ICT IN FOREIGN LANGUAGE TEACHING IN AN INNOVATIVE UNIVERSITY IN VIETNAM: CURRENT PRACTICES AND FACTORS AFFECTING ICT USE

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STATEMENT OF AUTHORSHIP

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis submitted for the award of any other degree or diploma.

No other person's work has been used without due acknowledgement in the main text of the thesis.

The thesis has not been submitted for the award of any degree of diploma in any other tertiary institution.

This thesis integrates the publications authored by me or with my supervisors during my candidature as listed below. Most of them have been drawn on and all uses acknowledged.

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List of Abbreviations

HANU	Hanoi University, Vietnam
ICT	Information and communications technology
CALL	Computer-assisted language learning
UTAUT	Unified theory of acceptance and use of technology
PE	Performance expectancy
EE	Effort expectancy
SI	Social influence
FC	Facilitating conditions
UTAUT 2	Extended unified theory of acceptance and use of technology
PTM	Pedagogy * technology model for information and communications technology integration in education
C-UTAUT-PTM	The combined unified theory of acceptance and use of technology and pedagogy * technology model
MOFA	Ministry of Foreign Affairs, Vietnam
MOET	Ministry of Education and Training, Vietnam
DOET	Department of Education and Training, Vietnam
VNNIC	Vietnam National Internet Centre
SPSS	Statistical Package for the Social Sciences
ANOVA	Analysis of variance
NVivo	A qualitative data analysis software produced by QSR International
NAATI	National Accreditation Authority for Translators and Interpreters
IELTS	International English Language Testing System (an international standardised test of English language proficiency)
EFA	Exploratory factor analysis
PCA	Principal components analysis
PA	Parallel analysis
PBAE	Positive beliefs, attitudes, experience
EOU	Ease of use
PBT	Perceived benefits for students
TPB	Teacher perception of benefits

DFT	Disadvantages for teachers
PFO	Pressure from others
LS	Leadership support
G	Guidelines
LA	Limited access
IT	ICT training
TP	Technical problems
BECTA	British Educational and Communications Technology Agency
USB	Universal serial bus (a flash drive for data storage)
TESOL	Teaching English to Speakers of Other Languages
TESL	Teaching of English as a second language
TEFL	Teaching English as a foreign language
UNESCO	United Nations Educational, Scientific and Cultural Organisation
OECD	Organisation for Economic Cooperation and Development
NETS	National Educational Technology Standards
ISTE	International Society for Technology in Education
BYOD	Bring your own device
MOOCs	Massive open online courses
ELT	English language teaching
ESL	English as a second language
EFL	English as a foreign language
ASEAN	Association of Southeast Asian Nations
BBC	British Broadcasting Corporation
ABC	Australian Broadcasting Corporation
CNN	Cable News Network
VOA	Voice of America
CD	Compact Disc
CD-ROM	Compact Disc-Read-Only Memory
EDO	English Discoveries Online
UK	United Kingdom
USA	United States of America
BC	Before Christ
AD	Anno Domini
N/A	Not applicable
n/a	Not available

ABSTRACT

*The aims of this study are to document current practices of ICT in teaching foreign languages and investigate major factors influencing ICT use by teachers of foreign languages in one innovative university in Vietnam. The research uses the unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003) and Lin, Wang and Lin's pedagogy * technology model (2012) as the main theoretical frameworks to better understand and explain what teachers are doing with ICT and which factors encourage or discourage their ICT usage. A mixed methods approach was employed, starting with a survey of language teachers (n = 222), then semi-structured interviews with senior university leaders (n =18), classroom teachers (n = 23) and ICT support staff (n = 2). The study shows that a majority of teachers used ICT for lesson preparation and classroom teaching but their usage was restricted to some frequently used applications and practices such as word processing, PowerPoint presentations, Internet search and downloading. Their usage was affected by 11 major factors. Those factors were initially categorised as 7 barriers (lack of adequate ICT training, disadvantages for teachers, lack of leadership support, limited access to ICT facilities, pressure from others, technical problems and lack of guidelines) and 4 enablers (positive beliefs, attitudes and experience, ease of ICT use, teacher perception of ICT benefits and perceived ICT benefits for students). Positive beliefs, attitudes and experience plus ease of use are the strongest predictors of ICT use. It emerged that the 'barriers' mentioned above positively related to ICT use, meaning that they did not prevent usage. The more engaged teachers were with ICT, the more aware they became of the challenges. Consequently 'barriers' need to be re-classified as challenges to ICT use, which users overcome. The findings suggest a need for dissemination of good ICT practices and teacher-specific professional development programs, emphasising effective pedagogical use of ICT. The UTAUT model reveals facilitating conditions and effort expectancy as the dominant influencing factors while the pedagogy * technology model discloses the current scope of ICT use ranging from level 1(non-use) to level 5 (customising multimedia resources) on the technological dimension, and from direct teaching (level A) to cognitively active learning (level B) on the pedagogical dimension. This study makes substantial contributions by adding the pedagogy * technology model to expand the construct of "use behaviour" in UTAUT into technological and pedagogical uses of ICT for lesson preparation and classroom teaching; and providing updated knowledge about ICT practices and key factors affecting ICT use in teaching foreign languages at tertiary level in a less studied country such as Vietnam. The study suggests that models of technology acceptance may not work in the same way for all professions and may work differently according to beliefs, attitudes, experiences and cultures of participants.*

Keywords: Information communications technology (ICT), ICT use, factors affecting ICT use, UTAUT, pedagogy * technology model, foreign language teaching, higher education, Hanoi University (HANU), Vietnam

Chapter 1: INTRODUCTION

In order to set the scene for the study, this chapter starts with an overview of ICT usage in education in the world and its spread to Vietnam. Next, the term ICT which is used in the thesis is defined to set the scope of ICT coverage. Then the introduction of the specific context of ICT in foreign language teaching in Vietnam is introduced against the background of the current socio-economic situation, pedagogical contexts and ICT policy directions. This will facilitate a better understanding of later arguments regarding current practices and factors affecting ICT use in higher education in Vietnam.
Three primary aims of the study, two main research questions and the significance of the study are briefly presented. Finally, the organisation of the thesis is described to provide readers with an overall picture and key points in each chapter.

1.1 Background

The past three decades have seen the widespread use of information and communications technology (ICT) in different aspects of society and especially in educational systems in both developed and developing countries (Kusum Sharma et al., 2011; Nguyen & Le, 2011b; Peeraer & Van Petegem, 2012b; Plomp, Anderson, Law, & Quale, 2009; Sarkar, 2012; Tedla, 2012). The increased use of ICT is a trend in higher education in the 21st century (Chowcat, Phillips, Popham, & Jones, 2008). ICT has the potential to work as a catalyst for the transformation of education and the enhancement of teaching and learning quality as well as being a decisive driver for the socio-economic growth of a nation (Brack, Samarawickrema, & Benson, 2012; Levin & Wadmany, 2008; MOET, 2008c; Sarkar, 2012).

The use of information and communications technology in teaching and learning provides both opportunities and challenges (Fu, 2013). In the area of foreign language teaching and learning, these opportunities can range from access to online authentic resources, pronunciation drills and text manipulation to interactive practice through collaborative and communicative applications. On the other hand, challenges can include a lack of ICT skills, of knowledge about ICT integration and of support for

teachers and students (Davies & Hewer, 2012; Park & Son, 2009; Warschauer & Healey, 1998).

In this study, teachers' use of ICT in a Vietnamese university will be outlined and factors affecting ICT use in foreign language teaching will be examined.

Definition of term ICT

The term ICT has different definitions. It may refer to educational tools that facilitate learning outcomes (Drent & Meelissen, 2008) including the use of computers, digital cameras, the internet and the World Wide Web (Davies & Hewer, 2012; Finger, Russell, Jamieson-Proctor, & Russell, 2007; Gillespie, 2006). ICT is also associated with computer-based and computer-related devices (Finger et al., 2007). In this study, the term ICT is restricted to describing computer-, and internet-based technologies, covering both generic software applications (e.g. word processors, presentation software, email packages, web browsers, search and download) and computer-assisted-language-learning (CALL) software applications plus websites useful for teaching foreign languages (Davies, Walker, Rendall, & Hewer, 2012).

Vietnam as an overall context of the study

Vietnam is a fast emerging country in South East Asia with a GDP growth rate of approximately 7% per annum for the past few years (BBC, 2013; McCool, 2006; The Chronicle of Higher Education, 2013; U.S. Department of State, 2012; United States Department of Agriculture, 2013; Welle-Strand, Vlaicu, & Tjeldvoll, 2013). Recently, the country has been speeding up its integration into the world economy. To date, Vietnam has joined 63 international organisations, including the World Trade Organisation (2007), the Asia-Pacific Economic Cooperation Forum (1998), the Asia-Europe Meeting (1996), the Association of South East Asian Nations (1995), and so on. Vietnam has set up diplomatic relations with almost all countries in the world, and has relationships with 650 non-government organisations (MOFA, 2013).

In this process of international integration, foreign languages play an essential role (MOET, 2008a). Foreign languages serve as a bridge connecting Vietnam with the outside world, and help Vietnam in economic, cultural and educational cooperation with other countries.

At the national level, the Government of Vietnam has given full support to the teaching and learning of foreign languages in general, and of English in particular. This can be seen in the extensive legal documents issued recently, which aim to create favourable environments for teaching and learning foreign languages. Some of those crucial documents include:

- Resolution No.40/2000/QH 10 of the National Assembly of Vietnam on curriculum reform in schools (National Assembly of Vietnam, 2000), resulting in the establishment of the project on foreign language teaching and learning in schools up to the year 2010;
- Directive No.14/2001/CT-TTg issued by the Prime Minister on 11 June, 2001 to reform the curriculum and textbooks in schools, including the contents of foreign language teaching and learning in schools (Prime Minister of Vietnam, 2001);
- The Government Report at the 6th Session of the 11th National Assembly of Vietnam (Government of Vietnam, 2004) emphasising pro-active international cooperation in education, confirming English as a key foreign language, and allowing some subjects to be taught bilingually (both in Vietnamese and in a foreign language) at universities;
- 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 (MOET, 2008b).
- Resolution No.10/2011/QH13 on the 5-year socio-economic development plan of Vietnam for the period 2011-2015 (National Assembly of Vietnam, 2011).

According to the revised Education Law 2005 of Vietnam (National Assembly of Vietnam, 2005), foreign languages which are selected to be taught in the national educational system are the languages widely used in international transactions. The main language in the international transactions of Vietnam is English, despite the use of other languages such as Chinese, French and Russian as a result of historic, political and economic influences (Nguyen & Le, 2011a; N. Nguyen, 2012; Wright, 2002). English is therefore the key foreign language taught in the Vietnamese education system (Ly & Thu, 2011; Nguyen & Le, 2011a; Phan, 2009; Prime Minister of Vietnam, 2008). Nearly 99% of students choose to study English in lower and upper secondary schools (MOET, 2008c). Thus, the quality of English teaching and learning is of great

significance to the quality of foreign language teaching and learning in Vietnam as a whole. For that reason, many examples in this study are about ICT use in English teaching and learning.

In Vietnam, ICT has grown remarkably since the introduction of the internet in the late 1990s (National Steering Committee on ICT & Ministry of Information and Communications, 2010; Vietnam National Internet Centre -VNNIC, 2013). The internet infrastructure is being continuously developed and is expanding rapidly. In 1998, Vietnam began to deploy internet services mainly in big cities and had only 10,000 internet users (Miniwatts Marketing Group, 2009). As of May, 2013 the number of internet users had jumped to over 48.3 million people, accounting for more than 55.2% of the Vietnamese population (Vietnam National Internet Centre -VNNIC, 2013) and there is no sign of this expansion stopping. Now all 63 provinces in Vietnam have internet access (MOET, 2008b). The Ministry of Education and Training of Vietnam (MOET) is cooperating with Viettel Military Telecom Corporation to deploy free broadband internet connections to all 63 provincial Departments of Education and Training (DOETs). By 30 October, 2008, an optic fibre network had been connected to all DOETs, continuing education centres and community-based education centres. As announced in Directive No.55/2008/CT-BGDĐT, by 30 June, 2009 all Vietnamese universities and colleges had been connected to the optic fibre network at preferential costs (MOET, 2008b). Viettel Military Telecom Corporation offers free internet connection via mobile phones to DOETs in remote and isolated areas. By 31 October, 2008, all educators, teachers, and students had been provided with free email accounts using a unified education domain name @edu.vn.

To facilitate teachers' use of ICT in teaching, MOET has provided a wide range of digital resources on its website http://edu.net.vn/media. Here teachers can find authoring tools such as Moodle, Adobe Presenter 7, Microsoft LCDS 2.2, LectureMaker and Articulate Studio 09. There are also other audio and video editing, presentation and web conferencing applications. At the same site, teachers are also offered advice about internet search skills, educational software programs to develop teaching materials, and e-books about different subjects. There is also a forum called 'Teachers' Club' to facilitate exchange of teaching experiences. Additionally, teachers can find educational resources in the ViOLET online library for e-teachers (ViOLET Online Library, 2012).

As in other parts of the world such as the UK (Chowcat et al., 2008), Europe (Korte & Hüsing, 2006) and the USA (Paige, Hickok, & Patrick, 2004), Vietnam places high expectations on ICT in education in the hope of enhancing the quality of teaching and learning (Nguyen & Le, 2011b; Peeraer, Tran, & Tran, 2009). As a result, the school year 2008-2009 was chosen by MOET as "the Year of ICT" (Peeraer & Van Petegem, 2010, p. 916).

Vietnamese training institutions at all levels have found their own ways to introduce ICT into the curriculum. Starting in big cities and provinces, then spreading out to smaller provinces, universities have made special efforts to equip themselves with ICT resources, e.g. desktop computers, data projectors, internet connections, educational software, e-libraries, the development of online foreign language training programs and their own websites and intranets (Cisco Systems, 2001; Do, 2008; Smith, Toulmin, & Qiang, 2003).

Nearly all 215 colleges and 204 universities in Vietnam have ICT infrastructure and have used ICT in teaching and learning activities (MOET, 2012). Regarding ICT for English teaching, New English Discoveries Online is currently used at Hanoi University (EduSoft, 2013) and a similar online program, Dynamic English, is employed in other universities. Apart from those online language learning programs, teachers and students can exploit many other websites offering free English materials for grammar, pronunciation, vocabulary, listening, speaking, reading and writing skills, translation and online forums, e.g. www.tienganhonline.com, www.tienganh.com.vn, www.tienganh123.com, www.englishtime.us, and www.lopngoaingu.com.

Vietnamese pedagogical contexts and foreign language teaching

As language and culture are closely connected (Baker, 2012), a good understanding of cultural context can contribute to a better understanding of how a foreign language is taught in that particular context. Different cultures have different approaches to teaching and learning foreign languages. Therefore, in order to have a satisfactory understanding of teaching and learning in a particular culture, it is useful to consider that "What one culture values should not result in devaluing other cultural practices, which may present similar qualities in different ways." (Phan, 2004, p. 57).

The culture of teaching and learning in Vietnam has been historically influenced by Confucianism, which is characterised by filial piety (i.e. respecting parents and elders),

strict discipline and proper behaviour (Hofstede, Hofstede, & Minkov, 2010; Nguyen & Le, 2011b; Nguyen, 2008; Vietnam-Culture, 2013). Under this influence, teacher-centred methods are common (Kramsch & Sullivan, 1996; Pham, 2011a; Trinh, 2005). Regarding the area of foreign language teaching, teachers are the centre of the teaching and learning process and are expected to play several key roles: i) as major providers of information and knowledge about target language skills (e.g. listening, speaking, reading and writing) and language components (grammar, vocabulary and pronunciation), presenting models of foreign language standards and usage in the classroom; ii) as feedback givers, providing comments on students' language practice and performance, knowing most answers to students' questions; iii) as mistake correctors, remedying target language mistakes that students make; iv) as evaluators, giving marks on students' work; and v) as mentors, being role models for students in terms of morality, manners and behaviours (Phan, 2004; Trinh, 2005).

Under the impact of globalisation, internationalisation of higher education, intercultural communication and the overseas training of Vietnamese teachers, Western teaching styles have found their ways into the Vietnamese pedagogical context (Nguyen, Terlouw, & Pilot, 2005). The new styles promote a student-centred approach, student autonomy and collaborative learning. In these styles, teachers work as facilitators, who create favourable conditions for students' learning. In some Asian countries with Confucian Heritage Culture, despite the influence of the student-centred styles as mentioned above, the deeply-rooted teacher-centred methods seem to be predominant (Nguyen et al., 2005, p. 416). This appears to be the case for Vietnam as well. Teacher-centred teaching styles are common in foreign language classes in Vietnam, focusing more on language knowledge than on the use of language skills. Learning tends to be exam driven. In these classrooms, students sit in rows, are expected to listen to teachers, copy teachers' models and answer questions only when asked (Le, 2001; Pham, 1999; Trinh, 2005). Nevertheless, despite the popularity of the teacher-centred methods as indicated above, there is an emerging growth of student-centred approach in higher education in Vietnam (T. H. T. Pham, 2010).

Some studies from other parts of the world show that there is a significant difference in ICT competence, i.e. ability to use various ICT applications for different purposes in a complex situation (Rychen & Salganik, 2001; Van Braak, 2004), and confidence, i.e. perceived chance of success with ICT use (Peralta & Costata, 2007), between males and

females with higher levels of ICT use being reported more frequently by males (Jamieson-Proctor, Burnett, Finger, & Watson, 2006; Kay, 2006; Wozney, Venkatesh, & Abrami, 2006). However, in the field of foreign language teaching and learning in Vietnam, it is observed that female teachers and students (often accounting for 70-80%) tend to outnumber male counterparts (only 20-30%). If the findings from other parts of the world are valid internationally, this proportion may imply that ICT may be used less frequently in foreign language teaching in Vietnam. Alternatively, the general support for ICT innovation in Vietnam may overwhelm any gender-based differences observed in other countries.

ICT policy directions in Vietnam

Expressions of full support from the Vietnamese government for ICT in education and in foreign language teaching and learning can be found in various legal documents that have been issued to create a favourable environment for ICT uptake in education.

According to the 14th draft of the Strategy of Education Development for Vietnam (MOET, 2008a), a learning society is to be shaped in Vietnam with 9,000 community-based learning centres, 700 continuing education centres at the provincial and district levels, and 1,300 ICT centres nationwide. As of July 2008, there were 163 universities in Vietnam, with 24 advanced training courses conducted in English at 17 universities.

The 14th draft of the Strategy of Education Development for Vietnam (MOET, 2008a) set an ambitious vision that by the year 2015, 80% of school teachers and 100% of college and university teachers will be able to use ICT effectively in their classroom teaching. More e-libraries will be set up to be shared by and connected with other universities in the country, the Asian region and the world. One of the national key projects on education and training is to develop strong ICT human resources and boost ICT use in education throughout the nation by the year 2020. Vietnam's education system is working hard towards fulfilling this and related ambitious visions:

> By the year 2020 at least five Vietnamese universities will appear among the top 50 universities in the ASEAN region, and two Vietnamese universities will be ranked among the top 200 universities in the world. By 2015, four world-class universities will be established in Vietnam. (MOET, 2008b)

As a key document, Directive No. 55/2008/CT-BGDĐT is seen as the turning point in the area of strengthening ICT use in education in Vietnam for the period 2008-2012 (MOET, 2008b). This Directive set favourable conditions for ICT use in the national education system. First, all universities and colleges have been required to create and develop their own websites to support their teaching, learning, administration and management. Second, as stated above, an email system with a unified education domain name @edu.vn has been established free for teachers, students and administrators easing communication in the education environment. Third, ICT has been strongly promoted for teaching and learning to help transform the quality of education. Specifically, teachers have been encouraged to prepare presentations in PowerPoint format, develop e-lectures, then upload those materials to the websites of their respective institutions or share them via the MOET website. Fourth, e-learning deployment has been strongly promoted. Teachers have been supported in preparing e-learning materials (MOET, 2007) encompassing any application of ICT in teaching and learning, ranging from word-processed hand-outs, to online learning and distance learning (Davies & Hewer, 2012). Fifth, ICT training workshops for teachers and administrators have been conducted via teleconferencing or web-based seminars to save the time and costs of travelling. Sixth, a shared database has been set up on the MOET website, including such resources as e-books, lesson plans, PowerPoint presentations, lecture notes, objective tests and educational software. Seventh, focus has been given to research on how to enhance teaching and learning with ICT, taking into consideration international practices using ICT in education (MOET, 2008b).

In 2008, the Prime Minister issued Decision No.1400/QD-TTg on the approval of the Project on Teaching and Learning Foreign Languages in Vietnam for the period from 2008 to 2020 (Prime Minister of Vietnam, 2008). The Decision focussed on professional development for teachers, ICT use in teaching and learning foreign languages, investments in teaching facilities, e.g. ICT equipment and software and multimedia language labs. A large amount of capital was allocated for this project, i.e. 1,060 billion Vietnamese dong (about 55,020,477 Australian dollars) for the period, 2008-2010, and 4,378 billion Vietnamese dong (about 227,245,035 Australian dollars) for 2011-2015, and 4,300 billion Vietnamese dong (about 223,196,356 Australian dollars) for 2016-2020.

Resolution 40/2000/QH paved the way for the promotion of ICT use in teaching and learning (National Assembly of Vietnam, 2000). To create favourable conditions for implementation, the National Assembly of Vietnam (i.e. the Vietnamese Parliament) has decided to annually allocate 20% of total expenditure from the State budget for education and training (Ministry of Finance, 2012; National Assembly of Vietnam, 2004).

The above-mentioned legal documents have paved the way for increasing usage of ICT in teaching and learning foreign languages in Vietnam. It can be argued that those policies also put considerable pressure on teaching staff to use ICT in their teaching. As can be seen from ICT experience in other countries, while ICT usage may come easily for some teachers, others have to struggle and may use it only perfunctorily (Haydn & Barton, 2007; Phillips, 2002; Zhao & Frank, 2003; Zhao, Pugh, Sheldon, & Byers, 2002). In the case of Vietnam, ICT use by teaching staff seems to be varied and still limited (Peeraer & Van Petegem, 2010).

1.2 Aims of the study

To the best of my knowledge, to date, there has been little research into ICT use and factors affecting ICT use in university foreign language teaching in Vietnam. Therefore, this study has three primary aims: i) documenting current ICT practices in foreign language teaching by teaching staff at Hanoi University (HANU); ii) investigating teachers' perceptions of factors influencing ICT use in foreign language teaching; and iii) identifying implications for successful ICT integration into foreign language teaching at tertiary level in Vietnam. The findings will possibly be applicable to other training institutions with appropriate consideration of local contexts.

1.3 Research questions

In order to fulfil the aforementioned aims, a case study was designed to investigate current practices and factors influencing ICT use in teaching foreign languages in a public university in Vietnam. Following are the two main research questions:

Question 1: What is the current use of ICT by teachers of foreign language at Hanoi University (HANU)?

- Which ICT facilities are available at HANU?
- Which types of ICT (e.g. software, facilities, websites …) are HANU teachers using to teach different subjects/skills in languages?
- How are HANU teachers using those ICT facilities?
- How do HANU teachers learn ICT skills?
- What are HANU teachers' suggestions for successful integration of ICT in foreign language teaching in the future?

Question 2: Which factors affect teachers' use of ICT in foreign language teaching at HANU?

- What are teachers' perceptions about factors which encourage or facilitate teachers' use of ICT in foreign language teaching at HANU?
- What are teachers' perceptions about factors which discourage or hinder teachers' use of ICT in foreign language teaching at HANU?

1.4 Significance of the study

In terms of theoretical significance, the study contributes to the baseline unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003) by embedding the pedagogy * technology model for information and communications technology integration in education (Lin, Wang, & Lin, 2012) to expand the core construct of 'use behaviour'. In light of the way that the UTAUT model is often applied in the workplace, use behaviour seems to be viewed as a monolithic entity. In the context of university teaching in this study, pedagogy plays an essential role in determining the use of ICT. Yet, there is no explicit acknowledgement of pedagogy in the UTAUT. In this study, the combination of the pedagogy * technology model for teachers' ICT integration (Lin et al., 2012) could provide a more powerful view of both technological uses (8 levels) and pedagogical uses (4 levels) of ICT by teachers.

This study contributes to the world knowledge of ICT integration into teaching by adding evidence-based information of ICT use in teaching foreign languages at tertiary level in a less studied country such as Vietnam. The results of this study when combined with those of other studies in the world lead to a better understanding of ICT integration into teaching and learning worldwide.

Research has shown that the quality of ICT use in teaching and learning is closely related to teachers' teaching styles, types of assignment and lesson designs (Levin & Wadmany, 2008). Therefore, a better understanding of teachers' ICT practices and factors affecting their use can contribute to more successful ICT integration and development of ICT plans which can better meet the needs of language teachers in Vietnam.

In this study, adding the two dimensional model to the UTAUT model provides a more detailed framework to interpret teachers' use of ICT along two dimensions: first, technology and second, pedagogy. This approach means that the influencing constructs in the UTAUT model need to be considered in relation to two dimensions: technology competence and pedagogy competence. In addition, the pedagogy * technology model may offer teachers different options of progression with ICT thanks to the flexible combination of the technological and pedagogical dimensions.

The study points to the need for more attention to the pedagogic use of ICT in teaching foreign languages as a feature of theorising acceptance. In this thesis, I will explore the extent to which current ICT use by teachers of foreign languages at HANU supplements traditional, teacher-centred teaching styles rather than being associated with any transformative change in teaching practices.

Knowledge of the major factors affecting ICT use by teachers can be of value to different stakeholders, i.e. policy makers, university leaders, ICT coordinators, university teachers and ICT theorists. The study provides empirical evidence to assist them to develop relevant strategies for innovative and transformative integration of ICT into teaching and learning in general and foreign language teaching and learning in particular.

