victoria University; Phone: (+61)423814208; (+64)223274781; Email: Martin.andrew@vu.edu.au

Dr. Oksana Razoumova, Lecturer, MTESOL Advisor, Associate Investigator, College of Arts and Education, Victoria University; Phone: 61406781526; Email: Oksana.Razoumova@vu.edu.au

Mr. Le Duc Cuong, Research Student, College of Arts and Education, Victoria University; Phone: (+61)450341827, (+84)904942065; Email: le.le3@live.vu.edu.au; leduccuonghp@gmail.com

Any queries about your participation in this project may be directed to the Chief Investigator listed above. If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Vietnamese version:

THÔNG TIN DÀNH CHO NGƯỜI THAM GIA NGHIÊN CỨU

Bạn được mời tham gia

Bạn được mời tham gia vào dự án nghiên cứu "Sử dụng những môi trường học tiếng được tăng cường bởi công nghệ để gây ảnh hưởng /tác động tới tiềm năng giao tiếp của học viên ngoại ngữ tiếng Anh người lớn ở Việt nam".

Dự án này được thực hiện bởi nghiên cứu sinh Lê Đức Cường cho khóa học tiến sĩ tại trường Đại học Victoria, Australia, dưới sự hướng dẫn của Tiến sĩ Martin Andrew và Tiến sĩ Oksana Razoumova, từ Khoa Giáo dục, Trường Đại học Victoria, Australia.

Giới thiệu về dự án

Nghiên cứu này nhằm khám phá trải nghiệm của học viên ngoại ngữ tiếng Anh người lớn Việt nam trong việc học tập để nâng cao năng lực giao tiếp tiếng Anh thông qua những môi trường học tiếng được tăng cường bởi công nghệ. Nghiên cứu cũng nhằm khám phá xem những trải nghiệm học tập này ảnh hưởng như thế nào tới việc phát triển năng lực giao tiếp tiếng Anh của người học cũng như việc nâng cao kiến thức và kỹ năng nghề nghiệp của họ. Nghiên cứu không nhằm kiểm tra một giả thuyết, mà nhằm tìm kiếm những quan điểm, những giải thích chi tiết của người tham gia. Nói cách khác, nghiên cứu nhằm khám phá môi trường học thực sự, những trải nghiệm của người học, những cơ hội, thách thức, và ảnh hưởng của những trải nghiệm này tới việc phát triển kiến thức và năng lực nghề nghiệp của người học.

Bạn sẽ được yêu cầu làm gì?

Bạn được mời tham gia dự án, trước hết xin hãy đọc đơn và ký đơn nếu sẵn sàng đồng ý tham dự. Bạn sẽ được mong đợi tham gia dự án trong khoảng năm tháng, từ tháng 7/2018 đến 11/2028.

Bạn được mời cung cấp lịch sử học tiếng, nhật ký người học, và tham gia phỏng vấn để đưa ra trải nghiệm của bạn trong việc học ngoại ngữ tiếng Anh mà có sử dụng các môi trường học tiếng được tăng cường bởi công nghệ cũng như quan niệm, phản hồi của bạn về việc học tập trong môi trường này, những tác động của trải nghiệm này đến hoạt động nghề nghiệp của bạn. Lịch sử học tiếng và nhật ký người học của bạn sẽ được gửi tới nghiên cứu sinh Le Duc Cuong qua email le.le3@live.vu.edu.au và leduccuonghp@gmail.com, trong khi đó, phỏng vấn bán cấu trúc sẽ được thực hiện qua Skype.

Về lịch sử học tiếng, bạn sẽ được cung cấp mẫu hướng dẫn để điền thông tin liên quan lịch sử hoc tiếng của mình bao gồm cả việc học tiếng có sử dụng các môi trường học tiếng được tăng cường bởi công nghệ. Lịch sử học tiếng được hy vọng hoàn thành trong tháng 7/2018. Đối với nhật ký người học, bạn được khuyến khích tiếp tục sử dụng các môi trường học tiếng được tăng cường bởi công nghệ để học tập nâng cao năng lực giao tiếp tiếng Anh theo nhịp độ, thời gian và điều kiện riêng của bạn, đồng thời viết nhật ký học tập cùng với việc tự học hàng ngày của bạn. Bạn sẽ được hướng dẫn hoàn thiện nhật ký học tập và được khuyến khích viết hàng ngày trong thời gian khoảng ba tháng, từ tháng 8 đến tháng 10 năm 2018. Bạn không cần gửi nhật ký hàng ngày cho người nghiên cứu, mà thay vào đó, bạn được mong đợi gửi nhật ký hàng tuần cho người thực hiện nghiên cứu vào những ngày cuối tuần, khi đó bạn có thể có nhiều thời gian hơn để viết và phản ảnh nhiều hơn về việc học tập trong tuần của mình.