1.5 Thesis organisation

The thesis consists of six chapters and eleven appendices.

Chapter One has set the scene by providing background to the key issues in the area of ICT use in foreign language teaching in Vietnam, followed by the aims of the study, the main research questions, the significance of the study and the organisation of the thesis.

Chapter Two critically reviews available literature surrounding ICT use in teaching foreign languages and the main factors influencing use of ICT at teacher and institutional levels. The term ICT as it is used in this thesis is defined in this chapter. Next, the main theoretical framework of this study is introduced, i.e. the combination of the baseline unified theory for acceptance and use of technology (UTAUT) of Venkatesh et al. (2003) and the technology * pedagogy model for information and communications technology integration in education of Lin et al. (2012) .

Chapter Three identifies the research paradigm, research design, the methodology and the methods used in the study as well as reports the results of a pilot study. The research site (Hanoi University) is introduced to provide a clear view of the chosen location. The process of data collection and analysis is then explained, followed by consideration of the issues of reliability, validity, and ethics during the process of research.

Chapter Four reports the key results of the analyses of both quantitative and qualitative data regarding ICT use in foreign language teaching and major factors affecting usage. The practical steps involved in conducting statistical tests are described to explain how the results are developed. Interview data are used to exemplify and develop quantitative findings.

Chapter Five focuses on in-depth discussion and elaboration of the key results of the two research questions presented in Chapters One, Three and Four. The theoretical framework (presented in Chapter 2) is used to interpret the results. Specifically, the technology * pedagogy model of Lin et al. (2012) helps decipher teachers' usage of ICT and the UTAUT model of Venkatesh et al. (2003) helps identify major factors influencing ICT use.

Chapter Six summarises the key findings of the study about ICT use and the main factors affecting teachers' use of ICT in teaching foreign languages at HANU. On the basis of these results, implications are presented with the focus on pedagogy. Some limitations of the study are identified, resulting in recommendations for possible future research. Finally, key conclusions are drawn.

Chapter 2: LITERATURE REVIEW

2.1 Introduction

This chapter critically reviews available literature related to: i) different uses of ICT in teaching and learning foreign languages; ii) factors influencing ICT use, which can be grouped within teacher level and institutional level factors; and iii) the theoretical framework which is used in this study to understand teachers' ICT use and factors affecting it. A majority of the reviewed literature comes from Western and developed countries where educational systems and ICT facilities tend to be of better quality than those in Vietnam which is still a developing country. However, I have made a special effort to include relevant literature about ICT use in developing countries in Africa and Asia reflecting similar contexts to Vietnam.

The purpose of this review is to establish what is known about impacts on teachers' decisions to integrate ICT into their teaching. One of the key issues to be explored is whether teachers' decision-making can be accommodated within existing technology acceptance models. The first issue to explore is the potential range of options that may be connected with educational uses of ICT.

2.2 ICT tools for foreign language teaching and learning

Students today, especially in Western contexts, grow up with many technologies around them and prefer using ICT in their learning (Tapscott, 2009). Current college and university students are often labelled as digital natives (Prensky, 2001) or the Net Generation (Oblinger & Oblinger, 2005) since they live with technology from birth. In other words, ICT is intertwined with their ways of living and learning (Kvaivk & Caruso, 2005; Oblinger, 2005a, 2005b; Oblinger & Oblinger, 2005). This context creates pressures for teachers to adapt to the ways students learn by including computers and resources accessible on the internet in their teaching (Prensky, 2001), but teachers may not make decisions based solely on their perceptions of their students' desires.

2.2.1 Different uses of ICT in foreign language teaching

With its extensive and varied potential applications, ICT can be an effective medium for language teachers. The literature reveals various ways ICT is used to facilitate foreign language teaching and learning. These include its use as a: location and retrieval tool (Davies & Hewer, 2012), material creation tool (Rendall & Davies, 2012), interaction tool (Newhouse, 2002), teaching tool (Peeraer & Van Petegem, 2012b), communication tool and collaborative learning tool (Chen, 2012; Davies & Hewer, 2012; Newhouse, 2002; Schank & Cleary, 1995; Stevenson, 2008). The uses of these tools are elaborated in more detail below.

Location and retrieval tools: It is common for teachers to search the internet for available learning materials to support their preparation and teaching (Scrimshaw, 2004). Accessing information and knowledge is seen as one of the most important uses of ICT (Lewis & Goodison, 2004). Internet access allows teachers to retrieve different types of digital resources, for instance: lesson plans; e-books; photos; audios and videos (Do, 2013; Kirkwood & Price, 2013 - in press). Popular search engines include Google, Bing and Yahoo (Davies & Hewer, 2012). Popular sites are YouTube, TeacherTube, TV and radio channels, and so on (X. T. Dang, 2012).

Material creation tools: Teachers can use ICT tools to create customised learning materials from digital resources accessible on the internet (Lewis & Goodison, 2004). Word processing and presentation applications are frequently used tools (Aydin, 2013). Word-processors can help teachers design different types of activities for language practice such as flashcards, vocabulary exercises, grammar practice activities, re-ordering exercises, gap-filling exercises, cloze exercises, matching exercises and multiple choice exercises. Presentation software enables teachers to make appealing resources for the whole class to focus on including the possible insertion of animated text, images, audio and video clips into slides (Rendall & Davies, 2012). Some authoring programs (e.g. Hot Potatoes, TaskMagic and Fun with Texts) provide ready-made templates for teachers to create activities involving gap-filling, re-ordering jumbled words, sentences and paragraphs, matching exercises and interactive games (Camsoft, 2012; Half Baked Software, 2013; TaskMagic, 2013). Moreover, audio and video editing tools (e.g. GoldWave, Sound Forge, JetAudio and CyberLink) help teachers to record and make changes to audio and video files such as splitting audio and video files into smaller pieces or merging them into a larger file, adjusting voice speed

and creating sound/video effects (CyberLink, 2013; GoldWave, 2013; JetAudio, 2013; Sony Creative Software, 2013). There are other material-generating tools such as screencasting to make videos by screen recording (Screencast-O-Matic, 2013; TechSmith, 2013a, 2013b), e-lecture tools that merge videos with teaching points in the same slide (Daulsoft, 2013; LectureMaker, 2013), movie making (Microsoft, 2013; Softsonic, 2013), mindmapping to visualise the flow of ideas (ThinkBuzan, 2013) and the like.

Interaction tools: ICT supports human-computer interaction which here refers to the relationship between technologies, their uses and users' purposes (Sarmento, 2005). The instructional content is either pre-packaged in CD-ROMs or web-based. Interaction can be context-sensitive or based on pre-programmed stimulus and response. Students can control the pace of interaction while teachers take care of appropriate access, selection of materials as well as software or websites suitable for students (Newhouse, 2002). Students can choose their own time and place of study as well as their desired pace of learning (Griffin, Mitchell, & Thompson, 2009) and the computer tutor can tirelessly provide students with responses and feedback. However, this type of ICT use is expensive because each student needs a computer for individual practice.

Teaching tools: Classroom teaching can be facilitated by having a computer connected to a data projector to show materials that teachers have prepared in advance (Peeraer & Van Petegem, 2012b; Ward & Parr, 2010). PowerPoint or Keynote presentations are commonly used, projecting slides embedded with sounds, videos or still images on a screen. Recently Prezi has become a popular presentation application with zoom-in and zoom-out effects, appealing to young students (Prezi, 2013). The tools work as a teacher aid to support teacher-student interaction or student-student interaction (Newhouse, 2002).

2.2.2 Awareness of possible disadvantages of ICT in teaching

While many potentially positive dimensions of ICT have been discussed above, there also exist some cautions or negative perceptions about the use of ICT in education. Critical arguments concentrate on two main issues: access to too much information and the detrimental effect of ICT use on learners.

It is undeniable that connection to the internet facilitates students' access to extensive information and knowledge on the web (Davies & Hewer, 2012; Hung & Jeng, 2012).

Yet, some critics argue that much of online information is of poor quality and that too much information is even counter-productive. Massive information is likely to result in unprocessed information, information overload, intellectual inertia or information obesity (Whitworth, 2009) and consumption of information before proper evaluation of its worth (De Botton, 2009; Selwyn, 2011).

There are also claims about possible detrimental effects of ICT use on students' general intellectual abilities, thinking and learning (Carr, 2011; Keen, 2011). It has been claimed that in the present era of instant information, common learning styles among current generations of students seem to include taking search-engine results as gospel and using cut and paste without evaluation (Keen, 2011). In consequence, it is argued that as students become dependent on ICT, they lose the ability to learn for themselves and their concentration ability is shortened (Carr, 2011; Keen, 2011). Consequently, current generations of students have been described as shallow learners who study less effectively than pre-ICT generation students (Kolikant, 2010). It has been argued that the internet and Google 'think' for today's students, leaving them with no in-depth thoughts of their own (Carr, 2011). On another note, computers and the internet are seen as making it easier for students to engage in academic dishonesty such as plagiarism (Taylor, Parker, Lenhart, & Patten, 2011). These issues may be why some teachers are cautious about ICT use.

These perspectives suggest that there is a need to acknowledge both advantages and disadvantages of ICT use to understand why some teachers are enthusiastic about ICT, whereas others feel uneasy about it (Perrotta, 2013). Most of these concerns seem to be based on conjecture and supposition rather than empirical evidence (Selwyn, 2011) and they have not prevented teachers from using ICT in their teaching. It is therefore necessary to develop a better understanding of what affects teachers' use of ICT in their work rather than blaming individual teachers for not embracing ICT in their classroom practices (Perrotta, 2013).

The next section of the review examines factors which influence university teachers' ICT use to set the scene for the study, contribute to the development of a questionnaire and later help in the interpretation of the results of the data analyses.

2.3 Factors influencing ICT use

ICT has become an integral part of education and therefore is being increasingly integrated into teaching and learning all over the world (Buabeng-Andoh, 2012; Rozgiene, Medvedeva, & Straková, 2008). In relation to foreign languages, ICT has evolved from a marginal contribution to an effective factor in successful learning (Murray, 2008). However, these advantages are not the only influence on teacher decisions. Not all uses of ICT are equally accessible to all teachers and learners nor equally desired by them.

The results of the literature reviewed below show that teachers' use of ICT is affected by various factors that can be inter-related. Some factors exercise their influence at the teacher level, while others operate at the institutional level. In the discussion that follows, the teacher level factors will be presented first.

2.3.1 Teacher level factors

According to the literature, influencing factors at the teacher level can consist of teacher beliefs, attitudes, ICT competence and confidence, social influence, teachers' workload, teaching experience, age and gender. These factors will be illuminated one by one.

Beliefs

Of these factors, teachers' beliefs about the relevance and value of ICT for teaching and learning have the biggest impact on ICT use (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012b; Mama-Timotheou & Hennessy, 2013; Voogt, Fisser, Pareja Roblin, Tondeur, & Van Braak, 2012). It is important to understand teachers' beliefs because changes in teachers' beliefs are associated with changes in teachers' practices (Kagan, 1992; Ng, Nicholas, & Williams, 2010). Beliefs can be both technological and pedagogical.

Technologically, studies have demonstrated that rationales for teachers' use of ICT align with their beliefs. When teachers positively believe in the usefulness of ICT for teachers' and students' needs, they are more likely to integrate ICT into their work (Mirriahi, 2012). In contrast, when teachers have negative beliefs about ICT, they are unlikely to embrace it at all (Buabeng-Andoh, 2012; Ottenbreit-Leftwich, Glazewski, Newby, & Ertmer, 2010). ICT-using teachers are those who tend to believe that ICT is

the best available solution to help them achieve their teaching goals (Bai & Ertmer, 2008; Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012a).

Teachers' beliefs are consolidated by evidence derived from use, i.e. impacts of ICT use on teaching and learning. If the impacts are positive, teachers are more likely to incorporate ICT into classroom practices and vice versa (Ertmer & Ottenbreit-Leftwich, 2010; Mumtaz, 2000). Regarding the role of evidence, Hutchings, Huber and Ciccone (2011) argue that "the scholarship of teaching and learning is, at its core, an approach to teaching that is informed by inquiry and evidence (both one's own, and that of others" (p. 3). Positive results and improved quality of teaching as a result of the employment of ICT have been reported. Nevertheless, there has not been as much concrete evidence as might be assumed, despite extensive anecdotal evidence on the positive impacts of ICT on teaching and learning (Becta, 2007; Davies, 2012; Golonka, Bowles, Frank, Richardson, & Freynik, 2012; Newhouse, 2002; Trucano, 2005). Some concrete evidence includes:

- Students' pronunciation is improved as a result of the use of automatic speech recognition and their language production increases due to the use of online chat in foreign language learning (Golonka et al., 2012).
- Students' reading skills are enhanced by the use of e-books, which are perceived by students as more available, more portable and able to cultivate better reading habits than print-based texts (Huang, 2013).
- Students' practice opportunities and comprehension are improved due to increased inputs of new materials from the internet (Fox & Trinidad, 2007; Jump, 2011; Newhouse, 2002).
- Students learn more, learn faster, feel motivated and actively engage in interaction when ICT is used (Davies & Hewer, 2012; Lehtinen, 2010; Trucano, 2005).
- Use of ICT contributes to higher marks in national tests, greater interaction and collaboration between teachers and students, a wider choice of learning styles, more individual feedback from teachers, a supportive learning environment, better behaviour and attendance of students (Becta, 2006, 2007).

It is not an easy task to measure and justify the impact of ICT for a number of reasons. Some studies measure the ICT effects in the traditional setting rather than in ICT-enhanced learning environments, resulting in a mismatch (Trucano, 2005). For some studies, ICT is so well integrated into the teaching and learning process that it is nearly impossible to separate ICT usage from other factors (Newhouse, 2002). Hence, despite the positive impacts of ICT reported above, it is still not clear whether the enhancement is due to ICT use only or due to the good subject knowledge of the teachers or some combination of other factors (Davies, 2012; Newhouse, 2002). It is therefore difficult to mount an argument that the use of ICT separated from the use of particular pedagogies will improve the quality of student learning or teacher teaching.

Research has indicated that pedagogical beliefs can influence the way ICT is integrated in the classrooms (Ertmer, 2005; Ertmer et al., 2012b; Kim, Kim, Lee, Spector, & DeMeester, 2013) because beliefs have a filtering effect on information processing (Pajares, 1992). Teachers who hold different pedagogical beliefs associated with either teacher-centred or student-centred methods (Chan & Elliott, 2004) tend to incorporate ICT in their instruction in different ways. For example, teachers with teacher-centred approaches tend to use ICT in ways that mirror their teaching in a traditional classroom where new knowledge is passed from teachers to students. However, those who believe in student-centred approaches tend to exploit ICT in innovative ways to support collaborative and interactive learning to enhance students' learning (Kim et al., 2013). To fill in the spectrum between these two approaches is a continuum ranging from structured to open-ended learning environments respectively associated with direct learning, cognitively active learning, constructive learning and social learning (Kim et al., 2013; Lin et al., 2012). ICT alone does not change teaching practices but teachers (as ICT users) can (Loveless, DeVoogd, & Bohlin, 2001). Teachers are encouraged to incorporate ICT as meaningful pedagogical tools to facilitate students' learning (Ertmer & Ottenbreit-Leftwich, 2010). A shift in teachers' pedagogical beliefs in ways that embrace student-centred approaches would call for innovative uses of ICT for the enhancement of teaching and learning (Mama-Timotheou & Hennessy, 2013; Voogt, Knezek, Cox, Knezek, & Ten Brummelhuis, 2013; Wozney et al., 2006).

However, teachers' beliefs are also strongly related to personal factors such as subject matter knowledge, teaching experience and experience with schooling and instruction (Jimoyiannis & Komis, 2007; Richardson, 2003). Jimoyiannis and Komis (2007) argue

that “teachers of a younger age have been more exposed to technology than their predecessors” (p.168). The fact that their recent schooling is more likely to have engaged with ICT may explain why younger teachers tend to believe in ICT use (Buabeng-Andoh, 2012).

It is important to note that there seems to be a gap between teachers’ reported pedagogical beliefs and their observed practices with ICT in classrooms (Ertmer & Ottenbreit-Leftwich, 2010; Hennessy, Ruthven, & Brindley, 2005; Webb & Cox, 2004). In other words, teachers do not seem to practise what they pedagogically believe. For example, teachers may be strong believers in student-centred uses of ICT but their actual usage in the classrooms may demonstrate a teacher-centred approach. There are multiple potential reasons for this. Teachers may be drawn to the excitement of new ICT tools and therefore focus on learning how to operate these tools and improving their own ICT competence more than on supporting students’ interactions and learning (Petko, 2012). Another possibility could be that teachers use ICT tools for the functions and convenience offered by those tools rather than addressing students’ needs (Law & Chow, 2008).

ATTITUDES

Another essential determinant of ICT integration is teachers’ attitudes towards ICT integration into instruction. Attitude is a necessary condition for ICT use. Teachers who have positive attitudes are more likely to be willing to integrate ICT into their work, whereas teachers who have negative attitudes towards ICT tend to avoid using it (Drent & Meelissen, 2008; Fu, 2013; Hew & Brush, 2007; Sánchez, Marcos, González, & GuanLin, 2012). Attitudes of teachers towards ICT can be influenced by their previous experiences with ICT, their value beliefs or the perceived usefulness of such experiences (Huang & Liaw, 2005; Ottenbreit-Leftwich et al., 2010). Positive attitudes of teachers towards the usefulness or benefits of ICT for teachers’ teaching and students’ learning often foster ICT integration and negative attitudes often discourage or hinder ICT use (Jimoyiannis & Komis, 2007; Jones, 2004; Mama-Timotheou & Hennessy, 2013). Research has shown that teachers are likely to continue teaching with ICT if they have successful experiences with ICT. If they have experienced failure with ICT, resulting in embarrassment or loss of face, they are likely to resist using it (Aydin, 2013; Jones, 2004; Scrimshaw, 2004).

ICT COMPETENCE AND CONFIDENCE

A major predictor of ICT integration into teaching is ICT competence (Bordbar, 2010). The reviewed literature shows an inter-relationship between ICT competence and other enablers. For instance, technological competence can be improved by ICT training or professional development, which covers both informal self-training and formal training (Kessler, 2007), inclusive of ICT skills and the integration of ICT into subject teaching (Buabeng-Andoh, 2012; Scrimshaw, 2004). It is noted that professional development about ICT should be an on-going process rather than a one-off event so that teachers' ICT skills can be sustainable (Trucano, 2005). In turn, ICT training influences teachers' perceptions of the ease of use of ICT so that those who attend ICT professional development tend to have lower levels of computer anxiety and often perceive ICT as both useful and easy to use (Becta, 2004; Teo, 2011; Trucano, 2005). ICT competence is also a result of perceived self-efficacy, which refers to teachers' beliefs in their own abilities to use computers to achieve a goal (Bandura, 1997; Moos & Azevedo, 2009). Teachers who have high levels of self-efficacy tend to have higher levels of ICT competence (Holden & Rada, 2011). Perceived self-efficacy and perceived ease of use are regarded as significant enablers for teachers' engagement with ICT and lead to teachers' willingness to use ICT (Preston, Cox, & Cox, 2000; Yuen & Ma, 2008).

The more ICT use teachers experience, the more ICT competent they become, and the more ICT confident they feel. In contrast, lack of ICT competence causes lack of confidence, leading to teachers' avoidance of ICT use (Jones, 2004; Pelgrum, 2001; Zhao et al., 2002).

Teachers often express their lack of confidence about ICT use in relation to multiple sets of factors. The first set relates to provision of equipment and support. This set includes lack of access to ICT facilities limiting teachers' opportunities for ICT use (Cox, Preston, & Cox, 2000; Guha, 2003; Ross, Hogaboam-Gray, & Hannay, 1999); lack of technical support leaving technical problems unsolved (Cuban, Kirkpatrick, & Peck, 2001; Russell & Bradley, 1997) and lack of ICT training for both technological and pedagogical aspects, causing teachers' inability to operate ICT tools and to integrate ICT into teaching (Balanskat, Blamire, & Kefala, 2006; Buabeng-Andoh, 2012; Davies, 2002). In addition, there is a second set more associated with teachers' beliefs. For example, lack of confidence is often caused by a fear of failure (Beggs, 2000), a lack of awareness of the benefits that ICT can bring to teaching and learning (Preston et al.,

2000), negative attitudes (Jones, 2004; Sugar, Crawley, & Fine, 2004), doubt about the ability of ICT to enhance teaching and learning (Robertson, 2003; Trucano, 2005; Yuen & Ma, 2002) and resistance to change (Cuban et al., 2001).

Social influences

Although teachers have a large measure of control over their own ICT use, their decision can be influenced by their working environment (Grainger & Tolhurst, 2005). Bandura (2006) also argues that "people create social systems, and these systems, in turn, organize and influence people's lives" (p.164). A social system or an environment where there is a popular trend towards ICT use in teaching and learning is likely to lead to a common thought that ICT use is normal while ICT non-use is not (Selwyn, 2003). When computers and the internet are used by a majority of teachers in an institution, there is either pressure or an expectation for others to follow. Departmental networks of ICT-using teachers tend to influence ICT adoption of other teachers as well (Mirriahi, Dawson, & Hoven, 2012). As people tend to live up to the expectations of others in the same social environment (Rogers, 2003), when a teacher sees many colleagues using ICT, he or she tends to do the same.

In the conception of human development, adaptation and change, individuals in an environment are "contributors to their life circumstances, not just products of them" (Bandura, 2006, p. 164). Research indicates that in most contexts ICT use is voluntary rather than compulsory (Venkatesh, Thong, & Xu, 2012). In the area of education, teachers' use of ICT often remains a matter of individual agency, i.e. teachers make their own decisions whether to integrate ICT into their teaching or not (Kozma, 2008; Law, Pelgrum, & Plomp, 2008; Voogt & Knezek, 2008; Zhao & Frank, 2003). In addition, as indicated in relation to beliefs, teachers' decisions on ICT usage are found to be associated with their beliefs in ICT usefulness for their work and students' learning. Once teachers decide to use ICT in their teaching, they realise that their workload is affected (Buabeng-Andoh, 2012).

Workload

Teachers' increased workload hinders ICT use (Abuhmaid, 2011). Classroom teaching might seem to be the only task teachers have to do, but in fact that task alone requires teachers to do multiple other tasks, e.g. preparing for lessons, teaching, marking assignments and doing administrative work (Buabeng-Andoh, 2012; Chittleborough, Campbell, Hubber, & Tytler, 2012; Lim & Khine, 2006). This combination of tasks is

why teachers are well known for experiencing time constraints and heavy workloads. In that context, it is easy to understand that teachers often find it hard to find time to learn to manage new hardware and software or to attend formal ICT training (Fabry & Higgs, 1997; Jones, 2004; Schoepp, 2005). The use of ICT often takes time, first to learn how to use it, then to try using it. Furthermore, it takes time for teachers to search for relevant materials among the available resources, including those on the internet and it is time-consuming again to use ICT to create worksheets and/or presentation slides from downloaded materials (Lim & Khine, 2006; Mumtaz, 2000; Preston et al., 2000). In addition, the need for course maintenance, lesson preparation, replying to student emails and learning new ICT applications makes teachers' heavy workloads heavier (Samarawickrema & Stacey, 2007). Consequently, trying to incorporate new ICT applications into instruction while being overloaded with teaching responsibilities may result in "mere recycling of old practices in order to accommodate both pressure to change practices and overload creating the illusion of improved performance" (Abuhmaid, 2011, p. 206).

However, there is another stream of research showing that ICT can help reduce teachers' workloads. Selwood and Pilkington (2005) argue that at first it is time consuming to use ICT for material preparation. After that, those ICT-enhanced materials can be reusable or shared via an intranet so that preparation time can be saved. Mundane use of ICT cannot help teacher reduce workload but it has been calculated that effective usage (e.g. creating customised teaching materials of high quality, re-using and sharing them) can save about 3.25-4.55 hours per week for teachers (Selwood & Pilkington, 2005). Another study in Singapore (Lim & Khine, 2006) showed that when teachers work collaboratively in groups for lesson preparation with ICT, individual workloads can be reduced due to sharing by group members.

Some literature also demonstrates that teachers' workloads can be lessened by leadership support, giving teachers more time for ICT professional development, for lesson preparation using ICT skills and for classroom teaching with ICT, especially extending technical support to teachers with low levels of ICT competence (Abuhmaid, 2011; Yunus, Nordin, Salehi, Sun, & Embi, 2013).

AGE, GENDER AND TEACHING EXPERIENCE

Personal characteristics of teachers (i.e. age, gender and teaching experience) have an important impact on how easily teachers engage with ICT use (Buabeng-Andoh, 2012; Scrimshaw, 2004).

Age negatively relates to use; yet, age per se is not a significant factor influencing ICT use (Jones, 2004). There is an inter-relationship between age and ICT experience, which jointly impact intentions to use ICT (Venkatesh et al., 2012). Experienced teachers are likely to be older teachers, who seem to be less enthusiastic (than younger teachers) about ICT integration in their teaching (Rahimi & Yadollahi, 2011). Some possible reasons are listed. Veteran teachers (other than long-standing innovative teachers) are unlikely to feel motivated to change their long-standing pedagogical practices (Snoeyink & Ertmer, 2002), probably have little prior experience with ICT before becoming teachers (Jimoyiannis & Komis, 2007), lack ICT confidence and competence (Bingimlas, 2009; Snoeyink & Ertmer, 2002), lack a feeling of readiness for ICT integration (Inan & Lowther, 2010), may feel that it is difficult to learn new technologies (Morris, Venkatesh, & Ackerman, 2005; Tapscott, 2009) and consequently seem to be more resistant to change (Cuban et al., 2001).

There is contrasting evidence about teaching experience. A research project in Malaysia found that younger teachers had lower levels of ICT integration into teaching than older teachers (Lau & Sim, 2008). The reasons could be that while novices have good ICT skills, they may lack experience in ICT integration into teaching. Furthermore, in the early years of their career, new teachers often need to spend most of their time on familiarisation with curriculum and classroom management (Russell, Bebell, O'Dwyer, & O'Connor, 2003). More years of teaching experience may lead to increased understanding of subject knowledge and the ways students learn, which in turn could result in better quality ICT use and the increased attainment of students (Cox et al., 2003).

There are different research results regarding gender differences in ICT use. Many studies indicate that males are likely to use ICT more than females perhaps because men are reported to show more interest in technology than women (Volman & van Eck, 2001) and because ICT is sometimes associated with male culture (Irwin, 2000). However, interestingly, in recent years there has been an increasing number of female

teachers using (Adams, 2002). The gender gap in ICT use is also shrinking thanks to ICT professional development (Kay, 2006).

When age, gender and teaching experience are analysed independently in relation to ICT use, the common result from the reviewed literature is that male teachers of a young age, with little teaching experience tend to engage with ICT more than older, female veteran teachers. However, when age, gender and teaching experience are considered in relation to such factors as ICT competence, ICT professional development and teachers' beliefs, the differences appear to be more complex than the aforementioned one-to-one relationship. This is due to the interplay of more than two variables at the same time.

In addition to the influence of individual teachers on ICT use, there are also factors influencing teachers' use of ICT at the institutional level.

2.3.2 Institutional level factors

The literature indicates that successful integration of ICT into teaching is closely related to institutional level actions such as provision of leadership support, ICT training, increasing access to ICT facilities and technical support (Buabeng-Andoh, 2012; Scrimshaw, 2004; Tondeur, Van Keer, van Braak, & Valcke, 2008).

At the institutional level, the reviewed literature tended to associate influencing factors with leadership support (i.e. creating a favourable environment for ICT use), ICT professional development (i.e. training teachers to use ICT), access to ICT facilities (i.e. availability of ICT equipment for teachers to integrate ICT into their teaching) and technical support (i.e. helping solve technical problems during ICT implementation).

LEADERSHIP SUPPORT

In Confucian philosophy-influenced countries (including Vietnam) where there is strong power distance, support of senior leaders is a necessary condition for successful implementation of any activity in an organisation (Hofstede et al., 2010). Research in several countries supports the same view that strong support at the senior leadership level is a significant predictor of teachers' integration of ICT into teaching (Afshari, Bakar, Luan, Samah, & Fooi, 2008; Anderson & Dexter, 2005; Bosley, Krechowiecka, & Moon, 2005; Davies, 2010; Sheppard, 2003). The leadership support can be expressed via a shared vision of purposeful use of ICT to meet institutional goals or in

the expectations of institutional leaders about ICT integration (Buabeng-Andoh, 2012; Conlon, 2000; Evans, 2002; International Society for Technology in Education (ISTE), 2009; Kozma & Isaacs, 2011; Lim & Khine, 2006; Peeraer et al., 2009; Plomp et al., 2009). Leadership support can be embedded in ICT policies and plans guiding the directions of ICT use for the whole institution (Keengwe & Malapile, 2013; Kirkwood, 2013; Lee, Hung, & Cheah, 2008; Peeraer & Van Petegem, 2012a). Such documents give teachers a sense of the rationale for ICT use and the common goals to be achieved by the concerted efforts of teachers (Buabeng-Andoh, 2012; Firth & Mellor, 2002; Goktas, Gedik, & Baydas, 2013; Lee et al., 2008).

The highest frequency of ICT use in classroom teaching is recorded in institutions where there is an incentive and recognition system to reward teachers' integration of ICT into their work (Wastiau et al., 2013). The incentives can include financial methods such as prizes in competitions, financial rewards, and non-financial methods, for example public recognition, fewer hours of teaching, more hours of ICT training and installation of additional ICT equipment in the classroom (Wastiau et al., 2013). This kind of incentive system is thought to help create a momentum as well as maintain the motivation and dynamic engagement of teachers in ICT use (Mahdi, 2013).

Leadership support is a necessary but not a sufficient condition for the success of ICT integration in an institution. Research findings have shown that ICT policies are underdeveloped and underutilised (Tondeur, Van Keer, et al., 2008). ICT policies, vision and guidelines tend to be developed by institutional leaders without teachers' engagement or contribution. Teachers in a training institution with an explicit ICT policy have been found to use ICT more regularly in classroom teaching (Tondeur, Van Keer, et al., 2008). However, the actual content of the ICT policy and teachers' perception of the ICT policy are different. An ICT policy becomes an important enabler of ICT integration "only when teachers are aware of its content" (Tondeur, Hermans, Van Braak, & Valcke, 2008, p. 220).

The reviewed literature reveals that teachers in institutions which lack leadership support (e.g. lack of ICT policy, vision, guidelines and incentives) are unlikely to use ICT regularly in their classroom practices. That is because there is an absence of shared goals or rationale for ICT use, resulting in disconcerted implementation of ICT. Lack of

leadership support is a barrier to ICT integration (Gülbahar, 2007; Jones, 2004; Peeraer, 2013).

ICT PROFESSIONAL DEVELOPMENT

A major impediment to ICT integration is teachers' reluctance to change their existing pedagogy (Hennessy et al., 2005). ICT professional development for teachers is a major enabler of successful integration of ICT into teaching (Buabeng-Andoh, 2012; Scrimshaw, 2004). The advantages of ICT professional development are numerous, e.g. raising teachers' awareness of the availability of extensive ICT resources, updating the functionality of a wide variety of ICT applications, showing teachers how to operate those applications, resulting in teachers' increased self-efficacy, ICT competence, confidence and positive attitudes (Buabeng-Andoh, 2012; Drent & Meelissen, 2008; Peralta & Costata, 2007).

There can be different forms of ICT training, i.e. formal training courses organised by institutions, self-training by teachers in their own time or learning from peers (Kirkup & Kirkwood, 2005; Newhouse, Trinidad, & Clarkson, 2002; Perkins, 2010). For an ICT training course to be successful, it needs be on-site, on-going, work-embedded and conducted by peer teachers who are well known for good ICT practices (Borthwick & Pierson, 2008; Perkins, 2010). During the preparation of ICT training courses, teachers need to be involved to voice their real training needs, which need to be reflected in the training content (Lawless & Pellegrino, 2007).

Lack of appropriate ICT training is the key barrier to ICT use at the institutional level (Preston et al., 2000). Three issues seem to be associated with ICT professional development: i) due to time constraints and heavy workloads as indicated in the Section 'Teachers' workload' above, teachers tend to have difficulty finding time to attend formal ICT training courses; ii) ICT training tends not to be customised to teachers' existing ICT skill levels, and iii) the training content seems to focus on how to operate certain ICT applications rather than on how to integrate ICT into subject teaching (Buabeng-Andoh, 2012; Davies, 2002). As analysed above, lack of ICT training also leads to a lack of ICT competence, confidence and negative attitudes towards ICT use (Bauer & Kenton, 2005).

The reviewed literature reveals that ICT professional development seems to lean more towards technological uses than pedagogical uses of ICT. Yet it is argued that pedagogy needs to be placed before technology (Watson, 2001). It is essential to stress that training for ICT skills is necessary, however, it is more important to focus training on pedagogical uses of ICT (Brack et al., 2012). Then, teachers coming from different pedagogical perspectives will be provided with innovative ways of incorporating ICT into subject teaching to facilitate students' learning (Brack et al., 2012; Buabeng-Andoh, 2012; Scrimshaw, 2004; Trucano, 2005). When there is no guidance on pedagogical ways of using ICT in teaching and learning, innovation is unlikely to happen (Mumtaz, 2000).

ACCESS TO ICT FACILITIES

What is gained from ICT training is only valuable when it is put into use through access to ICT equipment either at home or in training institutions (Preston et al., 2000; Son, Robb, & Charismiadji, 2011). Access can be varied in different socio-economic situations. In many developed countries, there is high access to computers, the internet and other facilities, however ICT usage is not necessarily high (Cuban et al., 2001). In developing countries, low access – low usage seems to be common due to financial constraints (Koranteng, 2012; Peeraer & Van Petegem, 2011b; Saheb, 2005). Therefore, access is a necessary but not sufficient condition for successful integration of ICT into teaching since access by itself does not automatically lead to ICT use (Buabeng-Andoh, 2012; Plomp et al., 2009). However, teachers seem to incorporate ICT more in their classroom teaching when there is deployment of computers in the classrooms (rather than a concentration in a few computer labs), bookable ICT rooms, wireless internet connection, access to laptops and whole institution access to shared resources (Scrimshaw, 2004). High levels of access are likely to encourage teachers' use of ICT (Afshari, Bakar, Luan, Samah, & Fooi, 2009; Mama-Timotheou & Hennessy, 2013).

Due to the importance of the availability of ICT equipment, limited access to ICT negatively affects the levels of ICT use by teachers (Jones, 2004; Mumtaz, 2000). Lack of access may be caused by a lack of investment in equipment as the consequence of chronic financial constraints of training institutions (Pelgrum, 2001). It is also due to computers being deployed in limited ICT suites rather than in classrooms (Cuban et al., 2001). Despite the common view of no access - no use (Norris, Sullivan, Poirot, & Soloway, 2003), research reveals that inadequate access to ICT in the classrooms per se

is a challenge but not a significant barrier to ICT use. Different teachers have different responses to limited access to ICT facilities. Some teachers give up while others try to make full use of whatever resources are available. It is argued that the important difference between those responses depends on teachers' beliefs in the usefulness of ICT for teachers' and students' needs (Hennessy, Harrison, & Wamakote, 2010; Ottenbreit-Leftwich et al., 2010) , which indicates that there is an interaction between teacher-level and institution-level influences on ICT use.

TECHNICAL SUPPORT

During ICT implementation, technical problems seem to occur and lead to the need for provision of technical support for teachers. ICT-using teachers tend to report such problems as lack of timely technical support when technical problems happen, out-of-date software and hardware (Preston et al., 2000) and unreliable ICT equipment (Cuban et al., 2001). Teachers seem to lack the technical knowledge to be able to solve those problems, therefore ICT support is important for successful integration of ICT in teaching (Ertmer, Ottenbreit-Leftwich, & York, 2007; Gülbahar, 2007; Samarawickrema & Stacey, 2007; Scrimshaw, 2004; Tearle, 2003; Tondeur, Van Keer, et al., 2008).

Teachers tend to expect institutions to provide reliable and timely on-site technical support to help tackle technical problems when they occur in the classrooms. This kind of support helps lessen teachers' fear of technology failure and increases their perception of ease of use (Buchanan, Sainter, & Saunders, 2013; Goktas et al., 2013). Additionally, it is useful to establish ICT peer support groups in an institution to provide just-in-time support for teachers (Goktas et al., 2013).

2.4 The theoretical framework of this study

The main focus of this study is ICT use by teachers and factors affecting their usage. The literature review above has identified key themes relating to ICT use and factors affecting that use.

Regarding ICT use by teachers, there are different ways ICT can be used in teaching such as to retrieve materials from the internet; to create teaching materials using word processing, presentation software, audio and video editing; to support computer-student and student-student interactions; to facilitate classroom teaching with presentation

software and internet applications; to support computer-mediated communication in one-to-one, one-to-many or many-to-many communication environments or to promote students' collaborative learning. Despite extensive (potential) benefits of ICT, there are still negative perceptions about access to too much information on the internet and other detrimental effects of ICT use on students.

Teachers' use of ICT is influenced by many factors, which can be grouped into teacher level factors (e.g. teachers' beliefs, attitudes, ICT competence, confidence, social influence, workload, age, gender and teaching experience) and institutional level factors (e.g. leadership support, ICT professional development, access to ICT facilities and technical support).

It seems that those key themes fit rather well with the key constructs of two models. The first of these models is the unified theory of acceptance and use of technology (UTAUT)[1] of Venkatesh et al. (2003) and the pedagogy * technology model for information and communications technology integration in education of Lin et al. (2012) .

The UTAUT (see Figure 2.1 below) is a comprehensive model developed from the influential constructs of eight theories and models relating to technology acceptance and use, including the Theory of Reasoned Action (Fishbein & Ajzen, 1975), the Technology Acceptance Model (Davis, 1989), the Motivational Model (Davis, Bagozzi, & Warshaw, 1992), the Theory of Planned Behaviour (Ajzen, 1991), the Model of Personal Computer Utilisation (Thompson, Higgins, & Howell, 1991), the Innovation Diffusion Theory by Rogers (1995) and the Social Cognitive Theory (Bandura, 1986). Thanks to this combination, the UTAUT has been claimed to possibly explain "as much as 70 per cent of the variance in intention" to use technology (Venkatesh et al., 2003, p. 471).

There are four core constructs in the UTAUT: performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC). These are presented on the left hand side of the model of Venkatesh et al. (2003). The influence of these constructs on behavioural intention and use behaviour are variably moderated by

[1] See below for discussion of later versions of this model.

four variables: gender; age; experience and voluntariness of use. These terms will be defined and their roles explored below.

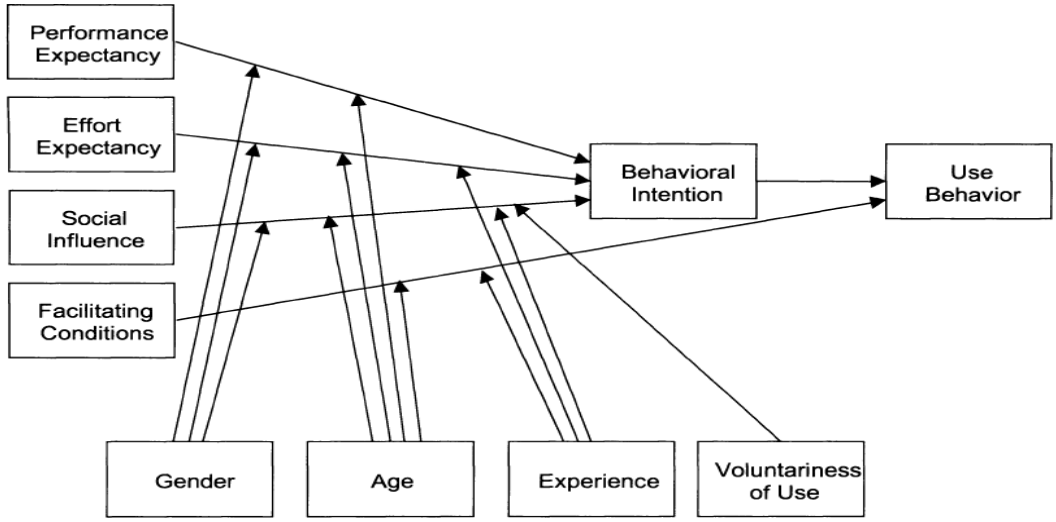


Figure 2.1: The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003, p. 447)

Performance expectancy (PE) refers to "the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003, p. 447). It is associated with other constructs in other theories such as perceived usefulness (Technology Acceptance Model/Technology Acceptance Model 2 and Combined - Technology Acceptance Model - Theory of Planned Behaviour), extrinsic motivation (Motivational Model), job-fit (Model of Personal Computer Utilisation), relative advantage (Innovation Diffusion Theory) and outcome expectations (Social Cognitive Theory). Performance expectancy is found to be the strongest predictor of intention to use ICT. With two moderators (i.e. gender and age) performance expectancy is found to have a stronger effect for males and younger people (Venkatesh et al., 2003).

Effort expectancy (EE) is used to describe "the degree of ease associated with the use of the system" (Venkatesh et al., 2003, p. 450). Effort expectancy consists of similar constructs as in other models: perceived ease of use (Technology Acceptance Model/Technology Acceptance Model 2), complexity (Model of Personal Computer Utilisation) and ease of use (Innovation Diffusion Theory). Effort expectancy tends to be significant only during the initial stages of ICT use, and then becomes non-significant in later stages of extended usage when users' technology competence

increases (Venkatesh et al., 2003). There is a correlation between effort expectancy and gender, age and experience. Its effect is stronger for females, older people and people with limited experience (Venkatesh et al., 2003).

Social influence (SI) is about "the degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh et al., 2003, p. 451). Social influence captures other constructs such as subjective norms (Theory of Reasoned Action, Technology Acceptance Model 2, Theory of Planned Behaviour/Decomposed Theory of Planned Behaviour, Combined Technology Acceptance Model - Theory of Planned Behaviour), social factors (Model of of Personal Computer Utilisation) and image (Innovation Diffusion Theory) (Venkatesh et al., 2003). In response to social influence, individuals are likely to comply with expectations of important others especially when there is a system to reward behaviour and punish non-behaviour. There is a direct relationship between social influence and behavioural intention. Four moderators which influence social influence are gender, age, experience and voluntariness of use. Social influence has a stronger effect for females and older people with limited experience in mandatory settings (Venkatesh et al., 2003).

Facilitating conditions (FC) refer to "the degree to which an individual believes that an organisational and technical infrastructure exists to support use of the system" (Venkatesh et al., 2003, p. 453). Other concepts similar to facilitating conditions are perceived behavioral control (Theory of Planned Behaviour/Decomposed Theory of Planned Behaviour, Combined Technology Acceptance Model - Theory of Planned Behaviour), facilitating conditions (Model of Personal Computer Utilisation) and compatibility (Innovation Diffusion Theory). Research has found that facilitating conditions are non-significant in relation to behavioural intention because the effect is captured by effort expectancy. However, facilitating conditions directly relate to use behaviour (Venkatesh et al., 2003).

Recently, an extended UTAUT (UTAUT 2) has been introduced (see Figure 2.2 below) with three additional constructs: hedonic motivation (i.e. pleasure gained from technology use), price value (i.e. trade-off between the perceived benefits of applications and the monetary cost of usage) and habit (i.e. automaticity of behaviours due to learning). Voluntariness of use has been removed from the moderators because

findings have shown that most consumer behaviours are voluntary, leading to no variance in the voluntariness construct (Venkatesh et al., 2012).

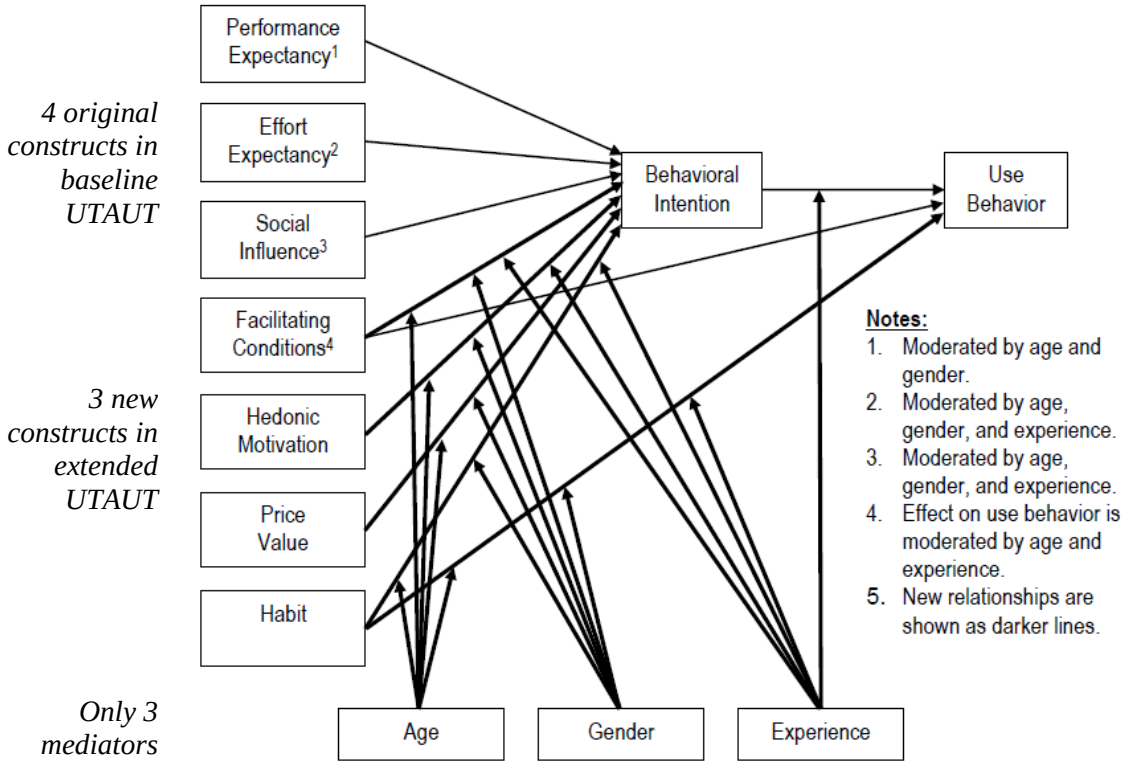


Figure 2.2: The extended Unified Theory of Acceptance and Use of Technology (UTAUT 2) (Venkatesh et al., 2012, p. 11)

The UTAUT 2 is claimed to explain up to 74% of the variance in behavioural intention and 52% of variance in technology use compared to 56% and 40% respectively in the baseline UTAUT (Venkatesh et al., 2012).

Although the extended UTAUT is the newer theory, it has not been used as the theoretical framework for this study simply because the data collection processes of this study were designed earlier than the introduction of the extended UTAUT. Therefore, the term UTAUT that is used in this thesis from here onward refers to the baseline UTAUT (2003) version. In Chapter 6 I will discuss my findings in relation to both versions of the model.

Some constructs within the UTAUT model deal with individual ICT users (e.g. performance expectancy, effort expectancy, age, gender and experience), whereas others relate to broader contexts (e.g. social influence and facilitating conditions). The

UTAUT model was originally designed for non-educational contexts and targets technology users who "may be less inclined to adopt and use new systems" (Venkatesh et al., 2003, p. 426). Some researchers have tried to apply this model in educational settings and indicated that UTAUT also works in those settings although there may be differences in the degree of influence of each construct on user behaviour (Godin & Goette, 2013; Lewis, Fretwell, Ryan, & Parham, 2013; Lin, Lu, & Liu, 2013; Oye & Iahad, 2012; Teo, 2011; Wong, Teo, & Russo, 2013). However, those studies focused on analysing the impact of four constructs of UTAUT (i.e. PE, EE, SI and FC) rather than on expanding the construct of 'use behaviour'. In other words, those studies shared a lack of explicitness in relation to unpacking technology use in educational settings. These findings confirm the legitimacy of the decision to use the UTAUT model in this study to provide a scaffold for identifying factors that might contribute to influencing ICT use by university teaching staff at both teacher and institutional levels. On the other hand, it is proposed that there are reasons to adopt an open approach to the analysis of the findings rather than just seeking to test the model.

The reviewed literature (see Section 2.2 and Section 2.3) reveals that ICT usage is complex with different uses in teaching foreign languages. Yet, UTAUT treats use behaviour as a monolithic construct, consequently making it difficult to explain different nuances of ICT use. This leads to the need for the incorporation of another framework to better capture what is meant by use of technology in educational institutions. For this purpose, I have chosen the pedagogy * technology model for information and communications technology integration in education (Lin et al., 2012) (see Figure 2.3 below). This model has been used only in the interpretation of the data as it too emerged after data collection had been completed.

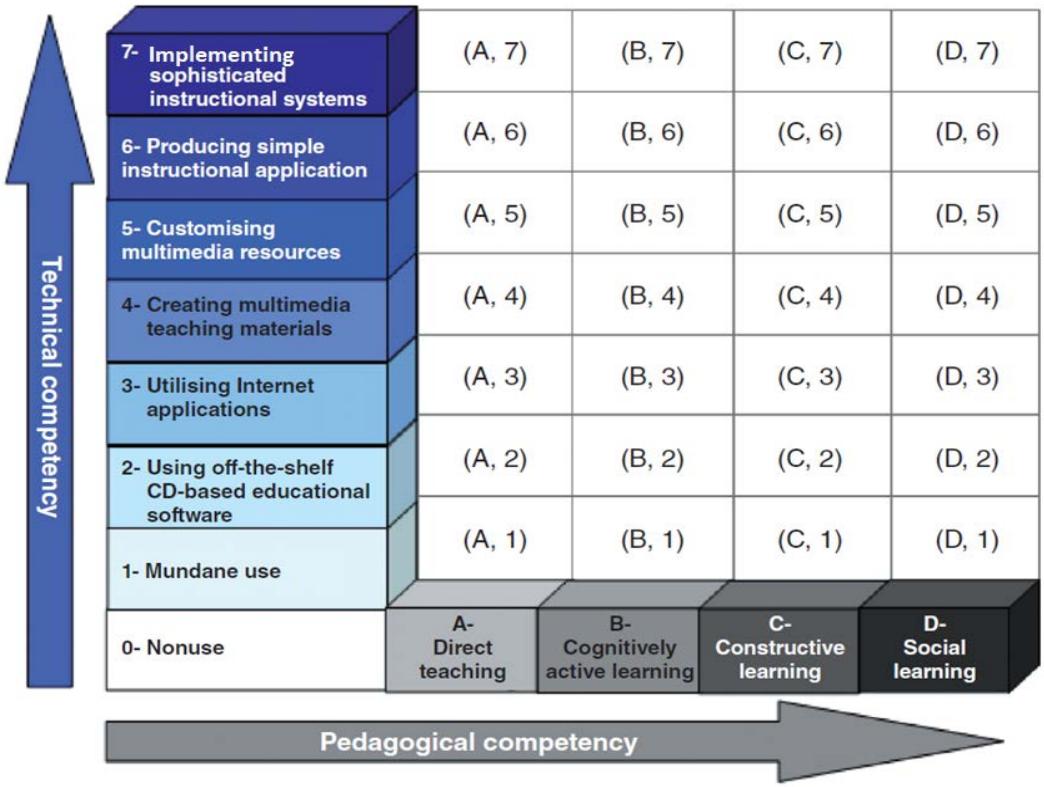


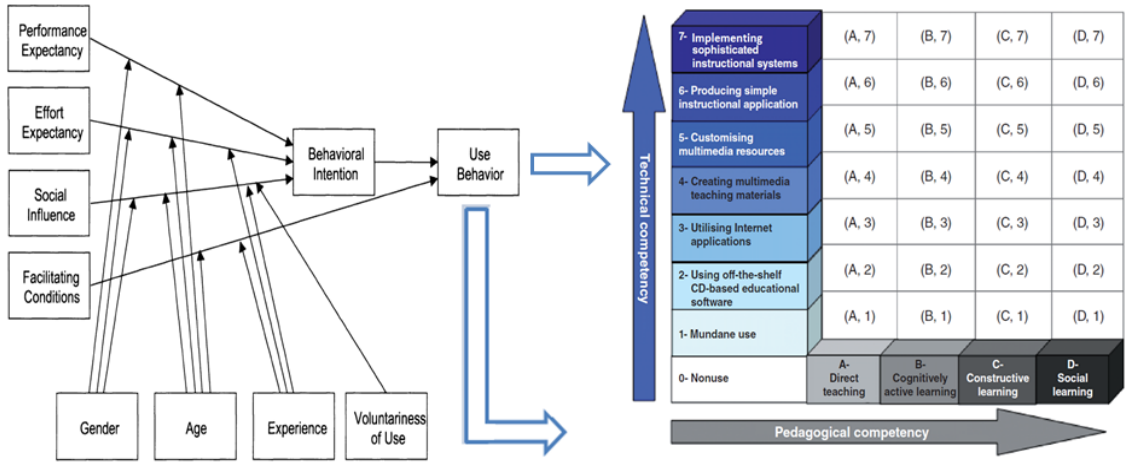
Figure 2.3: The pedagogy * technology model of information and communications technology integration in education (Lin et al., 2012, p. 100)

As indicated in the review of the literature above (Section 2.2 and Section 2.3), ICT use in the context of teaching foreign languages can consist of technological use and pedagogical use, which cannot be interpreted by the single entity ‘use behaviour’ in the UTAUT model. But the pedagogy * technology model (PTM) offers a way of addressing this issue. According to the two dimensional model, ICT use can be expanded into and viewed from two dimensions: technological competence and pedagogical competence (see Figure 2.3 above). Teachers seem to have different levels of ICT competence as demonstrated in Section 2.3. Therefore, a breakdown of the technology dimension, which involves 8 levels ranging from level 0 (non-use) to level 7 (implementing sophisticated instructional systems), makes it easier to interpret the respective technological levels of ICT-using teachers.