Về phỏng vấn, bạn được mong đợi tham gia vào những cuộc phỏng vấn sâu, bán cấu trúc, tương tự dạng hội thoại và tiếp theo, có thể là những cuộc phỏng vấn thêm sau đó nếu cần để cung cấp thông tin liên qua tới trải nghiệm học tiếng và phản ảnh của mình trong môi trường học tiếng Anh được tăng cường bởi công nghệ. Phỏng vấn dự kiến được thực hiện trong tháng 11/ 2018. Mỗi cuộc phỏng vấn sẽ được kéo dài trong khoảng 45 phút, và không vượt quá 01 tiếng để tránh những mệt mỏi cho những người tham gia nghiên cứu. Tất cả phỏng vấn đều được tiến hành thông qua ứng dụng Skype như đã đề cập, phù hợp với thời gian và địa điểm thuận lợi của bạn, và sẽ được ghi âm lại để phân tích cho nghiên cứu.

Bạn được mong đợi giữ liên lạc để chúng ta có thể cùng nhau kiểm tra lại và đưa ra thông tin nghiên cứu chính xác.

Tôi sẽ được gì từ việc tham gia này?

Dự án sẽ cung cấp cho bạn cơ hội chia sẻ trải nghiệm học tiếng trong các môi trường học tiếng được tăng cường bởi công nghệ của mình để các bạn học, đồng nghiệp, trường học, hoặc cá nhân khác có thể học hỏi từ bạn.

Là học viên/giáo viên/nhà chuyên môn, thông qua nghiên cứu này, bạn cũng sẽ có cơ hội:

- Trải nghiệm việc thu thập dữ liệu và tiến trình nghiên cứu

- Vận dụng trải nghiệm học tập để nâng cao năng lực giao tiếp tiếng Anh

- Dùng trải nghiệm và suy nghĩ của mình để nâng cao kiến thức và kỹ năng nghề nghiệp

- Đóng góp vào việc nâng cao chất lượng đào tạo

- Phản hồi về sự tiến bộ trong nghề nghiệp của mình

Thông tin bạn đưa ra sẽ được sử dụng như thế nào?

Thông tin bạn đưa ra sẽ được giữ bí mật. Thông tin sẽ được phân tích để tìm ra trải nghiệm của người học trong môi trường học tiếng này, những cơ hội, thách thức, và ảnh hưởng của môi trường học này đối với việc phát triển năng lực giao tiếp, cũng như kỹ năng và nghề nghiệp của bạn. Thông tin nghiên cứu có thể gợi ý giải pháp nâng cao chất lượng đào tạo. Kết quả nghiên cứu sẽ giúp đóng góp hoàn thiện luận văn tiến sĩ về giáo dục và có thể được xuất bản.

Tham gia dự án nghiên cứu này có thể tiềm ẩn rủi ro gì?

Rủi ro đối với nghiên cứu này là rất nhỏ vì nghiên cứu sẽ giấu tên bạn và tổ chức của bạn, Thông tin cá nhân của bạn sẽ được tuyệt đối giữ bí mật. Tất cả những thông tin về người tham gia và trải nghiệm học tập sẽ được thu thập với một cách thức hoàn toàn bí mật. Các thông tin thu thập được sẽ được xóa mọi dấu hiệu giúp sự nhận dạng trước khi đưa ra phân tích và giới thiệu kết quả. Tất cả các thông tin nghiên cứu được lưu giữ tại Trường Đại học Victoria bằng máy tính có mật khẩu bảo vệ hoặc tủ có khóa, do vậy sẽ hạn chế sự mất mát, rò rỉ thông tin thu thập được.

Người tham gia có quyền rút lui khỏi nghiên cứu bất cứ thời điểm nào.

Dự án này sẽ được thực hiện như thế nào?

Nghiên cứu sẽ thu thập dữ liệu định tính liên qua tới trải nghiệm của người học trong môi trường học tiếng được tăng cường bởi công nghệ.

Người tham gia sẽ được mời cung cấp lich sử học tiếng, nhật ký học tập, và tham dự phỏng vấn với những câu hỏi gợi ý. Thu thập dữ liệu sẽ được tiến hành qua email (đối với lich sử học tiếng và nhật ký học tập) và qua Skype từ điện thoại hoặc máy tính có kết nối internet (đối với phỏng vấn).

Liên hệ trước, trong và sau thời gian phỏng vấn sẽ được thực hiện qua điện thoại, email, và/hoặc các phương tiện truyền thông khác.

Bạn sẽ có cơ hội để trao đổi, chỉnh sửa phần trả lời của mình nếu cần.

Ai sẽ thực hiện nghiên cứu này?

Nghiên cứu này được thực hiện bởi:

Tiến sĩ Martin Andrew, Giảng viên cao cấp chuyên ngành Tiếng Anh, là nghiên cứu viên chính, Khoa Giáo dục, Trường Đại học Victoria, Australia; Email: Martin.andrew@vu.edu.au, Phone: (+61)423814208; (+64)223274781.