The aforementioned literature review shows that teachers’ pedagogies can be conceptualised as belonging to two main approaches: teacher-centred and student-centred (see Section 2.3). Covering the continuum of those two approaches are four main methods as indicated in the pedagogy * technology model, i.e. directing teaching,

cognitively active learning, constructive learning and social learning (Lin et al., 2012). It can be inferred by the horizontal arrow that the preferable path of pedagogical progression is from A (direct teaching) to D (social learning). In other words, the level of student-centredness increases when teaching methods are located further to the right. This pedagogical dimension seems to capture all major teaching methods currently influencing the teaching foreign languages, hence can help this study to better understand teachers' use of ICT in teaching foreign languages from the interplay of both technology and pedagogy dimensions.

While the unified theory of acceptance and use of technology (UTAUT) is useful in interpreting technology acceptance and factors affecting ICT use in general, it cannot unpack the relationship between technological and pedagogical usage. On the other hand, the pedagogy * technology model (PTM) can shed light on technology and pedagogy dimensions of ICT use but it cannot explain teacher acceptance. Each model has its own strengths and has different foci as analysed above. On the basis of the aims of this study (i.e. ICT use and factors affecting usage as indicated in Section 1.2, Chapter 1) and the relevant coverage of the UTAUT and PTM models, the theoretical framework for the current study is based on the combined unified theory of acceptance and use of technology and pedagogy * technology model (C-UTAUT-PTM) (see Figure 2.4 below)



The Unified Theory of Acceptance and Use of Technology (UTAUT), (Venkatesh et al., 2003, p. 447)

The pedagogy * technology model of information and communications technology integration in education (Lin et al., 2012, p. 100)

Figure 2.4: The combined unified theory of acceptance and use of technology and pedagogy * technology model (C-UTAUT-PTM) as the theoretical framework for this study

To sum up, the combined unified theory of acceptance and use of technology and pedagogy * technology model (C-UTAUT-PTM) is the theoretical framework for this study for two reasons: i) the combination of two models meets the aims of the study; and ii) no single theory or model seems to satisfy the two key themes of the present study, i.e. ICT use by university teachers and factors influencing their usage, however, the combination of the two models above seems to accommodate those themes.

2.5 Summary of Chapter Two

This chapter started with the review of literature regarding different uses of ICT use by teachers in foreign language teaching and learning. Literature indicates that ICT can be used to help teachers to access to extensive materials on the internet (location retrieval tool); to create teaching materials using word processors, presentation software, audio-video editing tools, and the like (material creation tool); to support human-computer interaction for language practice (interaction tool); to facilitate classroom teaching with the use of presentation software (teaching tool); and to promote collaborative learning for students with the use of Web 2.0 applications (collaborative learning tool). A list of useful ICT applications for language teachers is provided in Appendix 8 (as collected from the literature) and Appendix 9 (as suggested by survey participants).

Apart from extensive benefits of ICT for teaching and learning, the literature also reveals some cautions or negative perceptions of teachers about possible disadvantageous effects of ICT on students' learning. These include shorter concentration ability, easy consumption of web-based materials, facilitation of academic dishonesty (e.g. plagiarism), too much dependence on ICT leading to shallow learning and loss of ability for deep thinking.

Teachers' use of ICT can be affected by various factors. Teachers' beliefs in usefulness of ICT are viewed as the most significant factor. If teachers believe that ICT benefits students' learning and their professional work, they are more likely to integrate ICT into teaching. It is believed that pedagogy should be placed before technology in order to make innovative changes in teaching practices. Teachers' beliefs tend to be influenced by their attitudes towards ICT use which tend to be fostered by teachers' past experiences with ICT. This suggests that how the technology is used is a key element in understanding acceptance. The issue is not just 'acceptance', but acceptance to do what.

The reviewed literature indicates a close relationship between ICT competence - confidence and ICT training. ICT professional development influences teachers' perceived ease of use so that those who attend ICT training tend to have lower levels of computer anxiety and often perceive ICT as both useful and easy to use.

In educational settings, although ICT use is voluntary in most contexts, teachers' use of ICT tends to be influenced by their working environment, which consists of university leaders, peer teachers and students. As indicated in the literature, teachers in an educational institution with strong leadership support (i.e. explicit ICT policy, guidelines, reward systems and the like) are more likely to integrate ICT in their instruction. In an institution where many teachers and students use ICT, other teachers tend to do the same to live up to the common expectations.

There are different results about the relationship between ICT use and workload. For some teachers, using ICT is regarded as time consuming and makes their workload heavier, whereas for others ICT can reduce their workload because ICT-enhanced materials can be re-used. Literature shows that if workload is reduced, university teachers will have more time to attend ICT training, consequently impacting their ICT competence and then usage.

To use ICT, teachers need to get access to ICT facilities which can be varied in different socio-economic situations. High levels of access do not guarantee high level of ICT use. Low level of access certainly discourages but does not hinder ICT use.

Technical problems seem to be unavoidable during ICT implementation in the classrooms and lead to the need for provision of technical support for teachers. Reliable and timely technical support is found to increase teachers' confidence in ICT integration into their instruction.

Teachers' age, gender and teaching experience can influence their attitudes towards ICT use. Literature indicates that men tend to be more interested in ICT (than women) because they tend to be task-oriented and novelty seekers. Older (female) teachers tend be less engaged with ICT (than men) because they view ICT as difficult to use. However, the literature shows complex differences regarding the interplay between age, gender, teaching experience and ICT competence, professional development and teachers' beliefs. Therefore, simplistic generalisations need to be avoided.

The review of the literature guides the selection of a suitable theoretical framework for the study. No single theory or model in the field of technology acceptance seems to accommodate both themes of the study, i.e. ICT use and factors affecting ICT use. The pedagogy * technology model (PTM) of Lin et al. (2012) can interpret both technological and pedagogical uses of ICT but fail to interpret influencing factors. The unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003) can explain factors affecting ICT use but is not informative enough to shed light on different nuances of ICT use by teachers (i.e. technological and pedagogical uses of ICT). Therefore, the theoretical framework for this study is a combination of the UTAUT with PTM so that the two models can complement each other in interpreting the two themes of the study.

Chapter 3: RESEARCH METHODOLOGY AND METHODS

3.1 Introduction

This chapter starts with a justification of the choice of the research paradigm for this study. The paradigm lays the foundation for deciding methodology, methods, research design, data collection and data analysis (Donna M Mertens, 2010). Reliability and validity issues as well as ethical considerations will be discussed.

3.2 Research paradigm, methodology and methods

The conduct of research involves the selection of an appropriate paradigm, which may be defined as a worldview, a set of logically related propositions or philosophical assumptions concerning the nature of reality (ontology), knowledge of that reality (epistemology) and the ways of knowing that reality (methodology) (Cohen, Manion, & Morrison, 2011; Guba, 1990; Guba & Lincoln, 2005; Lichtman, 2012; Mackenzie & Knipe, 2006; Donna M Mertens, 2010). The research methods literature suggests four major paradigms: i) positivist/post-positivist that is frequently (but not exclusively) associated with quantitative research, ii) interpretive/constructivist that is frequently (but not exclusively) associated with qualitative research, iii) emancipatory that is associated with participatory and transformative research, and iv) pragmatic that can be (but not exclusively) associated with mixed methods research, involving acknowledgement of real world practices and constraints (Creswell, 2005; Mertens, 2005; Donna M Mertens, 2010; Mertens & Hesse-Biber, 2013; Tashakkori & Teddlie, 2010; Tashakkori, Teddlie, & Biesta, 2010; Venkatesh, Brown, & Bala, 2013).

Methodology reflects the overarching approach to research with a close connection to the selected paradigm, whereas methods (e.g. quantitative and qualitative research methods) refer to specific procedures or tools for data collection and analysis (Mackenzie & Knipe, 2006).

After consideration of the two research questions (regarding ICT use and factors affecting ICT use in teaching foreign languages at Hanoi University, Vietnam), pragmatism has been selected as the relevant paradigm for this study for two reasons.

First, the pragmatic paradigm is able to accommodate and support the use of both positivism/post-positivism (associated with the assumptions that have shaped the quantitative component of this study) and interpretivism (associated with the assumptions that have shaped the qualitative component) (Howe, 1988; Maxcy, 2003). As indicated in Chapter 2, while ICT is often viewed as a powerful tool to benefit both teachers and students, there exist cautions or concerns about possible detrimental effects of ICT on students' learning. This reflects different perspectives on ICT use. In addition, the use of ICT is reported to be influenced externally by institutional level factors and internally by teacher level factors. This reveals multiple realities, which can be engaged with in a pragmatic paradigm without forcing a choice between that perspective and a positivist/postpositivist perspective. Second, this study places the two research questions as central. This aligns with pragmatists' beliefs "in the dictatorship of the research questions" (Creswell, 2003; Venkatesh et al., 2013, p. 17).

The methodology selected for this study is case study, which refers to an empirical inquiry developing an in-depth understanding of a real-life phenomenon (Yin, 2009). The case is built up on a combination of quantitative survey methods and interviews. The case in this study is Hanoi University (HANU) (to be presented in more detail in Section 3.5), encompassing its different language departments, centres and teaching staff. All these could be regarded as constituting units of analysis or an embedded (multiple units of analysis) design (Yin, 2009). This approach is appropriate to gain an insight into the vibrant process of ICT use in teaching foreign languages at tertiary level in Vietnam. It is therefore assumed that the findings of this research may translate to other universities in similar contexts (Cohen et al., 2011).

The pragmatic paradigm which accommodates different worldviews suggests the use of mixed methods for this study, combining both quantitative and qualitative methods to collect empirical evidence relevant to the two research questions. This is in accord with suggestions in the research methods literature about the possibility of the pragmatic paradigm (Howe, 1988; Mertens & Hesse-Biber, 2013; Morgan, 2007; Teddlie & Tashakkori, 2011).

3.3 Research design

Researchers holding different worldviews tend to follow different research methods and therefore tend to debate the correctness and appropriateness of their respective methods (Cohen et al., 2011; Sale, Lohfeld, & Brazil, 2002). The qualitative-quantitative debates in the late 1980s and early 1990s are an example (Cohen et al., 2011; Guba & Lincoln, 2005; Venkatesh et al., 2013). Quantitative and qualitative methods have extensive differences in terms of ontology, epistemology, sample size and their uses of scientific language (Cohen et al., 2011; Creswell, 2005; Donna M Mertens, 2010). Quantitative researchers (at least those who are positivist in their paradigm) frequently view truth as singular or universal, whereas qualitative researchers (who are most frequently interpretive or transformative in their paradigm) view truths as multiple or relative (Cohen et al., 2011; Donna M Mertens, 2010; Sale et al., 2002).

Combining both quantitative and qualitative methods, the mixed methods approach respects the wisdom of both worldviews (Johnson, Onwuegbuzie, & Turner, 2007; Venkatesh et al., 2013). It is argued that researchers can hold different worldviews, which may lean either more towards “objective” reality or more towards “subjective” reality (Creswell, 2005, p. 511). Working within a pragmatic paradigm provides space to respect differences in worldviews by incorporating them in the same study.

Extensive debates have resulted in acceptance of the possibility of merging quantitative research with qualitative research in one study: “qualitative and quantitative work can be carried out simultaneously or sequentially in a single study or series of investigations” (Sale et al., 2002, pp. 50-51). Mixed methods are increasingly used in education research (Coronel Llamas & Boza, 2011).

Mixed methods can combine the strengths of both quantitative data (numbers) and qualitative data (words) in one study (Creswell & Tashakkori, 2007; Kelle, 2006; Wu, 2011). This approach helps gain a more comprehensive understanding of the answer to the research questions than that provided by a single type of data (Creswell, 2005; Kelle, 2006; Donna M. Mertens, 2010; Punch, 2009). Furthermore, cross-validation can be achieved by combining the different sources of quantitative and qualitative data to study the same research problem (Creswell & Clark, 2007; Creswell & Tashakkori, 2007; Johnson & Onwuegbuzie, 2004; Kelle, 2006). The quantitative and qualitative data of the current study can supplement each other to offer an in-depth understanding

of teachers' perceptions of ICT use and factors affecting their usage (Fielding, 2010; Wu, 2011).

There are four main types of mixed methods design: triangulation (merging qualitative and quantitative data), embedded (using quantitative data in a largely qualitative study or vice versa), explanatory (using qualitative data to explain quantitative results) and the exploratory design (using quantitative data to explain a relationship in qualitative results) (Creswell, 2005; Creswell & Clark, 2007). Each type has a different sequence of data collection and a different aim (Venkatesh et al., 2013).

In this study, the explanatory design was used with a questionnaire being used first to collect statistical data. The quantitative data then informed the questions asked in the follow-up interviews (Creswell & Clark, 2007; Punch, 2009). Quantitative data analysis is thus integrated with qualitative data analysis to shed light on the same research issues.

3.4 Piloting the questionnaire

After being developed from the reviewed literature, the questionnaire was piloted in two steps. First, a questionnaire in Vietnamese was emailed to ten teachers (volunteers) working at 4 language departments and one language centre at Hanoi University (HANU) for their feedback. Then the English version of the questionnaire was presented (for further feedback) at the research proposal presentation in early 2010 to a group of both research students and academic staff of the Faculty of Education, La Trobe University.

Feedback on the questionnaire (both Vietnamese and English versions) focused on the relevance of survey items to the research questions, readability, the use of plain language and the clarity of instructions. The questionnaire was revised in accordance with the feedback. The comparability of the English and Vietnamese versions of the questionnaire was double checked by a senior lecturer in translation at the University of Languages and International Studies, Vietnam National University (see the Statement of Audit Trail in Appendix 7) to ensure the accuracy of translation before the actual administration of the survey.

3.5 Site of study

The site of this case study is Hanoi University (HANU), a public university founded in 1959 in Hanoi, Vietnam. The choice of this institution is based on the assumption that HANU represents an interesting case due to its active role in innovative use of ICT in teaching foreign languages (Ta & Winter, 2010).

The leadership of Hanoi University is viewed as proactive and open to ICT implementation in teaching and learning foreign languages (Ta & Winter, 2010). HANU website (www.hanu.vn) is the portal to disseminate information relating to all activities at the university. Its intranet facilitates internal communications for all staff and supports paperless administrative work.

Since the year 2000, Hanoi University has been making special efforts to improve the quality of language teaching and learning with the use of ICT. With the support of the senior management, new ICT facilities and equipment have been purchased and installed. The university library has been upgraded with more electronic databases and more learning materials in digital format (Nguyen, 2007). Over the past 10 years, the university has been offering online language programs (e.g. English Discoveries Online – EDO) to supplement the traditional face-to-face teaching programs in a blended mode (Pham, Thalathoti, Dakich, & Dang, 2012).

Hanoi University is a well-known institution for foreign language training in Vietnam (Nguyen, 2007). Essential training programs in foreign languages for senior Government officials and pre-departure students have been conducted at HANU for over a decade. The university is also a main provider of interpreters and translators for the Government and other international organisations nationwide. Major foreign languages taught at HANU include English, French, Chinese, German, Korean, Japanese, Russian, Spanish and Italian (Nguyen, 2007; Ta & Winter, 2010). Foreign languages have recently been used as the language of instruction in some courses and subjects, e.g. English is being used to teach business administration, tourism, international studies, finance - banking, and computer science; Japanese for computer science (Nguyen, 2007; Ta & Winter, 2010). In addition, HANU also conducts Vietnamese studies at the undergraduate level for non-Vietnamese learners. In the future, the university is planning to increase the number of courses conducted in foreign languages. Moreover, this university is gradually moving into the provision of

international education, increasing the use of advanced technologies in teaching and learning in order to equip its students with professional skills to be able to adapt to future working environments. The goal of Hanoi University is to become a research university commensurate with other universities in the Asia-Pacific region and the world. To that end, the university publishes *The Journal of Foreign Language Science*, the only journal in Vietnam in the field of foreign language education (Hanoi University, 2011; Nguyen, 2007).

By limiting this study context to only one university (i.e. Hanoi University) in Vietnam, part of a bigger picture of ICT usage in foreign language teaching in Vietnam is likely to be undiscovered. One university cannot represent other universities in Vietnam. However, the literature review in Chapter 2 covered previous research on factors affecting ICT use in education in both developed and developing countries (Buabeng-Andoh, 2012; Firth & Mellor, 2002; Jones, 2004; OECD, 2004; Pelgrum, 2001; Plomp & Voogt, 2009; Trucano, 2005). The intention of this study is to provide in-depth insight into patterns of use of ICT and influences on them. The depth of the insights will provide other institutions with the capacity to explore how to translate the findings of this study to their own context without the claim being made that this study describes other contexts.

3.6 Data collection

The data were collected in the second half of 2010 with two main instruments: a survey questionnaire for quantitative data and interviews for qualitative data. The processes of data collection are illustrated in Figure 3.1 below with quantitative data being collected first, followed by qualitative data. The same sequence was applied to their analysis.

3.6.1 Quantitative data collection - Questionnaire

SAMPLING

According to some authors, neither a large nor small sample size guarantees representativeness of the targeted population (Cohen et al., 2011). In order to move towards a reasonably sized sample, a suggestion is to start with a minimum requirement for the statistical tests that are likely to be used (Cohen et al., 2011; Donna M Mertens, 2010). One of the aims of this study is to investigate factors influencing ICT usage by foreign language teachers within a single institution. Therefore, factor analysis is a

technique that needs to be provided for. It has been argued that the minimum requirement of sample size for factorability is 150 cases (Pallant, 2011, p. 183).

Guided by the minimum size for factor analysis and the convenience sampling techniques (Cohen et al., 2011; Teddlie & Yu, 2007), all teachers of foreign languages (n = 350) in 13 language departments and 3 language centres at Hanoi University (HANU) were approached with the approval letter of the HANU President and invited to complete the 28-question survey.

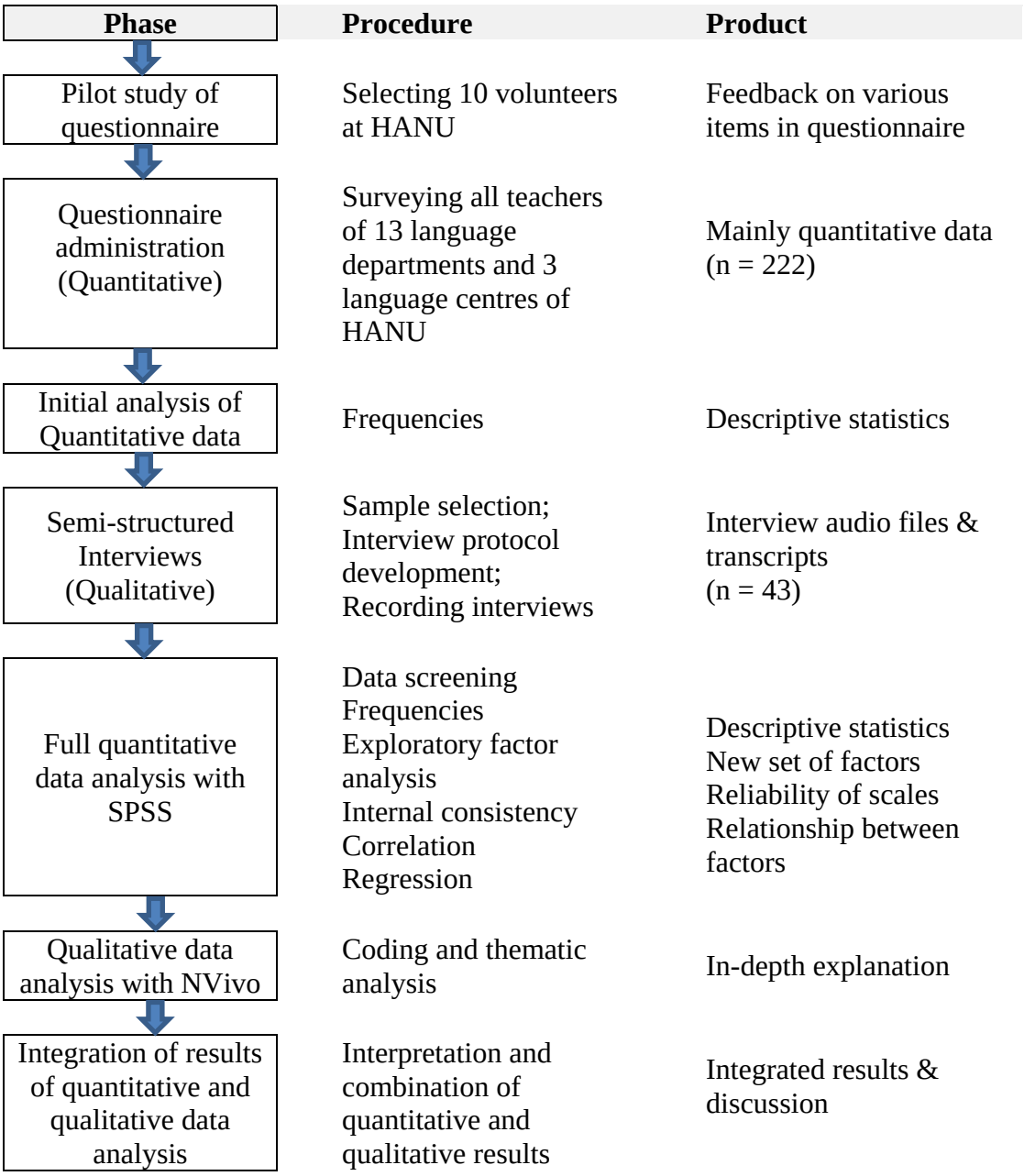


Figure 3.1: Design of the mixed methods study

Out of the total 350 questionnaires delivered, 222 were returned, resulting in a response rate of 63.4%. Female teachers (n = 176, ~80%) outweighed male staff (n = 43, ~20%). Of the 13 departments and 3 centres at HANU, there was at least a 75% response rate from 7 units and at least a two thirds response rate from 10 of the 16 units (63%). However, 3 units were strongly under-represented (i.e. Distance Education Centre, Russian Department and Chinese Department), 2 of which were quite large (n>25). Hence, the ability to generalise to the case study university language departments was a little compromised but nevertheless satisfactory (See Tables 2 and 3, Appendix 10). From the aforementioned analysis, the sample size (n = 222) for this study permits the intended statistical analyses to be conducted.

QUESTIONNAIRE

The survey questionnaire was written in Vietnamese (see Appendix 1) and was developed to address the relevant key issues arising from the review of the literature and empirical studies about ICT use and factors affecting ICT use in teaching and learning foreign languages (Al-Senaidi, Lin, & Poirot, 2009; Becta, 2003, 2004; Bingimlas, 2009; Goktas, Yildirim, & Yildirim, 2009; Jones, 2004; Mumtaz, 2000; Pelliccione, 2001; Samak, 2006; Scrimshaw, 2004).

The questionnaire included 28 questions framed according to the reviewed literature, guided by the unified theory of acceptance and use of technology (UTAUT) framework of Venkatesh et al. (2003). The questionnaire was divided into 6 parts (see Appendix 1). Part one had three items to investigate the available ICT facilities at Hanoi University (i.e. facilitating conditions). In part two, the participants were asked about ICT training activities at HANU (i.e. facilitating conditions). Part three sought to capture the actual use of ICT in language teaching by academic staff at HANU (i.e. different uses of ICT). Part four investigated teachers' perceptions about possible factors influencing ICT use in foreign language teaching at HANU (i.e. performance expectancy, effort expectancy, social influence and facilitating conditions). In part five, the participants were asked to provide examples of good practices in ICT use in language teaching at HANU. The final part sought demographic information, such as age, gender, teaching experience, place of work within the case study university, position, tenure and modes of teaching. Demographics were intentionally placed at the end of the questionnaire so that participants could express their opinions openly before being potentially influenced by awareness of their positions in the university.

The survey items were in three formats: tick-box and choice-circling plus 16 open-ended items. For the multiple-choice questions, three main scales were used: nominal, interval and ordinal. Nominal scales were applied to the items asking about demographics such as place of work, current position, main teaching subject(s), or about ICT facilities at the university, contents of ICT training workshops and the like. Interval scales were used for the items about the duration of employment and the hours of receiving ICT training. Ordinal scales were attached to most of the items in the questionnaire, e.g. factors affecting ICT use by teachers, however, the data were treated as interval, as items were combined to create scales (see later). The response alternatives for items related to frequency were 'never', 'rarely', 'sometimes', 'often' and 'always', which were coded from 1 to 5 respectively. The scale of quality of computers and the internet included the alternatives N/A (not applicable), 'much less than adequate', 'less than adequate', 'adequate', 'better than adequate' and 'much better than adequate' (N/A was coded 1 as missing data and the others were coded 2 to 6 respectively). The scale of agreement to propositions ranged from 'disagree', 'disagree a little', to 'agree a little', and 'agree' (coded 1 to 4 respectively). Vietnamese people are known as preferring peace, harmony and avoiding extremes (Nguyen, 2002; Phan, 2001), which is why the adverb 'strongly' was not used in the scale of agreement. The scale of ease of use ranged from 'hard' through 'average' to 'easy' (coded 1 to 3 respectively). The scale of usefulness ranged from 'not useful' to 'useful' and 'very useful' (coded 1 to 3 respectively). Neutral central terms or options such as 'not sure' were also avoided to remove the option of avoiding commitment.

For the 16 open-ended items, the participants were invited to express their opinions on different contents such as the reasons for using or not using ICT in their teaching, the types of ICT to be used for lesson preparation and for classroom teaching, facilitating and inhibiting factors for ICT use, names of teachers who were exemplary because of their use of ICT and their suggestions for ICT use in language teaching in the future.

PROCEDURE

The process of data collection had 3 steps: gaining access approval, contacting language departments and centres, and distributing and collecting the questionnaire.

To gain access to the study site, prior to the survey administration, an email was written to the President of Hanoi University to provide a brief description of the study and to

seek approval for the data collection at HANU. In response, the President granted permission in a letter expressing strong support and explicitly calling on all language departments and centres to participate in this study (see Appendix 5). The approval letter from the most senior leader of HANU was significant for the next step of data collection, which was approaching relevant language departments and centres.

Next, the President's approval letter was distributed to the heads of the 13 language departments and 3 language centres requesting their support. Subsequently, relevant information about the study (i.e. information sheet, consent form and the questionnaire) was sent to all language teachers via the administration staff of the respective departments and centres (see Appendix 4). The information sheet briefed participants on the aims of the study, the definition of the term ICT used in this research, the design of the study, voluntary participation, the use of the study results, the confidentiality of participants' responses and further contact information in case of complaints or queries.

In Vietnam, departments often hold meetings between August and September to implement preparatory work for a new academic year starting in early September. To facilitate the maximum response rate, the survey was distributed at those departmental meetings where there was a large presence of staff. Participants could either complete the questionnaire on the spot or could take it home for completion. The questionnaire was delivered to and collected from the participants through the administrative staff of the respective departments and centres before being returned in closed envelopes to ensure voluntary participation and the anonymity of the participants. Previously I held a middle-manager position (i.e. a deputy dean of the English Department) at this university. Therefore, the involvement of administrative staff in the distribution and collection of the questionnaire was to avoid any possible influence of previous administrative relationships between the participants and me. As many participants took the questionnaire home for completion, two statements were sent out and attached to notice boards of the departments and centres in late August 2010 and mid-September 2010 to remind those teachers to complete the questionnaire and at the same time thanking those who had already returned the completed surveys.

DEMOGRAPHICS

As can be seen in the demographic data (see Appendix 10), most survey participants were female, tenured lecturers under the age of 40, with fewer than 10 years of teaching experience, working on average 20 hours per week mainly in the face-to-face teaching mode.

Below are key points relating to demographic information (see Appendix 10):

- 84% of the survey participants were under 40 years of age;
- Females (80.4%) were approximately four times more common than males (19.6%);
- Teachers of English accounted for over half of the participants (52%);
- The majority of the survey participants were lecturers (80.6%);
- Two thirds of the participants had tenured status;
- Most participants (74.3%) had fewer than 10 years of teaching experience;
- Most survey participants (81.6%) taught about 10-20 hours a week;
- Most participants (86%) used the face-to-face teaching mode.

The last item in the questionnaire sought the participants' willingness to take part in a follow-up interview. 55 respondents (~24%) indicated a willingness to be interviewed.

3.6.2 Qualitative data collection - Interviews

According to the principles of the explanatory mixed methods design, information from the survey in the first phase helps guide the interview process in the second phase (Cohen et al., 2011; Creswell, 2005). Initial analysis of the questionnaire suggested that the follow-up interviews seek more meaning and attributions to help explain factors affecting teachers' use of ICT in teaching foreign languages.

SAMPLING

Frequency analysis of the questionnaire showed that 55 survey participants (academic staff) agreed to come to follow-up interviews. However, 20 participants could not be included because they could not be contacted via the contact information they had provided. Consequently, 35 survey participants from 10 departments (i.e. English, Foundation Studies, In-Service, French, German, Spanish, Portuguese, Italian, Japanese and Russian departments) and 3 centres (i.e. International Education Centre, Distance Education Centre and Vietnamese Language Centre) took part in the interviews. In addition to survey respondents, there were 8 who participated in the interviews who did not complete the questionnaire. These included the HANU President, 2 Vice Presidents,

the Head of the Equipment Department, 2 Deputy Directors of the ICT Centre and 2 ICT support staff (See Tables 4 and 5, Appendix 10). These staff were included in order to shed light on ICT policy and training at HANU. Consequently, the 43 interviewees could be categorised into three groups: i) HANU leadership as policy makers (n = 18) consisting of the university President, Vice-Presidents, Heads and Deputy Heads of Departments, Directors and Vice-Directors of Centres); ii) ICT support staff as ICT trainers (n = 2); and iii) language teachers as ICT users (n = 23). Despite my efforts (by emails, phone calls and direct meetings) to invite IC non-using teachers to participate in the interviews to share their perspectives about reasons for not using ICT in teaching, none of those teachers were willing to take part. However, some of them made comments relevant to their situation in the open-ended survey questions (see Table 12, Appendix 11).

INTERVIEW PROTOCOL

On the basis of the responses to the questionnaire, interview protocols were developed (Ivankova, 2013). The interviews were semi-structured with prompted questions to explore the in-depth opinions and perceptions of the participants about different aspects relating to ICT use and factors influencing ICT use in teaching foreign languages at Hanoi University. Each interview was scheduled according to the convenience of the particular participant. The interviews were held in the Vietnamese language and were audio recorded for later analysis.

PROCEDURE

The 43 individual interviews took place between September and October 2010 on the HANU campus and out of class time. Each interview was about 30 minutes long. Before the interviews, information sheets and consent forms (in Vietnamese) were provided to give the participants an overview of the project. The venue for the interviews was arranged away from other classrooms, in a room which was easy to find, comfortable and with air conditioning and chairs for the interviewees. A timetable was also prepared with a clear time slot for each interview. An interview protocol (see Appendix 2) was developed in the form of a list of prompt questions to facilitate the flow of interviews (Creswell, 2007; Dawson, 2009; Silverman, 2013; Turner, 2010).

Each interview started with self-introduction, small talk or some refreshments to establish rapport with the participants (Dawson, 2009; Given, 2008; Seidman, 2013). During the interviews, the prompt questions were framed in short and direct questions

and in plain language. Active listening strategies were applied together with taking notes of non-verbal clues, and probing for further clarification or elaboration, e.g. “That’s interesting; can you explain that in more detail?” or “Can you elaborate a little more?” or “Could you clarify that?” (Dawson, 2009, p. 75). Digital recording equipment was checked, e.g. glancing at the battery indicator light of the recording equipment from time to time to make sure it worked well throughout the interviews (McNamara, 2009).

The probing questions were used to obtain thoughtful insights from the participants (deMarrais, 2004; Given, 2008; Hancock, 2009; Seidman, 2013; Silverman, 2013) on different aspects of ICT in teaching languages at HANU. There were three different sets of guided questions for the three groups of participants (see Appendix 2). The leadership was asked questions focusing on the macro level, surrounding their roles in facilitating the use of ICT at the departmental and university levels, ICT policy making, purchase of ICT facilities, and guidelines on ICT use in teaching and learning at HANU. The teaching staff were invited to talk about their actual experiences in using ICT to teach different language skills at HANU, ICT training, possible enablers and barriers of ICT use, and effective practices of ICT in teaching foreign languages at HANU. The ICT staff were interviewed about the present status of ICT facilities available at HANU, their role in the provision of ICT training and ICT support to teachers at HANU. Three groups of interviewees provided different views and insights about how ICT was used in teaching foreign languages, and what encouraged and discouraged teachers’ use of ICT.

After the interviews, I read the notes that I had made to enable me to interpret the meanings of any non-verbal information and recorded interviews were transcribed for further analysis. Apart from the interviews, qualitative data came from 16 open- ended items in the questionnaire as well as relevant documents relating to ICT use in teaching and learning foreign languages, for example, HANU reports, Education Law of Vietnam, Resolutions of the National Assembly of Vietnam, Directives of the Ministry of Education and Training of Vietnam.

3.7 Data analysis

In this thesis, quantitative data analysis was integrated with qualitative data analysis to respond to two main research questions.

3.7.1 Quantitative data analysis with SPSS

For the quantitative data analysis, first of all, a codebook was prepared to guide computerised data entry (Pallant, 2011). The Statistical Package for the Social Sciences (SPSS) program was used for analysis with focus on frequency distributions, factor analysis, internal consistency of scales, correlation analysis, regression and ANOVA (analysis of variance). More details are provided in Chapter 4.

3.7.2 Qualitative data analysis with NVivo

The recorded interviews were manually transcribed using Microsoft Word, and then entered into the NVivo program for coding and interpretation (Gibbs, 2002; Wong, 2008). Qualitative data analysis techniques were used such as content, comparative, thematic analyses and emergent themes (Bazeley & Jackson, 2013; Beekhuyzen, Nielsen, & Hellens, 2010; Wong, 2008). All real names of participants in this study were coded (e.g. ID 01, ID 02, etc.) to ensure anonymity of participants (Bazeley & Jackson, 2013; Cohen et al., 2011; Gibbs, 2011). More details will be presented in Chapter 4.

3.8 Reliability and validity

In order to make sure that the research was honestly reported, the results of data analysis and interpretations were validated in three ways: triangulation, member checking and external audit (Cohen et al., 2011; Creswell, 2005).

There were different groups of interview participants: teaching staff, ICT support staff and the leadership of Hanoi University. Their views illuminated (from different perspectives) the quantitative statistics from the questionnaire (Onwuegbuzie & Johnson, 2006; Teddlie & Tashakkori, 2011). As a result, the data analysis reflects a combination of quantitative and qualitative types of data such as Likert-scale survey items, audio interviews, interview notes and transcripts. With such triangulation, the credibility and accuracy of this study were enhanced (Creswell & Clark, 2007; Kelle, 2006; Onwuegbuzie & Johnson, 2006).

For member checking, the preliminary results were sent to two academic supervisors and other research students for feedback in relation to the fairness of the description and justifications, the accuracy of the interpretations, the relevance of themes and claims, the use of language, and the like.

The interview transcripts were double checked by another Vietnamese postgraduate student who is also a translator and interpreter (level 3, accredited by the National Accreditation Authority for Translators and Interpreters - NAATI) for accuracy of transcription (see Statement of Audit Trail, Appendix 7). Some parts of the results were used to write up a paper to a peer-reviewed journal and conferences. Some of the data from published papers have been integrated in this writing as indicated at the beginning of the thesis. Reviewers have provided a fresh evaluation for further improvement of the study.

Given the case study methodology, my confidence in the finding was increased by drawing on the responses of all survey participants in addition to interview data from a range of relevant participants rather than limiting the analysis to data from a few individuals or a particular department. By developing a view of the experiences and attitudes of language teachers from across the university, the findings of this study sought to reflect ICT use and factors affecting ICT in the university as a whole. As expressed elsewhere, the use of different data sources and approaches can strengthen the validity of the findings (Cohen et al., 2011; Donna M. Mertens, 2010).

3.9 Ethical considerations

The study involved the participation, time and efforts of the different HANU staff indicated above. Therefore, their responses were handled with respect and responsibility. A code of ethics was applied to ensure that the research was ethically sound (see Appendix 6). Ethical behaviour was demonstrated in the choice of research topic, seeking institutional approval, provision of transparent information about the study, confidentiality for participants' responses, voluntary participation, a channel for making complaints (if any), respect for participants' feelings, safe storage of data, careful handling of data analysis and unbiased reporting of the results.

Research topics should not be 'over-researched' (Flick, 2007, p. 70). Therefore, a literature review was conducted examining various sources, e.g. journals, books,

conference papers and official documents (see Chapter 2). It revealed that there has been little research regarding the topic of this study: factors influencing ICT use in teaching foreign languages at tertiary level in Vietnam. In other words, the choice of topic for this study is relevant.

Before entry into the study location for data collection, access approval was sought and transparent information was sent to participants clearly explaining the purpose, procedures of data collection as well as the use of potential findings (see Appendices 4 and 5).

No real names or addresses were used in the thesis to guarantee participants' anonymity and confidentiality. This meant that the responses of the participants were untraceable. No information was disclosed to third parties (Dawson, 2009).

The information sheet made clear that participation was totally voluntary and that there was neither harm nor risks in participating (or not participating) in this research. Participants were given a chance to withdraw from the interviews (not applicable for the survey because no names were recorded and individual responses were therefore untraceable) by filling in a withdrawal form within two weeks from the date of the scheduled interviews (see Appendix 4). However, there were no withdrawals.

Participants were also given the contact address of the Human Ethics Committee of the Faculty of Education, La Trobe University in case of unsatisfactory settlement of complaints, if any. There have been no complaints from participants.

During the interviews, I avoided questions which might cause irritation for the participants, e.g. recalling awkward experiences in the past (Flick, 2007). The reason was to show respect to participants and to protect them from losing face. Disruption was kept to the minimum. Questions were probed in different ways to help participants express themselves clearly. No further questions were asked about the issues which participants did not want to talk about to avoid any possible embarrassment.

The data were carefully handled. The collected data from the survey were coded systematically. A code book was established and kept in a safe place. The quantitative data were entered into the computer and were checked over and over again to ensure accuracy. The interviews were transcribed and translated into English (when necessary).

The translation was double checked by a NAATI-accredited translator (see the Statement of Audit Trail in Appendix 7).

Safe storage of data was ensured. All hard-copy data (e.g. completed questionnaires and interview notes) were kept in a safely locked drawer in my office at the Faculty of Education, La Trobe University. The soft-copy data (e.g. audio files, data entry into SPSS and NVivo and interview transcripts) were password protected in my personal computer and the computer at my office. All the data will be safely kept for five years before being destroyed.

In the process of analysis (see Chapter 4), the results were read and re-read carefully to make sense of the data. Suitable software programs (e.g. Microsoft Excel, Microsoft Word, SPSS and NVivo) were used to quickly and accurately conduct statistical calculations, draw visual graphs, tables and run queries to correlate different variables and to facilitate interpretation of data. Impartiality and fairness were maintained during data interpretation to avoid internal generalisation (Flick, 2007, p. 74).

In reporting the results of data analysis (see Chapter 5), respect and fairness were shown with protocols used to check for and protect against bias. Claims were well supported by evidence from the collected data. As all participants worked in the same institution and were likely to know one another, care was taken to avoid revealing the real identity of the participants.

3.10 Summary of Chapter Three

This chapter has discussed the methodology of the study, starting with identification of pragmatism as the suitable research paradigm because of the nature of this study, which combines the worldviews of positivism/post-positivism and interpretivism, associating them both with the research questions (i.e. ICT use and factors influencing its usage in foreign language teaching in Vietnam).

With the explanatory mixed methods design, the quantitative (questionnaire, n = 222) and qualitative (interviews, n = 43) instruments can supplement each other to provide a more in-depth insight into ICT use and factors affecting ICT use in teaching modern languages at the case study university. The numeric and narrative data were analysed with the support of the SPSS and NVivo software respectively.

The reliability and validity of this study were supported by employing triangulation (i.e. questionnaire, interviews and key documents), member checking, external audit and peer reviewers (from conferences and journals).

Ethical considerations ensured respect for participants' responses as well as the anonymity of the participants. Careful preparation and processing were made in all steps of data collection and analysis to make the results as impartial and as accurate as possible.

The data analysis and results will be discussed in the next chapter.

Chapter 4: RESULTS OF DATA ANALYSIS

This chapter reports the results of the analysis of quantitative data collected from 222 survey respondents and qualitative data collected from 43 interviews and the responses to the open ended items in the survey.

As indicated in Section 3.2 (Chapter 3), this study employed the pragmatic paradigm which attaches the greatest importance to the research questions. The quantitative and qualitative methods were used to find empirical evidence to respond to the research questions. Excerpts from responses in the interviews were used to elaborate on the responses from the questionnaire.

In some mixed methods research, there may be a separation of quantitative and qualitative data analyses and then a section incorporating the two analyses together. However, as stated in the research design (Section 3.3, Chapter 3) the explanatory design was selected for this study so that there is an integration of quantitative and qualitative data analyses to address the research issues.

The results of both numeric and text data analyses are used to answer the two main research questions below:

Research question 1: What is the current use of ICT by teachers of foreign language at Hanoi University (HANU)?

Research question 2: Which factors affect teachers' use of ICT in foreign language teaching at HANU?

4.1 Research question 1: ICT use

The data in this study focused on two main purposes of ICT use (for lesson preparation and for classroom teaching) and two distinct dimensions of ICT use (technological and pedagogical) in foreign language teaching at Hanoi University (HANU).

4.1.1 Purposes of ICT use

Responses to question 12 in the questionnaire revealed the teachers' high but differentiated uses of ICT for the two main purposes of lesson preparation and classroom teaching.

ICT USE FOR LESSON PREPARATION

A common task for teachers before each class is lesson preparation (Oakley, 2008; Plomp, 2006), for example, selecting relevant materials, preparing worksheets or creating presentation slides. The survey data showed that teachers believed that ICT use would be beneficial for preparatory work. Nearly all survey respondents (97.1%) agreed/agreed a little that ICT would enhance their lesson preparation (Table 1, Appendix 11).

Table 4.1: ICT tools for lesson preparation and classroom teaching

ICT use for **lesson preparation**	N	Valid %
Word processing	197	**89**
Internet search	180	**81**
Internet download	162	**73**
PowerPoint	157	**70**
Email	145	**65**
Web browser	122	**55**
Voice recording	87	39
Audio editing	67	30
Spreadsheet	61	27
Education blogs	56	25
Mindmapping	41	18
Movie making	36	16
Video editing	22	10
E-lecture creation	22	10
Photo editing	20	9
Voice chat	18	8
Hot potatoes	17	7
Screencasting	14	6
Video conferencing	11	5
Podcast	8	3
VoiceThread	4	2

ICT use for **classroom teaching**	N	Valid %
PowerPoint	145	**65**
Internet search	90	40
Web browser	81	36
Word processing	75	33
Voice recording	69	31
Internet download	49	22
Audio editing	32	14
Email	29	13
Mindmapping	18	8
Video conferencing	14	6
E-lecture creation	11	5
Education blogs	11	5
Excel	8	3
Hot potatoes	8	3
Movie making	7	3
Video editing	7	3
Photo editing	7	3
Screencasting	7	3
Voice chat	5	2
Podcast	4	2
VoiceThread	2	1

Teachers were exposed to a wide variety of ICT tools (Table 4.1), however, only six applications were used by more than half the respondents, namely word processing (89.2%), an internet search engine (81.1%), internet download (73%), PowerPoint presentation (70.7%), email (65.3%) and web browser (55%). Some tools that lend themselves to collaborative learning were used to a much lesser extent, for example, educational blogs (25.2%), or even rarely such as videoconferencing (5%) and VoiceThread (1.8%).

Many interview participants reported their use of the internet to search for relevant teaching materials as part of lesson preparation. Teachers used their subject knowledge to look for learning material suitable for the subjects or skills that they taught at the university.

> For speaking skills I use the internet resources more often than computer software... Websites provide many suitable materials and I can choose valuable resources. (ID 13)

Many teachers used the downloaded materials exactly as they found them. They selected and matched those materials with the content of their lessons. They found this process quick, time saving and convenient as stated in the following reflection:

> For video files I mainly copy from the internet, I mean download from the internet. RealPlayer can easily help download those video files to show to our students. I don’t do anything to edit those files. (ID 30)

A smaller number of teachers who had higher ICT proficiency reported use of some editing software to make necessary changes to the downloaded materials to suit different levels of students. One teacher said:

> ... For voice recording, I use RealPlayer or Windows Media Player to record video or voice, and I also use those software programs in class. I use Audacity to edit, cut or slow down audio files to suit different groups of students. For interpreting skills, I mainly use RealPlayer and Audacity to edit audio files. I have heard about some video editing software programs but personally I have never used them. (ID 03)

Participants reported extensive use of word processing applications to design different exercises for listening, grammar, vocabulary and to provide feedback on students' work, especially for translation subjects. Some examples include:

> I use word processing to prepare for listening activities, grammar exercises and questions, etc. (ID 09)

> I use word processing to prepare for different types of practice exercises, tests and exams such as blank filling, answering questions and matching, etc. (ID 12)

> I use MS Word for my students to practise translation skills. I used Word functions to prepare different translation exercises to suit different groups of students. (ID 27)

PowerPoint was widely used to design presentations or worksheets from the downloaded materials. Many things could be done with PowerPoint such as noting down main teaching points, or adding images and audio-visual files.

> With the rapid development of ICT, computers are frequently used, and apart from computers I use other software programs to prepare for my lessons, sometimes simply PowerPoint or audio or video editing software. (ID 27)

The data also showed that most teachers prepared lessons at home (see Table 2, Appendix 11). As many as 86.7 % of survey respondents *always/often* used a computer at home and 86.1 % *always/often* used the internet at home as opposed to only 34.2 %, who *always/often* used a computer at the university and 35.8 %, who *always/often* used the internet at HANU. The participants rated the quality of their computing resources at home and at the university. Their home use preference was possibly due to the perceived better quality of computers (mean = 3.97/6) and the internet at home (mean = 3.85/6) than the quality of computers (mean = 3.06/6) and the internet (mean = 3.06/6) at the university, even though in all cases the mean score reflects a rating of between *less than adequate* and *adequate* (see Table 3, Appendix 11). As not all classrooms at the university were equipped with an internet connection, it was common for teachers to pre-download materials before each lesson so that they were prepared.

> In general, we, teachers, often download materials onto our laptop computers then show those materials to our students in the classroom. (ID 20)

There was a strong, statistically significant correlation between ICT use for lesson preparation and for classroom teaching (r = .66, p = 000). In other words, those teachers who reported greater use of ICT to prepare for their lessons were more likely to use ICT in classroom teaching and vice versa.

ICT USE FOR CLASSROOM TEACHING

A large majority of survey respondents (91.2%) reported their engagement with ICT in teaching. This high percentage was consistent with teachers' awareness of general ICT benefits (100%) and their widespread beliefs about the benefits of ICT in language teaching (99.1%). Yet, there was a small group of teachers (8.8%) who did not use ICT in their teaching at all.

As indicated in the literature review, ICT use for teaching is closely linked with (among other determinants) access to ICT facilities, quality of equipment, technology settings, performance expectancy, effort expectancy and ICT training (Buabeng-Andoh, 2012; Koranteng, 2012).

It is, therefore, necessary to explore the availability of ICT facilities at the case study university. The survey data showed that the following proportions of teachers had access to the identified facilities at HANU: internet connection (68.9%), data projectors (61.7%), desktop computers (58.1%), computer labs (56.3%) and interactive whiteboards (23.9%) (see Table 4, Appendix 11). Up to the moment of conducting the survey, HANU had not bought any interactive whiteboards; therefore the above-claimed interactive whiteboards were presumably normal whiteboards. These results suggest that between 30 and 66% of the teachers did not perceive that they had access to computer resources and that the resources that were most readily accessible were static and more readily associated with content transmission.

The quality of ICT equipment at HANU fell short of the teachers' expectation. Despite efforts by the university leadership to upgrade ICT resources, the quality of university computers (mean = 3.06/6) was reported as *less than adequate* by 56.1% of respondents and the quality of the internet (mean = 3.06/6) was also reported as *less than adequate* by 60.2% of respondents (see Table 3, Appendix 11).

There existed two different settings at Hanoi University: medium-technology and no-technology classrooms. The first setting consisted of 12 computer labs (with 520

computers) and the main library (with 250 computers) but the quality of facilities was below teachers' expectations as indicated above. In this medium-technology context, teachers mainly used PowerPoint (n = 145, 65.3%), internet search engines (n = 90, 40.5%), web browsers (n = 81, 36.5%), word processing (n = 75, 33.8%), voice recording (n = 69, 31.1%) and internet download (n = 49, 22.1%) (see Table 4.1 above), which again is consistent with more lecture-oriented uses of technology.