Tiến sĩ Oksana Razoumova, Giảng viên chuyên ngành Tiếng Anh, là nghiên cứu viên; Khoa Giáo dục, Trường Đại học Victoria, Australia; Email: Oksana.Razoumova@vu.edu.au; Phone: 61406781526

Nghiên cứu sinh Lê Đức Cường, Khoa Giáo dục, Trường Đại học Victoria, Australia; Email: le.le3@live.vu.edu.au; leduccuonghp@gmail.com; Phone: (+61)450 341 827, (+84)904 942 065.

Mọi câu hỏi về sự tham gia của bạn vào dự án này có thể được trực tiếp gửi đến Tiến sĩ Martin Andrew, nghiên cứu chính của dự án. Nếu bạn có câu hỏi hoặc bất kể sự phàn nàn nào về cách thức mà bạn được đối xử, bạn có thể liên lạc với thư ký, Ban Đao đức nghiên cứu về con người, Trường Đại học Victoria, Australia, Hộp thư, PO Box: 14428, Melbourne, VIC, 8001, email tới researchethics@vu.edu.au hoặc điện thoại (03) 9919 4781 hoặc 4461.

Authorized translation by:

Dr. Ngo Van Giang (Vietnamese national)

BA (English Language) and MA (English Linguistics), Hanoi University, Vietnam

PhD (TESOL Education), The University of Adelaide, Australia

Translator/Interpreter Educator and Vice Dean, Faculty of English Language

Head, Interpreting and Translation Division (English - Vietnamese), Hanoi University, Vietnam

Mobile phone: (+84) 948618789; Email: gianghanuvn@gmail.com

Appendix 3: Consent form for participants involved in research

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO PARTICIPANTS:

On behalf of the research team, I would like to invite you to be a part of a study entitled "Using Technology-Enhanced Language Learning Environments to Influence the Communicative Potential of Adult Learners of English as a Foreign Language in Vietnam".

As a broad aim, the research proposes to explore how Vietnamese adult English-as-a-Foreign-Language (EFL) learners experience the trajectory of enhancing their English communicative capacity in Technology-Enhanced Language Learning (TELL) environments. The study also aims to discover how these learning experiences influence the development of the learners' capacity to communicate in English as well as the improvement of the learners' professional knowledge and skills. In other words, the research will explore the real learning environment, the learners' experiences and interpretations, and the influence of these experiences on the learners' professional knowledge and capacity development. Under the broad aim, some of the main issues are contained in our research questions:

- What and how do the learners experience in TELL environments as a means of enhancing their English communicative capacity?
- How learning using TELL environments influence the learners' communicative capacity and their professional knowledge and skills?
- What aspects of TELL pedagogy and application are effective and what is the evidence of this?
- How does TELL-based learning impact on an apparent gap between government policy about language education and current conservative practices within teaching and learning contexts?

Using qualitative research methods, the data collection will be conducted through (1) Language Learning Histories, (2) Learners' Diaries, and (3) Semi-structured Interviews with guided questions.

As adult learners on these learning environments, your input is valuable, and your experiences and reflections will enable us to build up valuable data.

You may consent to participate in the Language Learning Histories, Learners' Diaries and Semi-structured Interviews:

☐ I consent to participating in the Language Learning Histories

☐ I consent to participating in the Learners' Diaries

☐ I consent to participating in the Semi-structured Interviews

CERTIFICATION BY PARTICIPANT

I, ... (Participant's name)

of..... (City)

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study:

"Using Technology-Enhanced Language Learning Environments to Influence the Communicative Potential of Adult Learners of English as a Foreign Language in Vietnam" being conducted at Victoria University by Dr. Martin Andrew.

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by Student Researcher Le Duc Cuong,

and that I freely consent to participation involving the below mentioned procedures:

- Providing language learning histories ☐
- Writing learners' diaries ☐
- Taking part in Interviews ☐
- Making changes if necessary ☐

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed:

Date: .....

Any queries about your participation in this project may be directed to Dr. Martin Andrew, Senior Lecturer in TESOL, Chief Investigator, College of Arts and Education, Victoria University; Email: Martin.andrew@vu.edu.au; Phone: (+61)423814208; (+64)223274781

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Vietnamese version

BẢN CHẤP THUẬN THAM GIA NGHIÊN CỨU

THÔNG TIN CHO NGƯỜI THAM GIA:

Thay mặt nhóm nghiên cứu, tôi mời bạn tham gia vào một nghiên cứu, với tiêu đề "Sử dụng những môi trường học tiếng được tăng cường bởi công nghệ để gây ảnh hưởng /tác động tới tiềm năng giao tiếp của học viên ngoại ngữ tiếng Anh người lớn ở Việt nam".

Về mục tiêu chung, nghiên cứu này nhằm khám phá trải nghiệm của học viên ngoại ngữ tiếng Anh người lớn Việt nam trong việc học tập để nâng cao năng lực giao tiếp tiếng Anh thông qua những môi trường học tiếng được tăng cường bởi công nghệ. Nghiên cứu cũng nhằm khám phá

xem những trải nghiệm học tập này ảnh hưởng như thế nào tới việc phát triển năng lực giáo tiếp tiếng Anh của người học cũng như việc nâng cao kiến thức và kỹ năng nghề nghiệp của họ. Nghiên cứu không nhằm kiểm tra một giả thuyết, mà nhằm tìm kiếm những quan điểm, giải thích chi tiết của người tham gia. Nói cách khác, nghiên cứu nhằm khám phá môi trường học thực sự, những trải nghiệm của người học, những cơ hội, thách thức, và ảnh hưởng của những trải nghiệm này tới việc phát triển kiến thức và năng lực nghề nghiệp của người học. Từ mục tiêu này, một vài vấn đề chính được khái quát trong câu hỏi nghiên cứu như sau:

- Người học trải nghiệm gì và trải nghiệm như thế nào trong những môi trường học tiếng được tăng cường bởi công nghệ để tăng cường năng lực giao tiếp tiếng Anh?
- Những môi trường học tiếng được tăng cường bởi công nghệ đã ảnh hưởng như thế nào tới năng lực giao tiếp tiếng Anh của người học cũng như tới kiến thức và kỹ năng nghề nghiệp của họ?
- Trong việc sử dụng những môi trường học tiếng được tăng cường bởi công nghệ, khía cạnh sư phạm và những ứng dụng nào là hiệu quả. Bạn có thể cho ví dụ?
- Việc học tập dựa vào các môi trường học tiếng này có tác động thế nào đến vấn đề hiện đang tồn tại giữa chính sách của chính phủ về giáo dục ngôn ngữ và các bối cảnh dạy và học truyền thống?

Sử dụng phương pháp nghiên cứu định tính, việc thu thập dữ liệu cho nghiên cứ này sẽ được thực hiện thông qua (1) thu thập Lịch sử học tiếng, (2) lấy Nhật ký học tập của người học, và (3) Phỏng vấn bán cấu trúc.

Là học viên trong các môi trường này, trả lời của bạn rất có giá trị. Trải nghiệm của bạn và cách nhìn nhận của bạn sẽ góp phần giúp chúng tôi xây dựng một cơ sử dữ liệu có giá trị.

Bạn có thể đồng ý cung cấp Lich sử học tiếng, Nhật ký người học, và tham dự Phỏng vấn:

☐ Tôi đồng ý cung cấp Lịch sử học tiếng

☐ Tôi đồng ý cung cấp Nhật ký người học

☐ Tôi đồng ý tham dự Phỏng vấn

XÁC NHẬN CỦA NGƯỜI THAM GIA

Tôi, ...(tên người tham dự)

Từ, ... (thành phố)

Xác nhận rằng tôi ít nhất 18 tuổi và tôi tự nguyện chấp thuận tham gia vào nghiên cứu với tiêu đề "Sử dụng những môi trường học tiếng được tăng cường bởi công nghệ để gây ảnh hưởng /tác động tới tiềm năng giao tiếp của học viên ngoại ngữ tiếng Anh người lớn ở Việt nam", được thực hiện tại Trường Đại học Victoria, Australia bởi Tiến sĩ Martin Andrew.

Tôi xác nhận rằng mục tiêu của nghiên cứu, cùng với những rủi ro có thể và biện pháp bảo vệ có liên quan tới tiến trình nghiên cứu, đã được nghiên cứu sinh Lê Đức Cường giải thích đầy đủ cho tôi.

Và tôi hoàn toàn tự nguyện tham gia vào các tiến trình đề cập dưới đây:

- Cung cấp Lịch sử học tiếng ☐
- Cung cấp Nhật ký người học ☐
- Tham dự Phỏng vấn ☐
- Chỉnh sửa, cập nhật để có thể đưa ra thông tin chính xác ☐

Tôi xác nhận rằng tôi đã có cơ hội được hỏi các câu hỏi và nghe trả lời, và tôi hiểu rằng tôi có thể rút lui khỏi nghiên cứu này tại bất kỳ thời điểm nào và việc rút lui sẽ không gây bất kỳ tổn hại, phiền nhiễu nào cho tôi.

Tôi đã được thông báo rằng mọi thông tin tôi đưa ra đều sẽ được tuyệt đối bảo mật.

Ký tên:

Ngày/tháng:

Mọi câu hỏi về việc tham gia dự án này có thể gửi trực tiếp đến Tiến sĩ Martin Andrew, Giảng viên cao cấp chuyên ngành tiếng Anh, Nghiên cứu chính, Khoa Giáo dục, Trường Đại học Victoria; Email: Martin.andrew@vu.edu.au; Phone: (+61)423814208; (+64)223274781.

Nếu bạn có bất kỳ câu hỏi hoặc phàn nàn gì về cách thức mà bạn được đối xử, bạn có thể liên hệ: Thư ký, Ban Đạo đức trong Nghiên cứu Con người của trường Đại học Victoria, Australia. Hòm thư: PO Box 14428, Melbourne, VIC, 8001, gửi email tới Researchethics@vu.edu.au hoặc gọi điện cho số (03) 9919 4781 or 4461.