In the limited number of classrooms that were equipped with ICT facilities, teachers reported the widespread use of PowerPoint and the internet to search for learning materials online to support students' practice of language skills or to check the accuracy of pronunciation. This is an example:

> In the classroom I often use PowerPoint or use the internet for students to look for information or do exercises according to what I am going to teach. (ID 10)
>
> …if any word is mispronounced, we can access to a website to check the pronunciation of that word or let students hear how native speakers pronounce that word. (ID 14)

Teachers could do many things with PowerPoint, e.g. directing students to focus on a particular feature, as the following statements demonstrate:

> I use PowerPoint for preparing a lesson about a film topic, about the civilisation of a particular country or creating special effects to draw attention to specific grammar items or vocabulary, etc. (ID 09)
>
> During an interpreting lesson in the language lab, I use PowerPoint to provide students with key points, which will appear in the audio file that they are going to hear. (ID 27)
>
> For example, when I teach the special topic about tourism, I use PowerPoint to show photos of various locations; I insert audio files or video clips or web links into the PowerPoint slides; let students watch the self-running photo slideshow to practise presentation skills. In language practice, I use PowerPoint to show images about things or products representing a particular culture, any images relating to the lecture so that students can practise questions-and-answers, story telling or description, etc. (ID 30)

In the no-technology context, which was the dominant one at HANU, teachers either used printed books and hand-outs or had to bring all their equipment (e.g. laptops, data projectors and speakers) if they wanted to teach foreign languages with ICT as illustrated in an example below:

> We, teachers, usually have to bring our own laptops and speakers to class. (ID 16)

Many survey participants reported that they would have been more likely to use ICT in their teaching if there had been more facilities in the classroom. They indicated a greater likelihood of use in relation to diverse technologies in the following proportions: data projectors (85.2%); internet connection (82%); faster internet connection (80.7%); interactive whiteboards (76.6%) and computers (70.7%) (see Table 5, Appendix 11).

Although many ICT tools are freely available, teachers dominantly exploited six applications: PowerPoint presentations (65.3%), internet search – seeking information on the web (40.5%), web browser - viewing web content (36.5%), word processing (33.8%), voice recording (31.1%) and internet download (22.1%). Only two of these tools were used by more than half the teachers. The next four were used by between 20 and 40% of the teachers. Other tools were used to an even smaller extent or hardly used at all (see Table 4.1).

It seemed that applications with higher levels of perceived usefulness and ease of use were used more often by teachers. Teachers ranked the following applications as useful/very useful: word processing, email, internet search and internet download (all appreciated by 100% of respondents), PowerPoint (99.5%) and voice recording (98%) (see Table 6, Appendix 11). The voice recording capacity is not surprising among language teachers, but this is the first reference to the use of a technology that is more obviously student-centred. According to Table 7 (Appendix 11), the top 6 applications which were rated average/easy to use were: email (99.3%), word processing (98.4%), internet search engine (e.g. Google, Yahoo) (98.3%), internet download (98%), presentation with PowerPoint (97.1%) and web browser (e.g. Internet Explorer, Firefox) (96.7%). The tools which were considered useful/very useful and average/easy by most respondents coincided with the most frequently used tools for both lesson preparation and classroom teaching. These tools appear to most readily align with teacher-centred approaches.

ICT was used to teach different language skills and subjects at Hanoi University (HANU). The data in Table 8 (Appendix 11) show that teachers used ICT the most in teaching listening (55.8% of respondents) and speaking skills (36.5%), followed by reading (16.4%), interpreting (15.1%), vocabulary (12.7%) and writing (10.5%). A smaller number of teachers reported their usage of ICT in teaching other subjects such as translation (8.8% of respondents), grammar (8.2%), literature (5.3%), phonetics (3.7%) and lexicology (3.7%). Some examples of ICT use for skills teaching include:

> If there is internet connection, very simple, we can let students watch some video clips online for listening comprehension, getting the main ideas and then do interpreting. Furthermore, we can obtain online newspaper articles and use them directly with students. And if any word is mispronounced, we can access a website to check the pronunciation of that word or let students hear how native speakers pronounce that word. (ID 14)

> Students can use video clips shown by teachers to express themselves. They watch video clips, then express views and impressions, for example: watching an excerpt of a TV documentary then expressing their thoughts and opinions. That is the tool for language development. (ID 22)

A small number of teachers used ICT in more sophisticated ways to teach language:

> When students do pronunciation practice with videos, they can see the speakers and learn better. Moreover, they can practise reading long sentences out loud. Obviously the scripts can appear in the videos just like Karaoke....We not only hear the sound but also see the sound ... when students speak we record their voice, then put the two frames of sound waves next to each other for analysis ... Now with this evidence, not only students but also our colleagues can be aware of the areas which need further practice... Now technology and computer software can help us do that. (ID 22)

When ICT was integrated into language lessons, teachers noticed meaningful impacts on teaching and learning. According to many respondents, ICT improved their teaching performance (98.1%), increased productivity (96.7%) and helped develop expertise in their subject areas (94.9%). In relation to students' benefits, teachers reported that ICT increased students' study motivation (100%), promoted deeper understanding of

subjects (92.5%), provided ubiquitous opportunities for language skill practice (90.5%) and enhanced employability for students after graduation (95.7%) (see Table 1, Appendix 11). Examples of relevant comments included:

> Of course the effectiveness of a lesson depends very much on teachers, on their way of expression as well as their pedagogies. However, if a technology or software is used, lessons will be more enjoyable, for example, students will feel more excited with audio-visuals. That is the motivation for students as well as teachers. (ID 16)
>
> ICT helps students absorb and update information fast and effectively. (ID 09)
>
> ICT helps teachers a lot in lesson preparation as well as helps teachers transmit lesson content to students more effectively. (ID 12)
>
> It depends on how different teachers understand the term "quality" in teaching but I personally think "yes". ICT helps me to get inputs/teaching points for my lectures by web-browsing across the topics relevant to the objectives of the lessons I am about to teach. Video clips from YouTube illustrate very well my points, especially those with interviews and answers from experts recorded in different corners of the world. (ID 21)
>
> ICT helps students search for information faster and more effectively, saving a lot of time and effort, resulting in better learning outcomes. (ID 12)
>
> I think that now students are interested in using ICT in learning languages. If teachers use ICT and ask students to do the same, then the quality of learning will be improved. For example, I often send audio files and other learning materials to students before each lesson so that they can make better preparation and will learn better. After each lesson I also upload audio files to the internet for students to download for further practice. However, whether the learning outcomes are enhanced or not depends very much on many factors such as students' practice or test taking techniques, etc. (ID 27)
>
> When ICT is used in teaching, students feel more enjoyment and it is easier for teachers to fulfil the aims of the lessons. About the increase in learning outcomes, I am not sure because I don't have any statistics. (ID 30)

Despite the positive impacts indicated above, the frequency of usage was not high. Only 46.2% of respondents *sometimes* used a computer at HANU, 15.6% *rarely* and 4% *never* used one while at the university (Table 2, Appendix 11). This could possibly be connected with the limited access to and low quality of ICT facilities. For example, about 40% of the respondents reported no access to computers and data projectors at the university; over 30% and 40% respectively had no access to the internet or computer labs (Table 4, Appendix 11). Over 70% of survey respondents were not satisfied with the quality of HANU computers, which were described as much less/less than adequate (see Table 3, Appendix 11). In addition, many survey and interview participants complained about the slow speed of internet at the university.

> As for the internet, I dare not risk using the internet in the class because I fear a sudden internet disconnection or slow connection. (ID 03)

> Although Hanoi University has made heavy investments [in ICT infrastructure], there are still many limitations, for example, the internet transmission is not as fast as we wish, often slow; secondly technical problems often happen, and if the technical support does not come in time, the ICT usage will be very difficult. (ID 14)

Teachers' engagement with ICT is closely linked with ICT confidence and competence, which in turn are related to ICT training (Buabeng-Andoh, 2012). From the perspective of survey respondents, the amount of formal ICT training at the university was insufficient. On average, academic staff had received a maximum of10 hours of ICT training over 2 years (see Table 9, Appendix 11). Over 80% of respondents were not satisfied with this frequency of ICT training. With such limited hours of training, the teachers did not feel that a sufficient level of competence and confidence in ICT use could be developed. Consequently, nearly 70% of the survey respondents felt 'not confident' or only 'a little confident' and 75% of them felt 'not competent' or only 'a little competent' in ICT integration (see Table 10, Appendix 11).

ICT professional development for teachers tended to focus on the operation of specific tools. Over half of the formal training content at HANU that the teachers had attended was about basic ICT applications, for instance, internet search skills (n = 33, 40.2%), word processing (n = 30, 36.6%), PowerPoint presentation (n = 28, 34.1%) and Excel (n = 12, 14.6%). There were some higher-level ICT skills such as e-lecture preparation (n = 22, 26.8%), audio editing (n = 22, 26.8%), and video editing (n = 9, 11%) (see Table 11, Appendix 11). A majority of survey respondents (77.1%) reported that ICT training content did not meet the needs of teachers teaching different subjects (see Table 1, Appendix 11). Here is an illustration:

> I think that the training content is inadequate because each teacher has a different need. Some need technology relating to audio and video while others need technology to search for and organise information. So I think that if we want to meet the needs of everyone, we need to divide teachers into different groups and each group will focus on learning the content they are interested in ... (ID 26).

When being asked about ICT training, neither survey nor interview participants mentioned anything explicitly about pedagogical uses of ICT for subject teaching.

Survey participants reported that they would have been more likely to use ICT in their teaching if they had received more professional development about how to use ICT in teaching (83%), more time to learn how to use ICT (73.4%), more technical support (80.3%), more leadership support (76.7%), more financial incentives (62.9%), more evidence of ICT usefulness (63.2%) and reduced teaching loads (60.4%). A smaller number of survey participants agreed that public recognition (44.7%) and promotion to higher position (26.3%) would encourage teachers to integrate ICT more into teaching (Table 5, Appendix 11). These responses suggest that the dominant need for these teachers is to explore and receive support for the relationship between innovative teaching practices and the use of technology.

The interview comments and open-ended question data shed light on different dimensions of ICT use, which is the focus of the next section.

4.1.2 Different dimensions of ICT use

ICT use as elaborated by interview participants was not a single entity but could be further unpacked in ways that are consistent with two dimensions: technological and pedagogical use proposed in the pedagogy * technology model for ICT integration by teachers (2012).

TECHNOLOGICAL USE OF ICT

Technologically, there was evidence of different levels of use by language teachers at Hanoi University that accorded with the eight levels identified by Lin et al. (2012) as presented below.

Level 0 - Non-use

There was a small group of teachers (n = 8.8%) who reported non-use of ICT in their teaching. No interviews could be made with ICT non-using teachers because no one in this category was willing to talk. Therefore, what is reported here came from open-ended items in the survey and interviews with ICT-using participants. Key words from responses to an open-ended item revealed some main reasons for ICT non-use: lack of ICT competency, lack of ICT equipment in the classroom, poor quality of ICT equipment, extensive consumption of time to prepare lessons with ICT, low incentives for use leading to low motivation to use ICT (see Table 12, Appendix 11).

A few interviewees explicitly complained about the poor remuneration, which was viewed not to be commensurate with the time they spent on ICT use and was reported to contribute to decisions not to use ICT.

> In our university, the remunerations are very modest; consequently teachers often think that for such modest remuneration, why they should have to make the effort to use technologies. As a result, teachers often teach their lessons in the fastest way, just to finish their lessons, and that's the greatest loss for the university and students. (ID 26)

Sometimes obstacles to ICT use could lie in the teachers' ways of thinking. Teachers implied that they worked across different institutions. If they shared their materials, those materials would be used by other teachers and then they would have to take time to design new materials.

> Many teachers think that if they share their lessons on the internet, their materials will be copied, they will lose the copyright, and then they will not be able to use those materials in other institutions. (ID 24)

It was observed that the older teachers seemed to be uninterested in integrating ICT into their teaching because they were happy with their current teaching styles. This is an observation of a classroom teacher in her 30s:

> About the age of teachers, for example, teachers who are kind of old do not show interest [in ICT use] because they have extensive teaching experience already. They feel satisfied with what they are passing on to students and perhaps that's why they don't want to update themselves. (ID 04)

Level 1 - Mundane use (i.e. using ICT to do little jobs, e.g. email, calculating grades)

Some interviewees reported that they were unable to use the university computers for teaching-related purposes because many teachers used university computers just to check email:

> Teachers mainly check their emails so the computers are busy all the time. (ID 09)

However, a slightly different perspective is also available. Email was seen as a good channel of communication between teachers and students. Teachers used emails to inform students of learning materials, which were uploaded for students to practise and to do assignments.

> Actually what I have done is mainly to upload lectures on the internet and then inform my students via email so that they can download those materials for practice, and then if students have any difficulty during practice, they can email me or phone me. Most importantly we need to ensure that our students can be aware of our uploaded materials within one or two days, otherwise students will forget that there are materials out there on the internet waiting for them. (ID 27)

For many participants, a possible reason for their mundane use of ICT was due to the low quality of computers at the university (rather than their low ICT competence):

> We cannot use those old computers to prepare our lessons because they are so slow and don't have software which we can use. (ID 26)

Level 2 - Using off-the-shelf CD-based educational software

Many teachers said that they made full use of compact discs (CD) accompanying textbooks. What they did was just to select suitable parts from the CD for classroom teaching:

> For teaching listening skills, I teach [name of subject] and I just use the available CD. (ID 13)

> Over the past few years we have moved to using CD, that means we select units which we feel appropriate … for example some [name of language] textbooks are accompanied by CDs and we can use those CDs when we teach that textbook. (ID 21)

The reason for CD use was that it was seen as convenient, economical and easy to use.

> Cassette tapes are out of date and cause many problems when we use them. In our Department of [name of department] we 100% use CDs in replacement of cassette tapes and save a lot of costs. (ID 12)

> Many people use CD because it is convenient and easy to rewind to previous cues. (ID 20)

CD-based software was found to be useful for language practice. Below is an illustration of how CDs were used for teaching pronunciation:

> About pronunciation, I have some [name of language] CD-based software to teach pronunciation especially for beginners, e.g. pronunciation of the alphabet. There are both male and female voices. I let students listen to different accents so that they are familiar with [name of language] pronunciation. (ID 04)

Level 3 - Utilising Internet applications

There is extensive evidence of teachers searching the internet for relevant materials especially as part of lesson preparation. Teachers often did preparatory work at home where ICT facilities were of better quality. The common way was to download suitable learning materials onto a computer or an USB to be later presented to students in the classroom.

> In general, we, teachers, often download materials onto our laptop computers then show those materials to our students in the classroom. (ID 20)

In classrooms with an internet connection, teachers directly searched for learning materials online to support students' practising their language skills or to check the accuracy of pronunciation.

> If there is an internet connection, very simple, we can let students watch some video clips online for listening comprehension, getting the main ideas and then do interpreting. Furthermore, we can obtain online newspaper articles and use them directly with students. And if any word is mispronounced, we can access a website to check the pronunciation of that word or let students hear how native speakers pronounce that word. (ID 14)

Some material-rich sources for language practice were mentioned such as radio and TV websites:

> Now when teachers go to the classroom, they often bring their laptops and directly log on to useful websites for their particular foreign language, such as channel TV5 for French, BBC for English. (ID 24)

While older teachers were reported to use only a limited number of tools, younger teachers seemed to be more active, and were more experienced in ICT.

> …There are two generations of teachers in my Department. The older teachers use only Microsoft Word, or use the internet to collect information, whereas younger teachers are very active in using ICT. (ID 04)

Level 4 – Creating teaching materials

In many cases, teachers used the downloaded materials as they were. They selected and matched those materials with the content of their lessons. That way was quick, time saving and convenient.

> For video files I mainly copy from the internet, I mean download from the internet. RealPlayer can easily help download those video files to show to our students. I don't do anything to edit those files. (ID 30)

In many cases, PowerPoint presentations were widely used to create teaching materials. Here is one example:

> I use other software programs to prepare for my lessons, sometimes simply PowerPoint. (ID 27)

Teachers also reported on how they used word processing to design different exercises for listening, grammar, vocabulary, and to provide feedback on students' work, especially for the translation.

> I use MS Word for my students to practise translation skills. I used Word functions to prepare different translation exercises to suit different groups of students. At the same time I also ask students to send me their translation works in the Word format and I use 'track changes' function to do that. (ID 27)

> For example, in a translation lesson, I use Word to correct students' translation works right in the class, e.g. underlining, highlighting important points, turn on 'track changes' to show changes, or open original document side by side with the translation version for the ease of comparison. (ID 30)

Teachers gave specific examples of how ICT was used to prepare for the teaching of different language skills.

> For example, I want to emphasise two things in listening. First, I can use any audio files available on the internet and download them. Second, I have some scripts without accompanied audio files, so I can use audio recording technology to record those scripts for students to listen. (ID 04)

In the limited number of classrooms that were equipped with ICT facilities, teachers reported extensive use of PowerPoint and the internet.

> In the classroom I often use PowerPoint or use the internet for students to look for information or do exercises according to my instruction. (ID 10)

Teachers could do many things with PowerPoint, e.g. using special effects to draw students' attention to vocabulary or grammar, as demonstrated in the following statement:

> For example, when I teach the special topic about tourism, I use PowerPoint to show photos of various locations; I insert audio files or video clips or web links into the PowerPoint slides; let students watch the self-running photo slideshow to practise presentation skills. In language practice, I use PowerPoint to show images about things or products representing a particular culture, any images relating to the lecture so that students can practise questions-and-answers, storytelling or description, etc. (ID 30)

With ICT usage, pronunciation practice could be visualised by sound waves, making it easier for students to identify the areas for further improvement.

> When students do pronunciation practice with videos, they can see the speakers and learn better. Moreover, they can practise reading long sentences out loud. Obviously the scripts can appear in the videos just like Karaoke. Students just read aloud, follow the words when the word colour changes. That is for pronunciation practice. (ID 22)

> ...We not only hear the sound but also see the sound ... when students speak we record their voice, then put the two frames of sound waves next to each other for analysis ... Now with this evidence, not only students but also our colleagues can be aware of the areas which need further practice... Now technology and computer software can help us do that. (ID 22)

Some teachers reported how ICT was used for teaching speaking skills.

> The software Sound Forge helps teachers in general and those who use similar software to edit audio files, to play back, to do voice recording and to visualise sound waves for further explanation. That serves as evidence. If voice is not recorded, there will be no evidence and students will not believe us. (ID 22)

Digital videos were used as input for students' language development by expressing their opinions and impressions about what they saw.

> Students can use video clips shown by teachers to express themselves. They watch video clips, then express views and impressions, for example: watching an excerpt of a TV documentary then expressing their thoughts and opinions. That is the tool for language development. (ID 22)

Teachers stated that despite the appeal of technology, teaching with ICT would not always be interesting and would possibly cause boredom if teachers did not know how to integrate ICT use with other activities.

> Take EDO [English Discoveries Online] for example, in one and a half hours if teachers do not know how to integrate it with other activities, students will feel bored because I think EDO is more suitable for self-study. Then there are also many disadvantages of learning in computer labs. In the past I did a lot of classroom teaching and I found that desks and chairs were often fixed and difficult to move them around to organise group work for instance. So, if students have to sit down for one and a half hour, it will be difficult for them. (ID 20)

Level 5 – Customising multimedia resources

In a small number of cases, those teachers who had higher ICT proficiency reported usage of some editing software to make necessary changes to the downloaded materials to suit different levels of language abilities for their students. One teacher said:

> ... For voice recording, I use RealPlayer or Windows Media Player to record video or voice, and I also use those software programs in class. I use Audacity to edit, cut or slow down audio files to suit different groups of students. For interpreting skills, I mainly use RealPlayer and Audacity to edit audio files. I have heard about some video editing software programs but personally I have never used them. (ID 03)

One thing that stands out from the interviews is that a limited number of language teachers often used a variety of applications to edit downloaded materials to make necessary preparation to suit language abilities of their students. For example:

> There are many reading materials on the internet. The resources are huge and can be downloaded from the internet and then I use Microsoft Word to make necessary changes to suit the levels of my students. (ID 04)

Level 6 & 7 – Producing simple and sophisticated instructional applications

Apart from the popular use of word processing and PowerPoint presentations, some teachers used Hot Potatoes software to design practice exercises for students. Fewer than 10 out of 43 interview respondents reported the use of Moodle as a learning management system to open online courses, to share learning materials with students and to create a favourable digital environment for students' collaborative learning.

> You can make lesson preparation with software Hot Potatoes or other software programs, however Moodle program allows us to upload audio and video files, even allows teachers to communicate with students like videoconferencing at any time. And it is quite possible to use Moodle for testing if you like. I have used Moodle for some distance learning courses. Our students can stay at home and can access to lectures and homework which are uploaded to Moodle by the teacher on a weekly basis. Students can submit their work to Moodle and the teacher can check whether students submit their work on time or not. (ID 27)

The diverse uses of technology reported above do not automatically specify how those technologies are deployed in teaching. There is therefore a need to explore how ICT use relates to diverse pedagogies.

PEDAGOGICAL USE OF ICT

There was more evidence of a connection between pedagogical use of ICT and direct teaching and cognitively active learning than there was of uses of ICT in association with constructive learning and social learning.

Direct teaching

The popular use of word processing and PowerPoint presentations seemed to be connected with the prevalence of traditional teaching styles in which teachers often stood at the front of the class and delivered the instruction to students.

> In the classroom I often use PowerPoint or use the internet for students to look for information or do exercises according to my instruction. (ID 10)

Cognitively active learning

ICT was used by a small number of teachers to promote collaboration between teachers and students, and knowledge was co-created by students and teachers, rather than the traditional one-way instruction. This is one example:

> ...The information is multi-dimensional and can be combined from my source as a teacher and from my students' sources; therefore the information is more diversified, objective and accurate. And I see that when I use ICT in my teaching, I feel much less busy than when I use the lecturing mode. (ID 26)

ICT supported student-generated knowledge and cognitively active learning in which students took an active role in their learning process:

> We sometimes give students homework, for example, to go online and search for examples of sentence patterns and expressions often used for a particular topic, then students come to the class to share with their classmates. (ID 09)

Constructive learning

A couple of interview participants reported that ICT supported students' construction of their own knowledge on the basis of interactions with recorded examples of real-life situations:

> When we bring authentic video or audio recordings and the breath of life into the classroom, students will feel less surprised when they go outside. (ID 22)

Social learning

There were a couple of teachers who used ICT differently from the others. They employed the use of social networking, Moodle and online forums to foster collaborative learning and social activities. Some examples include:

> I created some groups on Facebook or Yahoo for my students to exchange their discussions; introduced some online forums in [name of country] so that my students could make friends with [name of language] students. (ID 09)

> I am experimenting with a study forum on Moodle where teachers introduce topics or upload reference materials, and then students can download those materials for research and discussions with other students. (ID 12)

A small number of teachers used innovative ways of delivering lessons by using ICT to enhance the interactions between teachers and students via web-based forums, extending the learning space via virtual classrooms, and fostering meaningful learning through cross-border online discussions. As a result, teachers noticed that more knowledge was learned; diversified sources of information were presented; authentic materials which were downloaded from the internet were brought into classrooms.

> I teach the subject [name of subject], that is cross-cultural communication. My subject is normally taught in a traditional teaching method, i.e. lecture type, but now with the use of technology I can organise my class in different ways. I can assign homework to the students and can set up forums or use other online tools. I organise a virtual classroom on the internet and we usually conduct learning on the internet with each other, not only in the classroom but also on the internet. We conduct exchange with other students in different countries and so the

information that we can accumulate is diversified, and many sources are useful for the students. (ID 26)

As can be seen from the analysis above, ICT was used for lesson preparation and classroom teaching. Usage was found to follow two main dimensions: technological and pedagogical. Although a high majority of teachers used ICT, there were a small group of participants not using ICT at all, implying that ICT use could be influenced by some factors. The next section responds to this issue in more details.

4.2 Research question 2: Factors influencing ICT use

As explained in Chapter 2, the survey questionnaire contained 61 statements written to help identify factors influencing teachers' use of ICT. The items were originally grouped into 7 categories for which the literature review provided face validity. These were: rationale for ICT use (5 items), perceived usefulness of ICT (15 items), perceived ease of use of ICT (6 items), modes of teaching (4 items), experiences of ICT use in teaching (14 items), access to equipment (7 items), and support to ICT use (10 items). To explore the empirical usefulness of these groupings, exploratory factor analysis (EFA) was employed to identify potential latent constructs (i.e. factors) underlying the participants' responses to the 61 items. The aforementioned 7 categories will be later re-grouped and renamed by the factors which come from EFA.

In this chapter, the following terms have meanings attached to them as follows. Factors are latent variables in a factor analysis. Factor loadings of items help to see what items are together measuring a latent variable. Once the items (pulled together by factors) are put into scales, they are considered measures of variables. Each scale score measures a variable. In my discussion, factors as a term is used interchangeably with variables. Variables can be combined via a factor analysis of the variables to second order or broader variables. Variables are also used in regression and ANOVA (analysis of variance).

As a result of the exploratory factor analysis, eleven major factors influencing language teachers' use of ICT were identified. How those factors were extracted is explained below.

4.2.1 Identifying major factors

As explained above, the reason for conducting EFA was to reduce the 61 survey items to a smaller set of coherent factors (Pallant, 2011; Williams, Brown, & Onsman, 2012). The procedures presented here show the steps taken leading to the development of scales measuring factors affecting teachers' use of ICT in foreign language teaching.

A 5-step protocol for EFA was applied and included: i) checking the suitability of data for EFA; ii) extraction methods; iii) criteria assisting factor extraction; iv) selection of a rotational method; and v) interpretation and labelling (Williams et al., 2012).

Checking suitability of data for EFA: Before EFA was conducted, the suitability of the data needed to be considered by considering sample size and sample to variable ratio as well as the strength of the relationship among items (Pallant, 2011; Williams et al., 2012).

Suitable sample size for factor analysis has been viewed differently by different authors. For some, the minimum sample size should be 300 respondents (Tabachnick & Fidell, 2007), while for others, a smaller sample size of 150 participants could be sufficient (Steven, 1996). Comrey and Lee (1992) regarded a sample size of 100 as poor, 200 as fair, 300 as good, 500 as very good and over 1,000 as excellent. The total number of survey respondents in this study was 222 and therefore considered acceptable for factor analysis.