Authorized translation by:

Dr. Ngo Van Giang (Vietnamese national)

BA (English Language) and MA (English Linguistics), Hanoi University, Vietnam

PhD (TESOL Education), The University of Adelaide, Australia

Translator/Interpreter Educator and Vice Dean, Faculty of English Language

Head, Interpreting and Translation Division (English - Vietnamese), Hanoi University, Vietnam

Mobile phone: (+84) 948618789; Email: gianghanuvn@gmail.com

Appendix 4: Narrative frame and guidelines for writing language learning histories

NARRATIVE FRAME AND GUIDLINES

for writing learners' Language Learning Histories

Many thanks for participating in our study. You are expected to write briefly about your language learning history (LLH) from when you began to learn English to the present time and also about your thoughts on your future learning. The topic will include your language learning experiences, your reflections on who you are as learners in general and as learners in TELL environments, what contributes to and inhibits your learning as well as how you can best progress in the future. The length of LLH would be about 1000-1200 words and you should send your work back to the researcher via email. Following is the frame that works as a guidance on structure and content of what is to be written for you to complete your LLH. We hope your words will provide with useful information regarding your learning experiences and reflections.

NARRATIVE FRAME

Language Learning Histories

I am a ..... (profession). Currently I have been working in.....(the field in general). My job ... need English, as ..... I started learning English in .....(year) when I was at ..... primary/junior/senior high school). When I was at ..... primary/junior/senior high school, what I liked the best/least was ..... When I studied at university/college, English was one of my .....subjects. I studied English as if ..... This was the reason/good chance for ..... Before using TELL, I had intentionally learned to improve my communicative competence. However, I faced ..... For example, ... This was probably because ..... I had studied English at work/foreign language centres/..... However, ...

I have been learning English using TELL to improve my English communicative competence since ..... I often use ..... as resources/tools/approaches for my study. I have ever used TELL environments/resources at (at any English classes or for self-study .....). There are opportunities in learning English using TELL as a means to improve communicative competence. One of the main opportunities is ..... For instance, ... Another opportunity to learn English using TELL to improve communicative competence is ..... In study using TELL, I can gain other benefits, such as .....and..... There are also challenges for learning English using TELL to improve communicative competence. First, ... Second, ... Third, ... This is because ..... Currently, I have been able to, e.g., listen (speak .....) English for general communication purposes/my job, but I could not e.g., read/write English, particularly in .....situation, such as when I .....). When I use English now, I'm still facing problems with.....and ..... I think I can overcome this matter by .....

In order to improve my English communicative capacity in the future, I will ..... (what and how you will study/do.....) in the next 5 months/one year/5 years ...

Vietnamese version

HƯỚNG DẪN

viết Lịch sử học tiếng

Cảm ơn bạn rất nhiều đã tham gia nghiên cứu. Chúng tôi hy vọng bạn sẽ viết tóm lược lịch sử học tiếng (LSHT) của bạn từ khi bạn bắt đầu học tiếng Anh cho tới thời điểm hiện tại và những suy nghĩ của bạn cho kế hoạch học tập tiếp theo trong tương lai. Chủ đề sẽ bao gồm trải nghiệm học tiếng của bạn, những phản ánh của bạn với tư cách là người học tiếng nói chung cũng như người học tiếng sử dụng những môi trường học tiếng được tăng cường bởi công nghệ, những thuận lợi, khó khăn cho việc học tiếng, cũng như làm thế nào để bạn có thể tối đa hóa năng lực giao tiếp tiếng Anh trong tương lai. LSHT của bạn nên có độ dài khoảng 1000-1200 từ và khi hoàn thành, LSHT sẽ được gửi tới người nghiên cứu qua email. Dưới đây là mẫu hướng dẫn về cấu trúc và nội dung những gì cần viết cho LSHT. Chúng tôi hy vọng LSHT của bạn sẽ cung cấp những thông tin rất hữu ích liên quan tới trải nghiệm và phản ánh trong việc học tiếng của bạn.

MẪU

Lịch sử học tiếng

Tôi là ..... (nghề). Hiện tại tôi đang làm việc cho/tại .....(chỉ cần nêu lĩnh vực) ..... Nghề của tôi ... cần tiếng Anh, vì ..... Tôi đã bắt đầu học tiếng Anh năm ..... khi tôi ở trường ..... tiểu học/trung học cơ sở/trung học phổ thông. Khi tôi ở trường ..... tiểu học/trung học cơ sở/trung học phổ thông, điều mà tôi thích nhất/không thích nhất là ..... Khi tôi học ở đại học/cao đẳng, tiếng Anh là một trong những môn học ..... (ưa chuộng/ít ưu chuộng nhất) của tôi. Tôi đã học tiếng Anh như thể ..... Đây là lý do/cơ hội tốt cho ..... Trước khi sử dụng các môi trường học tiếng được tăng cường bởi công nghệ, tôi đã từng học để nâng cao khả năng giao tiếp. Tuy nhiên, tôi đã gặp phải những trở ngại ..... Chẳng hạn như, ... Điều này có lẽ bởi vì ..... Tôi thực sự đã học tiếng Anh ở các trung tâm ngoại ngữ, ở nơi làm việc..... Tuy nhiên, ...