Sample to variable ratio in factor analysis refers to the number of participants required for each variable (Williams et al., 2012). It is recommended that there are between 5 and 10 respondents for each item (Garson, 2013; Nunnally, 1978; Tabachnick & Fidell, 2013). With a sample size of 222 participants and 61 items in this study, a decision was made to conduct separate factor analyses for each of three groups of items. Each group consisted of approximately 20 items, thereby ensuring a ratio of about 10 respondents per item. Care was also taken to ensure that all items written to address a particular construct were considered simultaneously. The three groups for factor analysis included: i) the first group with 20 items (Q13.1-Q13.20), originally written to assess the rationale for ICT use and perceived usefulness of ICT; ii) the second group of 24 items (Q13.21-Q13.44) which were designed to measure perceived ease of use, modes of teaching and experiences of ICT use in teaching foreign languages; and iii) the third

group consisting of 17 items (Q13.45 to 13.61) originally designed to measure two constructs: access to ICT equipment and support for ICT use.

The strength of the relationship among items could be determined as appropriate to justify exploratory factor analysis (EFA) if : i) a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was >.6 (Kaiser, 1970); ii) a Bartlett's test of sphericity was statistically significant at p<.05 (Bartlett, 1954); and iii) inter-item correlation coefficients were >.3 (Tabachnick & Fidell, 2013). The results of the KMO and Barlett's test, recorded in Table 13 (Appendix 11), show a KMO value above .7 and a highly significant Bartlett's Test of Sphericity value (p=.000), suggesting that items in each of the three groups were suitable for factor analysis (Coakes & Ong, 2011).

Extraction methods: There are different methods to extract factors, however, principal components analysis (PCA) tends to be the most commonly used (Williams et al., 2012) because it helps provide the maximum possible amount of explained variance (Gorsuch, 1983; Pallant, 2011). In this study, the results of PCA and Kaiser criterion (consideration of components with eigenvalues ≥ 1) revealed 5 components having eigenvalues above 1 for each group of items (see Table 4.2) with cumulative percentage of variance of 64.2%, 58.4% and 64% for the first, second and third group of items respectively.

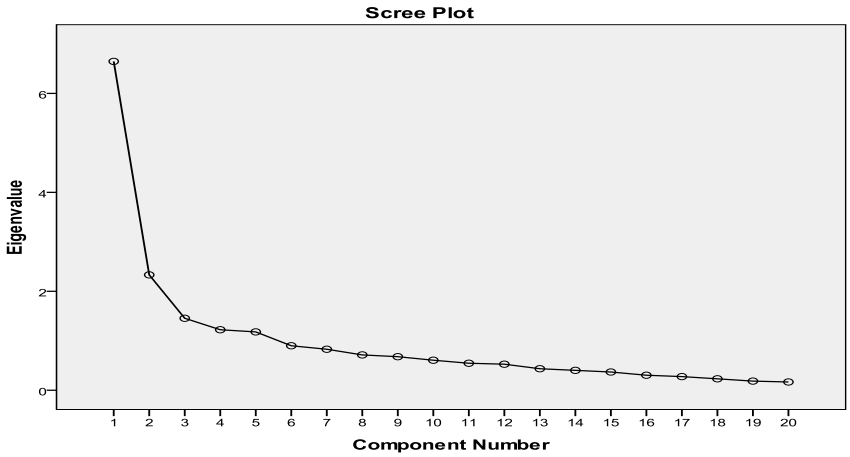
Criteria assisting factor extraction: Before accepting factors in an EFA it is recommended that additional criteria should be used to examine factors from the results of PCA, such as Scree plot and parallel analysis (Williams et al., 2012).

Table 4.2: An extract of the total variance explained by each of three groups

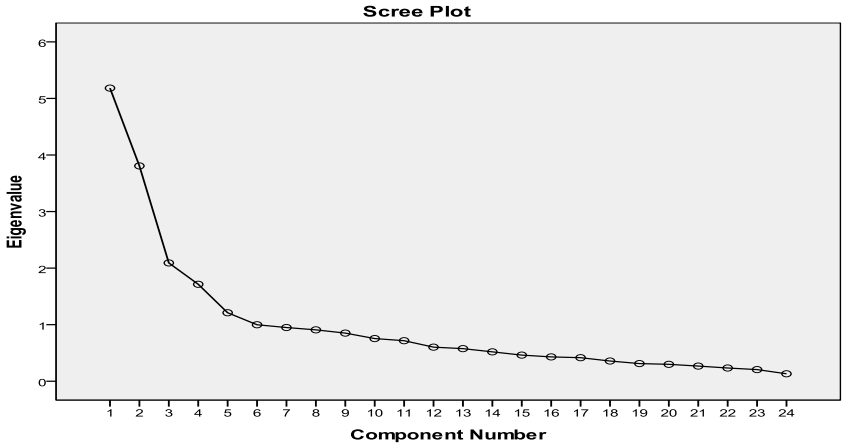
	Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
Group 1	1	6.647	33.234	33.234	6.647	33.234	33.234	5.028
	2	2.332	11.660	44.894	2.332	11.660	44.894	2.383
	3	1.455	7.273	52.167	1.455	7.273	52.167	4.411
	4	1.223	6.114	58.282	1.223	6.114	58.282	2.062
	5	1.179	5.895	64.177	1.179	5.895	64.177	2.764
	…	…	…	…	…	…	…	…
	20	.167	.833	100.000				
Group 2	1	5.183	21.594	21.594	5.183	21.594	21.594	4.643
	2	3.807	15.861	37.455	3.807	15.861	37.455	4.081
	3	2.092	8.715	46.171	2.092	8.715	46.171	2.183
	4	1.714	7.142	53.313	1.714	7.142	53.313	1.897
	5	1.211	5.045	58.358	1.211	5.045	58.358	2.533
	...	...	...	...	...	...	...	...
	24	.132	.549	100.000				
Group 3	1	4.781	28.125	28.125	4.781	28.125	28.125	2.433
	2	2.138	12.578	40.703	2.138	12.578	40.703	2.880
	3	1.524	8.966	49.669	1.524	8.966	49.669	2.923
	4	1.350	7.939	57.608	1.350	7.939	57.608	2.708
	5	1.082	6.367	63.974	1.082	6.367	63.974	2.294
	...	...	...	...	...	...	...	...
	17	.128	.752	100.000				
	Extraction Method: Principal Component Analysis (PCA).							
	a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

The Scree plot is a graph of eigenvalues. It is recommended to retain components lying to the left of the elbow which is a break from linearity (Williams et al., 2012). An inspection of the Scree plots of the three groups in Figure 4.2.1 below suggested two or three factors for the first group, and four or five factors for the second and third groups.

First group:



Second group:



Third group:

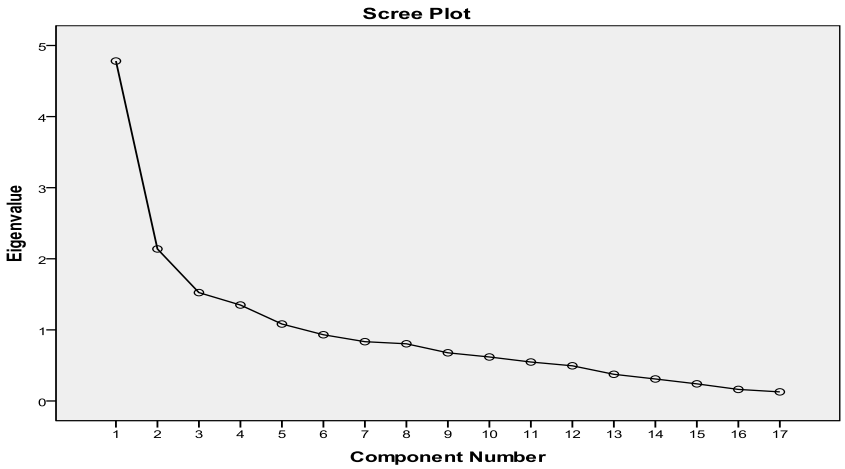


Figure 4.1: Scree plots of three groups of items

In many cases, the Scree is imprecise and therefore difficult to interpret. Therefore, parallel analysis (PA) can be added to help decide how many factors to retain (Pallant, 2011; Williams et al., 2012). PA is conducted on a randomly generated data matrix of the same size as that being subjected to EFA (Choi, Fuqua, & Griffin, 2001; Ledesma & Valero-Mora, 2007; Watkins, 2006). It is suggested that any components which have eigenvalues from PCA higher than random ordered eigenvalues from PA should be retained (Pallant, 2011; Williams et al., 2012). It seems that PA is one of the clearest methods for determining the number of factors to extract (Thompson, 2004). The results as shown in Table 4.3 below suggested retention of three components in group one, four components in group two and another four components in group three.

Table 4.3: Eigenvalue from PCA vs. random ordered value from PA

#	Component number	Actual eigenvalue from PCA	Random ordered value from PA	Decision
First group	1	6.647	1.6342	Accept
	2	2.332	1.5192	Accept
	3	1.455	1.4294	Accept
	4	1.223	1.3468	Reject
	5	1.179	1.2786	Reject
Second group	1	5.183	1.7276	Accept
	2	3.807	1.6057	Accept
	3	2.092	1.5050	Accept
	4	1.714	1.4256	Accept
	5	1.211	1.3609	Reject
Third group	1	4.781	1.5906	Accept
	2	2.138	1.4556	Accept
	3	1.524	1.3655	Accept
	4	1.350	1.2854	Accept
	5	1.082	1.2177	Reject
	6	.931	1.1479	Reject
	7	.834	1.0866	Reject
	8	.804	1.0297	Reject

Considering all analyses above, the final number of factors to be retained for further investigation was decided as follows: three components for the first group of items, and four components for each of the second and third group of items, totalling eleven major components (factors).

Selection of rotational method: There are two common rotational methods used in factor analysis: orthogonal (producing factors which are uncorrelated) and oblique (producing factors which are correlated) (Costello & Osborne, 2005; Thompson, 2004). The aim of those rotation options is to ease the interpretation of results by maximising high item loadings and minimising low item loadings (Pallant, 2011).

In this study, the factors affecting ICT use were assumed to be related; therefore an oblique rotation analysis (i.e. Direct Oblimin) was employed to extract factors.

After implementation of the rotation method, it was necessary to assess items in each component for factorial suitability by checking item factor loadings and the internal consistency of the scales comprising items loading 'significantly' on respective scales (Cronbach alpha).

Following the rule of keeping only items with factor loadings higher than 0.3, all items with factor loadings below .3 were regarded as non-contributing and were ignored (Pallant, 2011). Inspection of Table 4.4, Table 4.5 and Table 4.6 below shows that almost all items had factor loadings above 0.3 on a component (factor); except for one item (Q13.56) which was removed. It was noticed that 14 items in those three tables had cross-component loadings above 0.3. The conceptual relationship between the content of the item and the factor were considered before a decision was made about which component they belonged to.

Table 4.4: Pattern Matrix for PCA with Oblimin rotation of the first group (Q13.1-Q13.20)

Item	Component			Communalities
	1	2	3	
Factor 1				
Q13.1 I use ICT in teaching because I am aware of the benefits of ICT.	.829	-.056	.115	.613
Q13.6 I believe that ICT is very useful for language teaching	.803	-.132	-.006	.643
Q13.8 Using ICT increases my productivity	.784	.199	.029	.665
Q13.7 Using ICT improves my teaching performance	.722	-.007	-.181	.669
Q13.11 Using ICT enhances my lesson preparation	.599	-.130	-.204	.493
Q13.13 ICT helps me access extensive teaching resources on the internet	.531	.018	-.076	.327
Q13.9 Using ICT helps develop my professional expertise in my subject areas	.466	.164	**-.401**	.626
Q13.10 Using ICT facilitates sharing of teaching experiences	.452	**.378**	-.189	.538
Factor 2				
Q13.4 I use ICT in teaching due to the pressure from teachers	-.099	.876	.113	.722
Q13.3 I use ICT in teaching due to the pressure from students	-.082	.854	.145	.678
Q13.2 I use ICT in teaching due to my personal preference.	.263	.541	-.007	.396
Q13.12 ICT-enhanced lessons can be re-used	.143	.379	-.140	.245
Q13.5 I use ICT in teaching because of directives from my superiors	-.250	.375	-.187	.218
Factor 3				
Q13.15 Using ICT helps students gain better results in their studies	-.047	-.149	-.928	.765
Q13.17 Using ICT helps students understand subjects more deeply	-.045	-.155	-.889	.700
Q13.20 Using ICT enhances employability for students in the future	-.052	.145	-.648	.469
Q13.16 Using ICT increases study motivations for students	.136	.069	-.529	.390
Q13.18 Using ICT promotes autonomous learning	.286	.190	-.495	.556
Q13.14 Email is a useful tool for me to communicate with colleagues and students	.172	.007	-.379	.233
Q13.19 Using ICT helps students practise language skills ubiquitously	.243	**.339**	-.374	.488

Table 4.5: Pattern Matrix for PCA with Oblimin rotation of the second group (Q13.21-Q13.44)

Item	Component				Communalities
	1	2	3	4	
Factor 4					
Q13.22 I find it easy to use the Internet	.881	.173	-.166	.054	.743
Q13.21 I find it easy to use a computer	.855	.093	-.133	-.032	.725
Q13.23 I find it easy to use ICT in lesson preparation	.802	-.137	.042	-.095	.740
Q13.26 I find it easy to train myself how to use ICT in language teaching	.654	-.175	.169	-.094	.565
Q13.24 I find it easy to use ICT in language teaching in the classroom	.604	-.169	.047	**-.399**	.676
Q13.25 I find it easy to use ICT to share my teaching experiences with others	.495	-.009	.117	**-.423**	.523
Factor 5					
Q13.33 It is expensive to use ICT in teaching	-.120	.767	.034	-.058	.641
Q13.34 I believe that ICT increases workloads for teachers	.011	.766	.128	-.221	.675
Q13.32 It is very time consuming to use ICT in lesson preparation	-.156	.735	.042	-.250	.665
Q13.35 I cannot control the content of materials downloaded from the Internet	.124	.681	.282	.156	.586
Q13.36 I have difficulty in classroom management when using ICT	.113	.658	.177	**.361**	.584
Q13.44recode ICT has not been integrated into the current curriculum at the departmental level at HANU.	.073	.649	**-.436**	.009	.540
Q13.31 I have no time to learn how to use ICT	-.080	.403	-.047	**.367**	.320
Q13.29recode Teaching languages totally online is not suitable with the present situation at HANU.	**-.312**	.377	-.108	-.296	.344
Q13.41 Assessment & testing practices at HANU are still not ICT-based	-.030	.330	.315	-.187	.269
Factor 6					
Q13.39 Technical problems often happen and waste a lot of time in lessons	-.292	.037	.661	.001	.506
Q13.42 The internet easily distracts students from their studies	.124	.071	.597	.261	.444
Q13.40 The speed of Internet connection at HANU discourages teachers from using ICT	-.189	**.409**	.541	-.195	.582
Q13.43 ICT would facilitate students' violation of intellectual property rights	.183	.098	.523	.142	.342
Q13.30 Face-to-face teaching blended with online teaching is appropriate for HANU	.045	-.259	.433	**-.462**	.463
Factor 7					
Q13.27recode I do not feel comfortable with the face-to-face teaching mode and want ICT in my teaching.	.080	.137	-.165	-.669	.510
Q13.37recode I have not had negative experiences with using ICT in classrooms before.	.020	.063	-.182	-.654	.465
Q13.28 I believe that teaching with ICT is more enjoyable than teaching without ICT	.183	.097	.000	-.547	.374
Q13.38 I have succeeded in using ICT in teaching and will continue using ICT	**.392**	.009	.171	-.499	.513

Table 4.6: Pattern Matrix for PCA with Oblimin rotation of the third group (Q13.45-Q13.61)

Item	Component				Communalities
	1	2	3	4	
Factor 8					
Q13.54 The frequency of ICT training courses at HANU meets my need	.716	-.172	-.149	-.088	.695
Q13.52 ICT training is customised according to the level of ICT skills of HANU teachers	.708	-.225	.012	.009	.602
Q13.51 Computer software is updated by HANU on a regular basis	.645	.086	-.102	-.144	.510
Q13.49 HANU computers rarely have technical problems	.591	.033	.037	.079	.324
Q13.53 The contents of ICT training courses at HANU meets my need	.582	-.280	-.135	-.196	.638
Q13.55 I cannot resolve technical problems when they occur	.392	.083	**.514**	.102	.378
Q13.50 Most HANU computers have software that I can use for language teaching	.362	.137	-.135	-.266	.304
Factor 9					
Q13.46 Teachers have to share HANU computers with others	.014	.803	.068	.147	.687
Q13.47 Only some classrooms at HANU are equipped with computers and internet connection	.032	.779	.152	-.141	.638
Q13.45 Teachers have limited access to HANU computers	-.023	.710	-.056	.262	.580
Q13.48 HANU computers are concentrated in computer labs and in the library	-.161	.667	-.031	-.075	.504
Factor 10					
Q13.60 The official ICT guidelines have been well disseminated to all staff in HANU	.187	-.044	-.907	.156	.840
Q13.59 HANU has an official document guiding the use of ICT in teaching and learning	.180	-.081	-.856	.089	.788
Q13.61 At HANU there is a culture of sharing experiences in ICT use in language teaching	.072	.071	-.463	**-.353**	.474
Factor 11					
Q13.58 I receive strong support for ICT use from the leaders of my Department/Centre	.021	-.096	.135	-.920	.803
Q13.57 I receive strong support for ICT use from HANU leaders	.073	-.105	-.009	-.868	.814
Q13.56 At HANU, technical problems in using ICT in classroom are often solved fast	.034	.227	-.239	-.265	.216

Four items (Q13.27, Q13.29, Q13.37, Q13.44) were recoded so that they shared the same positive or negative factor loadings with the other items in their respective components, consequently maximising the internal consistency of the scale formed from the items.

Investigation of communalities showed four items (Q13.5, Q13.12, Q13.14 and Q13.56) having communality values less than .3, indicating that they might share little variance with the factors derived for this analysis. However, the decision to remove any item was made on the basis of an internal consistency test rather than low communality values.

The internal consistency of responses to items loading significantly on each respective factor was then examined using a Cronbach alpha coefficient for the scale containing these items. If the removal of an item increased a respective scale's alpha, that item was deleted unless there were strong, substantive reasons to retain it as will be explained later (Cohen et al., 2011). After the use of the item deleted method, the results of Cronbach alpha values for eleven scales were analysed as presented in Table 4.7 below. On the whole, 18 items were removed to maximise the Cronbach alpha coefficient of the respective scales. Nine scales had alpha values above 0.7 suggesting that they provided reliable measures.

The commonly accepted indicator of internal consistency is alpha ≥ 0.7 (DeVellis, 2003). However, it is noted that the scales derived from items loading significantly on factors 6 and 7 had Cronbach alpha coefficients of only .68 and .66 respectively. It is not rare to see alpha values below .7 when there are fewer than 10 items in a scale (Leech, Barrett, & Morgan, 2005; Pallant, 2011). In this circumstance, it is recommended to consider the mean inter-item correlation, with values of 0.2 - 0.4 being regarded as an optimal range (Briggs & Cheek, 1986). Fortunately, the mean inter-item correlation was .5 for factor 6 and .3 for factor 7 (see Table 14, Appendix 11), suggesting that the reliability of those two factors can be considered acceptable.

In some cases, it is not recommended to delete items rigidly on the basis of statistical tests. Therefore, peer debriefers were used to identify whether any remaining items in each factor needed to be discarded on conceptual grounds due to theoretical incoherence with other items in its respective scale (Cohen et al., 2011). Regarding the data in this study, discussions with peers and academic supervisors led to the decision that no further removal of items was necessary.

Interpretation and labelling: The interpretation and labelling of the latent variables underlying the factors involves the subjective judgement of the researcher and depends on the theoretical framework of the study. The principle of factor labelling is to look at the shared meaning of all items in the respective factor and to distinguish one factor from another (Henson & Roberts, 2006; Pallant, 2011; Williams et al., 2012).

Upon consideration of the aforementioned labelling principle, eleven factors were named and summarised in Table 4.7 below. Those names will be later compared with the name of core constructs of the theoretical framework (UTAUT) of this study.

Table 4.7: Eleven factor scales from three groups of factor analysis

	Scale/Label	No. of items	Cronbach's alpha	Average Item Mean	Standard Deviation	N
First group	**Factor 1**: Teacher perception of benefits (TPB)	8	.86	3.81	.33	205
	Factor 2: Pressure from others (PFO)	2	.85	1.93	.95	197
	Factor 3: Perceived benefits for students (PBS)	7	.82	3.59	.43	204
Second group	**Factor 4**: Ease of use (EOU)	6	.88	3.02	.66	203
	Factor 5: Disadvantages for teachers (DFO)	5	.84	2.58	.82	209
	Factor 6: Technical problems (TP)	2	.68	3.14	.69	205
	Factor 7: Positive beliefs, attitudes and experience (PBAE)	4	.66	3.41	.55	201
Third group	**Factor 8**: ICT training (IT)	3	.84	1.76	.87	189
	Factor 9: Limited access (LA)	4	.73	3.62	.55	206
	Factor 10: Guidelines (G)	2	.92	1.82	.80	185
	Factor 11: Leadership support (LS)	2	.86	2.49	.87	195

It was assumed that there would be relationships between the 11 factors described in Table 4.7 and other variables assessed in this study, especially with ICT use by language teachers. The details of these relationships are discussed in the next section.

4.2.2 Major factors and their relations with ICT use

To examine the relationship between those 11 factors and teachers' use of ICT, a bivariate correlation analysis was conducted. The results that are reported in Table 4.8 showed that ICT use for lesson preparation and for classroom teaching had very similar patterns of correlations with the 11 factors. But the patterns were not identical. Both preparation and teaching had statistically significant, positive relationships with 6 factors, namely positive beliefs, attitudes and experience, ease of use, perceived benefits for students, teacher perception of benefits, pressure from others and, for reasons that will be explored in greater detail below, disadvantages for teachers. It was also noted that ICT for preparation had a negative correlation with ICT training and a positive relationship with limited access, and ICT for classroom teaching had positive correlations with guidelines and leadership support.

Table 4.8: Correlations between 11 factors and ICT use

Pearson correlation with ICT use for **preparation**	**FACTOR**	Pearson correlation with ICT use for **teaching**
.404**	Positive beliefs, attitudes and experience	.336**
.343**	Ease of use	.330**
.289**	Perceived benefits for students	.241**
.282**	Disadvantages for teachers	.212**
.283**	Teacher perception of benefits	.229**
.339**	Pressure from others	.200**
.089	Leadership support	.215**
.138	Guidelines	.170*
.226**	Limited access	.084
-.160*	ICT training	-.006
.026	Technical problems	.096

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Teachers' positive beliefs, attitudes, experience (PBAE) had the strongest relationship with ICT use for both preparation ($r = .404$, $p<.001$) and for classroom teaching ($r = .336$, $p<.001$) (see Table 4.8). This relationship means that teachers who had positive beliefs, attitudes and experience were more likely to use ICT. PBAE was also found to be strongly related with ease of use (EOU) ($r = .492$, $p<.001$) and perceived benefits for students (PBS) ($r = .340$, $p<.001$) (see Table 15, Appendix 11). Therefore, any ICT tools which were viewed as easier to use and more useful for students' learning were more likely to be integrated into lesson preparation and classroom practice.

An interesting result was that factors such as disadvantages for teachers (i.e. workloads, ICT costs, and demands on time) pressure from others (i.e. from peer teachers and students), lack of ICT guidelines and limited access had a positive and significant relationship with the use of ICT either for preparation or for classroom teaching (see Table 4.8 above). A possible explanation could be that those factors did not prevent teachers from using ICT. On the contrary, the more teachers engaged with ICT in their work, the more they were aware of those challenges.

A strong, statistically significant correlation between ICT use for lesson preparation and for classroom teaching ($r = .66$, $p = 000$) indicated that those teachers who reported greater use of ICT to prepare for their lessons were more likely to use ICT in classroom teaching and vice versa.

In order to find out the levels of influence of the 11 factors (variables) on ICT usage, independent and multiple regression analyses were employed. However, because independent regression analysis is similar in result to bivariate correlation analysis, only multiple regressions will be presented here to avoid repetition.

Multiple regressions were conducted to see which group of variables could most strongly predict ICT use (Pallant, 2011).

In Model 1: When all 3 mediators (age, gender and teaching experience as used in the UTAUT model) were entered together, only age and gender were significant for lesson preparation (see Table 4.9 and Table 4.10). The results indicated that younger teachers tended to use ICT more than older colleagues, and more male teachers (coded 1) than female teachers (coded 2) used ICT in their preparation and teaching. Teaching experience was only significant for use of ICT in classroom teaching, implying that the more experienced teachers were, the more likely they were to use ICT in their teaching.

In Model 2: In order to obtain the largest number of cases, only significant independent variables were retained in the multiple linear regression analysis after age, gender and teaching experience were controlled for. Hierarchical multiple regression analysis resulted in limited, but overlapping though not identical predictors of lesson preparation and teaching. There were **4 significant predictors of ICT use for lesson preparation**: Age ($\beta = -.344$, $p = .021$), positive beliefs, attitudes and experience - PBAE ($\beta = .352$, $p<.001$), pressure from others - PFO ($\beta = .216$, $p = .003$) and disadvantages for teachers - DFT ($\beta = .186$, $p = .010$). There were **5 significant predictors for classroom teaching**: Age ($\beta = -.315$, $p = .039$), disadvantages for teachers - DFT ($\beta = .294$, $p<.001$), leadership support - LS ($\beta = .245$, $p = .001$), positive beliefs, attitudes and experience - PBAE ($\beta = .190$, $p = .020$), ease of use - EOU ($\beta = .188$, $p = .026$). These relationships are shown in Table 4.9 and Table 4.10 respectively.