Tôi đã và đang học tiếng Anh thông qua việc sử dụng các môi trường học tiếng được tăng cường bởi công nghệ để nâng cao năng lực giao tiếp từ năm/khi ..... Tôi thường dùng ..... làm nguồn tài liệu/công cụ/cách tiếp cận cho việc học tiếng của tôi. Tôi đã từng sử dụng các môi trường/nguồn tài nguyên học tiếng được tăng cường bởi công nghệ .....(cho việc tự học của tôi/hoặc tại các lớp học tiếng Anh). Có rất nhiều các cơ hội trong việc học tiếng Anh khi sử dụng những môi trường học tiếng được tăng cường bởi công nghệ để nâng cao khả năng giao tiếp. Một trong những cơ hội chính đó là ..... Ví dụ, ... Một lợi thế khác của việc học tiếng Anh thông qua những môi trường học tiếng được tăng cường bởi công nghệ để năng cao năng lực giao tiếp là ..... Trong việc học tiếng thông qua những môi trường được tăng cường bởi công nghệ, tôi có thể có được những cơ hội khác, chẳng hạn như .....và đồng thời..... Bên cạch những thuận lợi, cũng có những thách thức của việc học tiếng thông qua sử dụng những môi trường học tiếng được tăng cường bởi công nghệ để năng cao năng lực giao tiếp. Thứ nhất, ... Thứ hai, ... Thứ ba, ... Đây là vì

..... Hiện tại, tôi đã có thể, ví dụ, nghe (nói ....) tiếng Anh cho các mục đích giao tiếp thông thường/cho nghề nghiệp của tôi, nhưng tôi chưa thể, chẳng hạn như, đọc/ viết văn bản, cụ thể hơn là trong những tình huống ....., ví dụ như khi tôi .....). Hiện khi sử dụng tiếng Anh, tôi vẫn phải đối mặt với những vấn đề .....và ..... Tôi nghĩ rằng tôi có thể vượt qua vấn đề này bằng cách .....

Nhằm mục tiêu nâng cao năng lực giao tiếp tiếng Anh trong tương lai, tôi sẽ ..... (bạn sẽ học/làm cái gì, và như thế nào.....) trong 5 tháng tới/01 năm/5 năm .....

Authorized translation by:

Dr. Ngo Van Giang (Vietnamese national)

BA (English Language) and MA (English Linguistics), Hanoi University, Vietnam

PhD (TESOL Education), The University of Adelaide, Australia

Translator/Interpreter Educator and Vice Dean, Faculty of English Language

Head, Interpreting and Translation Division (English - Vietnamese), Hanoi University, Vietnam

Mobile phone: (+84) 948618789; Email: gianghanuvn@gmail.com

Appendix 5: Instructions for writing learners' diaries

INSTRUCTIONS

for writing Learners' Diaries

These diaries aim to record your current EFL learning experiences using Technology-Enhanced Language Learning (TELL) environments from your perspective. Very much like personal diaries, you are expected to write a series of entries over a period of three months, from August to October 2018.

These also aim to explore and understand affective factors, learning strategies, and your own reflections of your language learning experiences using TELL environments/resources while you are engaged in your self-study process. Thus, you are encouraged to write your learning diaries entries concurrently with your self-study (written daily around 50-70 words, for example, after your learning every day). However, you are expected to write and reflect more on your whole week study and your diaries entries should be sent to researcher every week via email. The length for your weekly diary entries should be at least 350-500 words.

In more details, you are writing about the contexts of your learning as well as, more specifically, sustained reflections on your current actual experiences. You should focus to record your thoughts and feelings about your current lessons/learning activities and reflect on how you have experienced them. You could report on some positive and negative aspects of studying a language this way as well as your proposed change for the next lessons/learning activities to become more effective.

You can also write about the stories of your language-related successes and failures in your current language learning using TELL. You should also comment on the opportunities and challenges of your study from these learning environments to improve your English communicative competence. Diaries may have a more specific focus too, such as you can write about your learning styles, emotional issues, or any cross-cultural encounters.

Vietnamese version

HƯỚNG DẪN

Viết Nhật ký người học

Nhật ký này nhằm ghi lại những trải nghiệm hiện tại của bạn trong việc tự học ngoại ngữ tiếng Anh thông qua môi trường hoc tiếng được tăng cường bởi công nghệ, theo cách nhìn của bạn. Rất giống với nhật ký riêng, chúng tôi hy vọng bạn viết nhật ký hàng ngày trong thời gian 3 tháng, từ tháng 8 đến tháng 10 năm 2018.

Nhật ký cũng nhằm khám phá và hiểu các nhân tố ảnh hưởng, các chiến lược học tập, và phản hồi của chính bạn về trải nghiệm học tiếng thông qua môi trường/nguồn tài nguyên học tiếng được tăng cường bởi công nghệ của bạn trong khi bạn thực sự gắn kết với quá trình tự học hằng

ngày. Do vậy, bạn được khuyến khích viết nhật ký đồng thời với việc tự học của mình (ví dụ, viết hằng ngày khoảng 50-70 từ, sau khi bạn tự học). Tuy nhiên, chúng tôi hy vọng bạn viết và phản hồi nhiều hơn vào những ngày cuối tuần về việc học tập của bạn và nhật ký của bạn nên được gửi tới người nghiên cứu hằng tuần thông qua email. Nhật ký hàng tuần của bạn nên giới hạn ít nhất 350-500 từ.

Chi tiết hơn, bạn sẽ viết về những bối cảnh học tập của bạn đồng thời, cụ thể hơn, những phản ánh liên tục, thực sự về những trải nghiệm hiện hành của bạn. Bạn nên tập trung ghi lại những suy nghĩ và cảm giác của bạn về những bài học/những hoạt động học tập hiện tại và phản hồi xem bạn đã trải nghiệm chúng như thế nào. Bạn có thể ghi lại những khía cạnh tốt hay không tốt của việc học ngôn ngữ thông qua cách này cũng như những đề xuất thay đổi của bạn để những bài hoc/hoạt động học tập kế tiếp trở nên hiệu quả hơn.

Bạn cũng có thể viết những câu chuyện thành công và thất bại liên quan tới việc học ngoại ngữ thông qua sử dụng môi trường học tiếng được tăng cường bởi công nghệ. Bạn cũng có thể nhận xét về những cơ hội và thách thức trong việc học tập nhằm nâng cao khả năng giao tiếp từ môi trường học tiếng này. Nhật ký cũng có thể có nội dung cụ thể hơn, chẳng hạn như bạn có thể viết về phong cách học tập của bạn, những cảm xúc của bạn, những vấn đề như giao thoa văn hóa, v.v.

Authorized translation by:

Dr. Ngo Van Giang (Vietnamese national)

BA (English Language) and MA (English Linguistics), Hanoi University, Vietnam

PhD (TESOL Education), The University of Adelaide, Australia

Translator/Interpreter Educator and Vice Dean, Faculty of English Language

Head, Interpreting and Translation Division (English - Vietnamese), Hanoi University, Vietnam

Mobile phone: (+84) 948618789; Email: gianghanuvn@gmail.com

Appendix 6: Guiding questions for semi-structured interviews

GUIDING QUESTIONS
for Semi-structured Interviews

The research aims to find out (i) the learners' EFL learning experiences and reflections regarding their language learning using Technology-Enhanced Language Learning (TELL) environments; (ii) how have their learning experiences influenced their English communicative capacity as well as professional knowledge and skills.

The instructions for the semi-structured, conversation-like, in-depth interviews will include suggestions for content, in the form of the following guiding questions:

QUESTIONS

Language Learning experiences in general:

1. When did you start learning English?

2. How did you learn English in Primary, Junior High School and High School?

3. What positive and negative experiences did you have and what did you learn from them?

4. How did you learn English at university/colleges and other programs, such as courses at foreign language centres?

5. What positive and negative experiences did you have at these places and what lessons did you have?

Language Learning experiences using TELL:

6. What were you expecting before you studied English using TELL environments?

7. What were you most surprised about in your English lessons using TELL environments?

8. Do you think that the application of TELL are important to language teaching and learning and how important it is?

9. How have you changed your ways of language learning since your studying using TELL environments?

10. What are the things that you found especially helpful in your studying English using TELL environments?

11. How important do you think learning EFL using TELL environments are to the improvement of your English communicative competence?

12. What kind of TELL environments/resources have you used for learning to improve English communicative competence and how effective are they? How have you used those resources?

13. What techniques/methods/approaches regarding your learning English using TELL environments to improve English communicative competence have you applied and how effective are they? How have you used those techniques/methods/approaches?

14. What problems have you faced in your trajectory of learning English using TELL to improve your communicative capacity? How have you overcome?

15. Do you think that your performance at your local working contexts can improve when you use TELL environments/resources for learning to improve your English communicative competence, if so in what ways?

16. In what ways has your language learning experiences using TELL environments impacted your English communicative capacity as well as your professional knowledge and skills?

17. What are the specific aspects of communicative competence that you still want to improve? How will you improve them?

18. Do you continue to use TELL environments/resources for learning to improve your English communicative competence as well as the enhancement of your professional knowledge and skills? If so, how do you think you will use them?

19. What are your language learning plans and goals after attending this research? What will you do to achieve those plans and goals?

20. What advice/ suggestions would you give to other Vietnamese adult EFL learners regarding learning English using TELL to improve their communicative competence?

Vietnamese version

CÂU HỎI HƯỚNG DẪN

cho Phỏng Vấn Bán Cấu Trúc

Nghiên cứu này nhằm tìm ra (1) trải nghiệm và phản hồi của người học liên quan tới việc học tiếng có sử dụng các môi trường học tiếng được tăng cường bởi công nghệ; (2) trải nghiệm học tiếng của họ đã ảnh hưởng thế nào tới năng lực giao tiếp tiếng Anh cũng như việc nâng cao kiến thức và kỹ năng nghề nghiệp của người học.

Hướng dẫn dành cho phỏng vấn sâu bán cấu trúc dạng hội thoại này bao gồm những gợi ý về mặt nội dung, dưới dạng các câu hỏi hướng dẫn sau đây.

CÂU HỎI

Về trải nghiệm học tập nói chung:

1. Bạn đã bắt đầu học tiếng Anh từ khi nào?

2. Bạn đã học tiếng Anh ở Trường Tiểu học/Trung học cơ sởTrung học phổ thông như thế nào?

3. Bạn đã có những trải nghiệm tốt/không tốt nào và bạn đã học những được điều gì từ đó?

4. Bạn đã học tiếng Anh ở trường đại hoc, cao đẳng và ở các chương trình khác, ví dụ các trung tâm ngoại ngữ v.v... như thế nào?

5. Bạn đã có những trải nghiệm tốt/không tốt nào từ việc học tập ở những nơi này và bạn đã thu được bài học gì từ đó?

Về trải nghiệm học tập có sử dụng các môi trường học tiếng được tăng cường bởi công nghệ:

6. Bạn đã hy vọng điều gì trước khi bạn học tiếng Anh mà có sử dụng các môi trường học tiếng được tăng cường bởi công nghệ?

7. Bạn đã ngạc nhiên về điều gì nhất trong các bài hoc tiếng Anh mà có sử dụng các môi trường/nguồn tài nguyên học tiếng được tăng cường bởi công nghệ?

8. Bạn có thừa nhận tầm quan trọng của việc ứng dụng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ vào việc dạy và học tiếng Anh không và chúng quan trọng như thế nào?

9. Bạn đã thay đổi cách học tiếng như thế nào từ khi bạn sử dụng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ?

10. Điều gì bạn nhận thấy đặc biệt hữu ích trong việc bạn học tiếng mà có sử dụng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ?

11. Bạn cho rằng việc ngoại ngữ tiếng Anh mà có sử dụng các tài nguyên/các môi trường học tiếng được tăng cường bởi công nghệ có tầm quan trọng thế nào đối với việc nâng cao năng lực giao tiếp tiếng Anh của bạn?

12. Các tài nguyên nào/các môi trường học tiếng được tăng cường bởi công nghệ nào mà bạn đã sử dụng cho việc học để nâng cao năng lực giao tiếp tiếng Anh và chúng hiệu quả thế nào? Bạn đã sử dụng các nguồn tài nguyên/môi trường đó như thế nào?

13. Bạn đã áp dụng những kỹ thuật/phương pháp/cách tiếp cận nào trong việc dùng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ để học tiếng nhằm nâng cao năng lực giao tiếp tiếng Anh và chúng hiệu quả thế nào? Bạn đã sử dụng những kỹ thuật/phương pháp/cách tiếp cận đó như thế nào?

14. Bạn đã gặp những vấn đề gì trong quá trình học tiếng Anh sử dụng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ để nâng cao năng lực giao tiếp? Bạn đã vượt qua như thế nào?

15. Bạn có cho rằng hoạt động nghề nghiệp trong những bối cảnh cộng đồng của bạn được cải thiện khi bạn sử dụng các môi trường học tiếng để nâng cao năng lực giao tiếp tiếng Anh và nếu có thì bằng cách nào?

16. Trải nghiệm hoc tiếng sử dụng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ đã tác động tới năng lực giao tiếp tiếng Anh cũng như kiến thức và kỹ năng nghề nghiệp của bạn bằng cách nào?

17. Hiện bạn vẫn muốn cải thiện những khía cạnh cụ thể nào trong năng lực giao tiếp? Bạn sẽ cải thiện chúng như thế nào?

18. Bạn vẫn tiếp tục sử dụng các nguồn tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ trong việc học tiếng để nâng cao năng lực giao tiếp tiếng Anh cũng như để tăng cường kiến thức và kỹ năng nghề nghiệp của bạn phải không? Nếu đúng, bạn sẽ sử dụng thế nào?

19. Kế hoạch và mục tiêu học tập của bạn sau khi tham gia nghiên cứu này là gi? Bạn sẽ làm gì để thực hiện kế hoạch và mục tiêu đó?

20. Bạn có thể đưa ra những lời khuyên/gợi ý gì cho những học viên ngoại ngữ tiếng Anh người lớn Việt nam khác trong việc học tiếng Anh sử dụng các tài nguyên/môi trường học tiếng được tăng cường bởi công nghệ để nâng cao năng lực giao tiếp?

Authorized translation by:
Dr. Ngo Van Giang (Vietnamese national)
BA (English Language) and MA (English Linguistics), Hanoi University, Vietnam
PhD (TESOL Education), The University of Adelaide, Australia
Translator and Interpreter Educator and Vice Dean, Faculty of English Language
Head, Interpreting and Translation Division, Hanoi University, Vietnam
Mobile phone: (+84) 948618789; Email: gianghanuvn@gmail.com