Table 4.9: Models of prediction for ICT use for lesson preparation – hierarchical multiple regressions

Coefficients[a]											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.724	.111		15.558	.000					
	Age	-.009	.003	-.443	-2.686	.008	-.113	-.206	-.202	.208	4.817
	Gender	-.113	.036	-.254	-3.133	.002	-.169	-.238	-.235	.856	1.169
	Teaching experience	.038	.023	.266	1.656	.100	-.048	.129	.124	.219	4.557
2	(Constant)	1.071	.135		7.928	.000					
	Age	-.007	.003	-.334	-2.329	.021	-.113	-.181	-.151	.204	4.899
	Gender	-.074	.032	-.167	-2.349	.020	-.169	-.183	-.152	.825	1.212
	Teaching experience	.011	.020	.080	.569	.570	-.048	.045	.037	.211	4.730
	PBAE	.113	.022	.352	5.180	.000	.404	.379	.335	.904	1.106
	PFO	.040	.013	.216	3.010	.003	.339	.232	.195	.816	1.225
	DFT	.040	.015	.186	2.624	.010	.282	.203	.170	.834	1.199
a. Dependent Variable: ICT for preparation											

Table 4.10: Models of prediction for ICT use for classroom teaching – hierarchical multiple regressions

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.428	.092		15.539	.000					
	Age	-.006	.003	-.393	-2.354	.020	-.012	-.182	-.179	.208	4.817
	Gender	-.085	.030	-.233	-2.836	.005	-.187	-.218	-.216	.856	1.169
	Teaching experience	.039	.019	.333	2.047	.042	.056	.159	.156	.219	4.557
2	(Constant)	.806	.124		6.489	.000					
	Age	-.005	.002	-.315	-2.076	.039	-.012	-.163	-.140	.199	5.025
	Gender	-.047	.027	-.130	-1.733	.085	-.187	-.137	-.117	.815	1.226
	Teaching experience	.030	.017	.254	1.706	.090	.056	.135	.115	.206	4.856
	DFT	.052	.013	.294	4.084	.000	.212	.310	.276	.880	1.137
	LS	.041	.012	.245	3.319	.001	.215	.256	.224	.839	1.192
	PBAE	.050	.021	.190	2.352	.020	.336	.185	.159	.703	1.423
	EOU	.041	.018	.188	2.249	.026	.330	.177	.152	.656	1.525
a. Dependent Variable: ICT for classroom teaching											

When multiple variables were put into the regression analyses, it was noticed that either 4 or 5 of the 11 variables had significant prediction (as opposed to 8 variables in independent regressions). Variables which could independently predict usage but were not able to when put into a multiple regression analysis must be assumed to share explanatory variance. In other words, although they jointly explained ICT usage, they were unable to provide unique explanatory variance due to their relationships with other independent variables.

There were some interview examples relating to the aforementioned highly influencing factors. Teachers for example reported that it was very time consuming to design lessons with ICT and incentives were insufficient:

> It is very time consuming to prepare a technology-enhanced lesson, but the remuneration is not worth the effort, so this is also discouraging for teachers. (ID 24)

However, other teachers placed priority on teaching quality rather than incentives:

> What is the most encouraging for me is perhaps the teaching quality, how to make the lessons most effective. I mean my goal is to help students to understand the lessons fastest rather than to pay attention to which incentives I will receive when I employ technology. (ID 30)

Many participants said that they felt some extent of pressure from students' expectations.

> Actually now I see that if I don't use ICT, my students will think that I cannot catch up with the modern times. I mean at present the internet and computers are used a lot. If teachers don't employ ICT, their lessons will not be enjoyable. (ID 10)

For others, they felt pressure from their own preferences to use ICT to make their lessons more interesting for their students and pressure from their own desire to become better teachers.

> I personally think that students are not a source of pressure [for ICT use] but the pressure comes from me myself. I personally see the need to employ technologies in teaching because in reality technologies have been applied in

> teaching in other countries for a long time. I have spent some time as part of my internship in [name of country] and have been exposed to different teaching methods using technologies and I think it is really essential. (ID 30)

Vietnam is a hierarchical society in which leadership support is an inevitable success factor for any program (Canadian Trade Commissioner Service, 2011; Centre for Intercultural Learning, 2009; Hofstede et al., 2010). In this study, many teachers reported that they received a lot of general support from the department and university leadership. However, the support was mainly in the form of verbal and spiritual encouragement rather than specific incentives for ICT use.

> The departmental as well as university leaders usually encourage us to use ICT, however, only spiritual encouragement. (ID 05)

> There are no financial incentives but there is encouragement for ICT use. (ID 07)

It is noted that the above mentioned 11 factors are the results of the factor analysis of the data in this study which is based on the reviewed literature and on the unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003). Therefore, those 11 factors are now compared with four core constructs of the UTAUT model. Specifically, two factors (perceived benefits for students and teacher perception of benefits) were associated with the UTAUT construct: performance expectancy; one factor (ease of use) with the UTAUT construct: effort expectancy; one factor (pressure from others) with the UTAUT construct: social influence; and 7 factors (positive beliefs, attitudes and experience, leadership support, guidelines, ICT training, limited access, disadvantages for teachers and technical problems) with the UTAUT construct: facilitating conditions.

To avoid confusion, ‘constructs’ are used to refer to the core constructs of the UTAUT model, and ‘factors’ refer to the factors (11 in total) coming from the data of this study. Those 11 factors were not in contradiction with the four UTAUT constructs but were re-structured in a different way.

Next, the multiple regression analysis using the UTAUT conceptual analysis was conducted. The Table 4.11 below shows that all the four constructs significantly related to ICT use for both lesson preparation and for classroom teaching. Social influence had the strongest influence on preparatory use of ICT whereas facilitating conditions had the strongest predictive power for instructional use of ICT.

Table 4.11: Correlation between core constructs of UTAUT model and ICT use

ICT use for preparation		Core constructs of UTAUT	ICT use for teaching	
Sig.	Beta		Beta	Sig.
.000	.313	Performance expectancy	.250	.001
.000	.303	Effort expectancy	.291	.000
.000	**.341**	**Social influence**	.186	.014
.000	.332	**Facilitating conditions**	**.385**	.000

Note: Controlling for age, gender and teaching experience

The UTAUT model was used to help interpret the factors affecting university teachers' use of ICT in teaching foreign languages. In a context of university foreign language teaching, my findings are consistent with the claims of the UTAUT model about the contribution of the four constructs to acceptance of ICT. However, the aim of this study is not to test the UTAUT model but rather to explore influences on ICT use informed by the strong tradition of research and potentially relevant findings associated with the UTAUT model. Having done the analysis with the UTAUT constructs as indicated above, I return to the 11 factors because they come out of the analysis of specific data of this study and allow me to explore whether some of the relationship might have a special character in the context of the use of ICT for (university foreign language) teaching.

Because the independent variables were closely related (see Table 15, Appendix 11) and had been derived from separate analyses, it was decided to conduct a second order factor analysis to identify whether those variables could be grouped into a smaller cluster of components. The pattern matrix of the second order factor analysis in Table 4.12 below revealed two components: Component 1 was characterised by 7 variables and Component 2 by 4 variables.

Table 4.12: Pattern matrix of second order factor analysis

	Component	
	1	2
Disadvantages for teachers	.718	-.026
ICT training	**-.707**	-.063
Leadership support	**-.632**	.278
Technical problems	.589	-.071
Limited access	.588	.153
Pressure from others	.528	.194
Guidelines	**-.486**	.063
Teacher perception of benefits	-.074	.821
Ease of use	-.145	.766
Perceived benefits for students	.017	.764
Positive beliefs, attitudes & experience	.261	.709
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.		
a. Rotation converged in 4 iterations.		

The shared meanings of the items loading significantly on Component 1 appeared to be **'Inhibiting factors'** (or barriers) whereas those loading on Component 2 reflected **'Facilitating factors'** (or enablers) often referred to in the literature on factors affecting ICT use (see Table 16, Appendix 11).

Three variables: ICT training; Leadership support and Guidelines had been recoded to turn them into positive factor loadings in conformity with other items in Component 1. Removal of the item Guidelines increased the alpha value of Component 1 from .67 to .72. In Component 2 all 4 items had an alpha value of .73 (see Table 16, Appendix 11).

When independent regression analysis was conducted, independently both inhibiting factors and facilitating factors positively and significantly predicted ICT usage in classroom teaching (see Table 17, Appendix 11).

When hierarchical multiple regressions were conducted and when age, gender and teaching experience were controlled, both inhibiting and facilitating factors made statistically significant contribution to the prediction of ICT use for preparation, (β =.340, p = .001) and (β = .378, p = .003) respectively. In this model, gender was a stronger predictor than age and teaching experience (see Table 4.13 below).

Table 4.13: Multiple regression analysis of inhibitors/ facilitators and ICT use for lesson preparation

Coefficients[a]											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.724	.163		10.554	.000					
	Age	-.009	.005	-.443	-1.822	.072	-.113	-.206	-.202	.208	4.817
	Gender	-.113	.053	-.254	-2.125	.037	-.169	-.238	-.235	.856	1.169
	Teaching experience	.038	.034	.266	1.123	.265	-.048	.129	.124	.219	4.557
2	(Constant)	.619	.238		2.598	.011					
	Age	-.004	.004	-.211	-1.019	.312	-.113	-.118	-.095	.200	5.002
	Gender	-.087	.045	-.195	-1.927	.058	-.169	-.220	-.179	.837	1.195
	Teaching experience	-.001	.029	-.005	-.026	.979	-.048	-.003	-.002	.208	4.810
	Inhibiting factors	.122	.034	**.340**	3.554	**.001**	.410	.384	.330	.939	1.064
	Facilitating factors	.179	.046	.378	3.907	.000	.461	.416	.363	.918	1.089
a. Dependent Variable: ICT for preparation											

After controlling for age, gender and teaching experience, multiple regressions showed that only facilitating factors (inclusive of teacher perception of benefits - TPB, ease of use - EOU, perceived benefits for students - PBS, positive beliefs, attitudes and experience - PBAE) significantly predicted ICT usage in classroom teaching (β=.354, p=.002) (see Table 4.2.42), while inhibiting factors (i.e. DFT, AT recode, LS recode, TP, LA and PFO) did not show any significant contribution (β=.145, p=.176) (see Table 4.14 below).

Table 4.14: Multiple regression analysis of inhibitors/facilitators and ICT use for classroom teaching

Coefficients[a]											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.428	.135		10.606	.000					
	Age	-.006	.004	-.393	-1.607	.112	-.012	-.182	-.179	.208	4.817
	Gender	-.085	.044	-.233	-1.936	.057	-.187	-.218	-.216	.856	1.169
	Teaching experience	.039	.028	.333	1.397	.166	.056	.159	.156	.219	4.557
2	(Constant)	.749	.217		3.456	.001					
	Age	-.004	.004	-.230	-.998	.322	-.012	-.116	-.103	.200	5.002
	Gender	-.065	.041	-.179	-1.584	.118	-.187	-.182	-.163	.837	1.195
	Teaching experience	.017	.026	.144	.636	.527	.056	.074	.066	.208	4.810
	Inhibiting factors	.043	.031	.145	1.367	.176	.225	.158	.141	.939	1.064
	Facilitating factors	.137	.042	.354	3.287	.002	.414	.359	.339	.918	1.089
a. Dependent Variable: ICT for classroom teaching											

It is interesting that the inhibiting factors were positively predicting usage for lesson preparation, rather than negatively predicting it (see Table 4.13) as might have been assumed (i.e. the greater the inhibition, the less the usage). This unexpected positive relationship between inhibiting factors and preparatory use of ICT will be discussed in some detail in Section 5.2, Chapter 5.

Before completing the analysis, it was decided to consider whether the language being taught by the respondents influenced the relationship between inhibiting and facilitating factors and usage of ICT. Survey respondents came from 13 language teaching departments and 3 language centres at Hanoi University (HANU). When respondents were grouped according to their departments/centres, it was noticed that there were substantially fewer teachers (teaching foreign languages other than English) in some departments/centres. Hence, to ensure sufficient numbers of teachers to establish reliable correlations for purposes of comparison, teachers of English treated as one group and were compared to all teachers of the remaining foreign languages at HANU.

Inspection of the correlation coefficients in Table 4.15 below indicates that as far as facilitators were concerned, there was a positive and highly significant correlation between facilitating variables and both preparation and teaching for both teachers of English and teachers of other languages. However, for inhibitors, even though all correlations were also positive, for teachers of English there was a highly significant correlation with preparation and a significant correlation with teaching, whereas for teachers of other languages neither of the correlations was significant. But this difference between the languages was not significant.

Table 4.15: Correlations of ICT use, facilitators, inhibitors between teachers of English and teachers of other languages

Correlations		Teachers of English (N=116)		Teachers of other languages (N=106)	
		ICT for preparation	ICT for teaching	ICT for preparation	ICT for teaching
Facilitators	Pearson Correlation	.532**	.448**	.375**	.378**
Inhibitors	Pearson Correlation	**.534****	**.330***	.224	.130

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

What seems to be the more important issue is that the correlations between inhibiting variables and both preparation and teaching are positive. This finding is interesting because it contradicts the very idea of an inhibitor. This issue will be explored in depth in Chapter 5.

4.3 Summary of Chapter Four

Data in this study focused on two main purposes of ICT use: for lesson preparation and for classroom teaching. For lesson preparation, teachers frequently used the internet to search for relevant learning materials, downloaded them onto computers, then used word processing and presentation software to design relevant activities or produce worksheets for students, and maintained interactions with students via emails.

Those teachers who prepared their lessons with ICT were more likely to use ICT in their classroom teaching. The tools used frequently in the medium-technology setting (i.e. computer labs and the university library) were: PowerPoint presentations, internet browser – search – download, word processing and voice recording. In the majority no-technology classrooms, teachers had to bring their own ICT equipment to class if they wanted to use it at all.

Through the lens of the pedagogy * technology model for ICT integration in education of Lin et al. (2012) , there was some evidence about two dimensions of ICT use: a technological dimension ranging from level 0 (non-use) to level 7 (implementing sophisticated instructional systems) with level 3 (utilising internet applications) and level 4 (creating multimedia teaching materials) applying to most of teachers; and a pedagogical dimension with more focus on direct teaching (level A) and cognitively active learning (level B) rather than constructive learning (level C) and social learning (level D).

Exploratory factor analysis helped extract 11 factors influencing teachers' use of ICT, namely teacher perception of benefits (TPB), perceived benefits for students (PBS), ease of use (EOU), positive beliefs, attitudes and experience (PBAE), technical problems (TP), ICT training (IT), limited access (LA), guidelines (G), leadership support (LS), pressure from others (PFO) and disadvantages for teachers (DFT).

Bivariate correlation analyses (Table 4.8) demonstrated that independently 6 factors (PBAE, EOU, PBS, TPB, DFO, PFO) affected ICT use both for preparation and for teaching, 2 factors only influenced ICT use for preparation (LA, IT) and another 2 factors only impacted ICT use for teaching (LS, G). Two factors which had the strongest impact on both ICT use for lesson preparation and for classroom teaching were positive beliefs, attitudes and experience (PBAE) and ease of use (EOU).

Multiple regressions showed that a group of 3 factors (PBAE, PFO, DFT) and 1 moderator (Age) were directly able to predict preparatory use of ICT (Table 4.9), while a group of 4 factors (DFT, LS, PBAE, EOU) and 1 moderator (Age) were significant predictors of instructional use of ICT (Table 4.10).

When the 11 factors (extracted from the data set of this study) were incorporated into the four core constructs of the unified theory of acceptance and use of technology (UTAUT) model of Venkatesh et al. (2003), multiple regression analysis showed that all the 4 constructs of the UTAUT model significantly predict ICT usage by teachers (Table 4.11).

Because the independent variables (i.e. 11 factors mentioned above) were closely related and had been derived from separate analyses, the second order factor analysis suggested a reduction of those 11 factors into two new groups: i) facilitating factors (including teacher perception of benefits - TPB, ease of use - EOU, perceived benefits for students - PBS and positive beliefs, attitudes and experience - PBAE) and ii) inhibiting factors (inclusive of disadvantages for teachers - DFT, ICT training - IT, leadership support - LS, technical problems - TP, limited access - LA, pressure from others - PFO and guidelines - G) (Table 4.12).

Interestingly, there was a positive relationship between inhibitors and usage for lesson preparation (Table 4.15), implying that those ‘inhibiting factors’ did not prevent teachers from using ICT, therefore they should be regarded as challenges to ICT use. The partial explanation could be that teachers were aware of those ICT challenges during the stage of implementation but still persevere because of their perceived benefits of ICT for students’ learning and for their professional needs and because of having opportunities to re-use ICT-enhanced materials in other settings outside the case study university. This was evidenced in some interviews.

Chapter 5: DISCUSSION

This Chapter focuses on in-depth discussion and elaboration of the key results in relation to the two main research questions: i) What is the current use of ICT by teachers of foreign language at Hanoi University (HANU)?; and ii) Which factors affect teachers' use of ICT in foreign language teaching at HANU?

The theoretical framework (as presented in Section 2.4, Chapter 2) has been used to interpret the results. The pedagogy * technology model (Lin et al., 2012) helps clarify the frequency and nature of teachers' usage of ICT and the extent to which the baseline unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003) helps identify major factors influencing ICT use.

To facilitate a full understanding, the discussion considers both the local context of Vietnamese culture and higher education, and the results of prior studies addressing ICT use in teaching and learning in general and in foreign languages in particular.

5.1 Research question 1: ICT use

Lin, Wang and Lin's pedagogy * technology model (2012) for ICT integration in education suggests 8 levels of technological use, namely level 0 (non-use), level 1 (mundane use), level 2 (using off-the-shelf CD-based educational software), level 3 (utilising internet applications), level 4 (creating multimedia teaching materials), level 5 (customising multimedia resources), level 6 (producing simple instructional application), level 7 (implementing sophisticated instructional systems); and 4 levels of pedagogical use, ranging from level A to level D, referring to direct teaching, cognitively active learning, constructive learning and social learning respectively. This two dimensional model is used to help interpret university teachers' use of ICT in teaching foreign languages.

5.1.1 Technological dimension of ICT use

Comparing the most-used applications reported in Chapter 4 (see Table 4.1) with the two dimensional model suggested a common pattern of technological usage by the foreign language teachers at HANU as follows. For preparatory work, teachers searched the internet for relevant resources (level 3); downloaded relevant materials onto their computers (level 3); designed worksheets and presentation slides by using word processing and PowerPoint (level 4), possibly inserting edited audio and video clips into PowerPoint slides (level 5). Email (level 1) was used for communication with other colleagues and students. Then in the classroom, teachers mainly used PowerPoint (level 4 – with multimedia files and level 5 – with edited multimedia files) to present information and knowledge to students; used word processing to provide feedback for writing skills and voice recording to provide feedback for speaking skills and pronunciation (levels 4-5); and used the internet (level 3) for further illustration.

When both numeric data from the questionnaire and open-ended data from the interviews were incorporated and interpreted through the lens of the pedagogy * technology model, the following profile of ICT-using teachers could be derived:

i) **ICT non-users** (level 0) accounted for nearly 9% of survey participants. They were teachers who were not willing to engage with ICT in teaching because of such barriers as a low level of ICT competency, lack of equipment in classrooms, lack of incentives (e.g. low remuneration) and senior age. These barriers have also been reported in previous studies (Al-Senaidi et al., 2009; Becta, 2003; Jones, 2004; Kopcha, 2012).

ii) **ICT users** (representing 91% of survey participants) were teachers who used ICT for preparation and/or classroom teaching. The ICT-using teachers could be loosely categorised into four groups according to technological competence:

- Low level users (levels 1 – 2) used ICT for simple tasks such as sending emails to students, selecting relevant materials from a CD that accompanies a textbook or other functions that often required no training.
- Medium level users (levels 3-4) utilised the internet to search for relevant materials during the stage of lesson preparation and directly used online resources (without any editing) to teach students in the classroom. Internet applications seemed to be an integral part of these teachers'

professional work. They were able to create teaching materials with word processing, PowerPoint presentations or other software. It seemed that over 70% of teachers in this study were at levels 3-4.

- Medium-high level users (level 5) consisted of teachers who used editing software (e.g. audio editing, video editing, photo editing, e-lecture creation and movie making) to create customised teaching materials to suit their instructional purposes.
- High level users (levels 6-7) consisted of teachers with advanced level of ICT competency. These teachers used Web 2.0 tools to set up online forums for students' discussions and interactions beyond the classrooms, and created online courses on a learning management platform (e.g. Moodle) to support sharing teacher- produced or teacher-collected materials with students.

As can be seen from Table 4.1 (Chapter 4) indicating the percentage of teachers using different ICT applications, it seemed that ICT-using teachers did not stay rigidly at one level of technology competency but used different tools from various levels according to their differing purposes. What can be seen is that the higher the level is, the fewer teachers there are.

5.1.2 Pedagogical dimension of ICT use

It can be argued that teachers' technological practices are influenced by their pedagogical beliefs so that the ways in which teachers implement ICT can shed light on their underlying pedagogical beliefs (Cox et al., 2003).

In this study, many interviewed teachers reported their common ways of using PowerPoint as presenting the main teaching points and knowledge about a language to students. Information was being passed from teachers to students. Pedagogically that was a teacher-centred, direct teaching style (level A).

There were also teachers reporting student-centred uses of PowerPoint. For example, teachers ID 09 and ID 30 (Chapter 4) talked about showing self-running PowerPoint slideshows, which had photos and short video clips about a particular culture inserted in them. The slides were used as inputs for students to practise language skills. Some teachers reported that students felt motivated by multimedia files and actively engaged with those materials in follow-up practice, e.g. questions and answers, discussions,

making student presentations and the like. Teachers ID 09 and ID 26 (Chapter 4) mentioned asking their students to use ICT to gather materials before coming to class and then actively present those materials to teachers and fellow students in the classrooms. That was a manifestation of level B – cognitively active learning.

Some teachers reported bringing real-world materials (such as recordings of speakers at conferences) into language lessons in order to let students have experience of real-life issues, develop problem-solving skills or prepare themselves for job-readiness after their graduation. The pedagogical use of those teachers was level C – constructive learning.

Three interview quotes (teachers ID 09, ID 12 and ID 26, Chapter 4, pp.81-82) revealed teachers' use of ICT to encourage students to engage in social activities (such as joining discussion groups on Facebook or Yahoo) and in collaborative learning activities (e.g. discussion forums on Moodle or English Discoveries Online). Those teachers reached level D – social learning.

There was an imbalance between teachers' technological and pedagogical uses. Teachers tended to focus more on elevating technological practices than on advancing their pedagogical approaches. As indicated above, most teachers used ICT in the traditional, teacher-centred manner. On the whole, not much innovative change appeared in terms of pedagogical practices. There may be a number of explanations for that.

First, the teacher-centred approach is regarded as deep-rooted among Vietnamese teachers (C. T. Nguyen, 2012), who have been affected by the Confucian philosophy (also referred to as Confucian heritage culture) that had been passed from China during the one thousand years (111 BC to AD 1858) of Chinese influence in the history of Vietnam (T. H. T. Pham, 2010). According to the Confucian heritage culture, teachers are the centre of the teaching-learning process, the main providers of knowledge, and the keepers of answers to problems. In class, they are the authority figures who tell students what to do and expect students' obedience rather than arguments (Nguyen, Terlouw, & Pilot, 2006; Park, 2000; T. H. T. Pham, 2010; Yao, 2000).

Additionally, before Vietnam opened its economy to the outside world in 1986 and before the removal of the United States trade embargo against Vietnam in 1993,

learning materials, among other things, were scarce in Vietnam. In that context, teachers seemed to be the only providers of information and knowledge in the classroom. As a result, it is common to see teachers standing in front of the class and spoon-feeding information and knowledge to students. In this study, a lot of quotes from interviewed teachers (see Chapter 4, pp.77-80) reflect this situation.

Since the expansion of the internet and computers in the 1990s, extensive online teaching and learning resources have been made available for both teachers and students (Richards, 2009). The results of this study show that when ICT was integrated into teaching, new ICT tools were seen as supplementing but not replacing traditional methods. Digital audio/video files were used together with (rather than instead of) audio/video cassette tapes; e-books together with printed books; and computers together with pens and paper notebooks. PowerPoint presentations were used (in many cases similarly to normal white boards) for knowledge and instruction delivery to students with a difference of having added audio, video clips and animations. Those types of change were obvious. Yet, these changes in ICT use were not accompanied by commensurate degrees of change in pedagogy.

Recently, student-centred teaching has been promoted under the education reform agenda of Vietnam, which is influenced by processes of globalisation and efforts to achieve change in educational processes and outcomes in Vietnam (Dang, 2009; Peeraer & Van Petegem, 2010; Pham, 2011b). Student-centred methods are often associated with attempts to increase academic performance, problem solving and autonomous learning (Coppola, 2004; T. T. Dang, 2012; Moersch, 2002; T. H. T. Pham, 2010) and therefore are strongly promoted by central authorities. In this study, there was some evidence of student-centred usage which included cognitively active learning, constructive and social learning. Teachers who reported encouraging students to use the internet and computers to engage in social activities, real life interactions and collaboration with others could be regarded as implementing student-centred teaching styles. Some interviewed teachers revealed that they had been trained in Western countries. Those teachers could possibly have brought back with them the new styles. It can be said that innovative and transformative uses of ICT only took place at the level of a small number of individual teachers.

ICT had strong impacts on teachers by: i) facilitating their access to online materials for their preparation and instruction; and ii) augmenting their ability to prepare language activities with the frequent use of word processing and presentation software. This echoes the results of previous studies (Chikasa, Ntuli, & Sundarjee, 2014; Purcell, Heaps, Buchanan, & Friedrich, 2013).

However, the two dimensional uses of ICT did not reveal any significant changes in pedagogies. The key to transformative usage lay in how ICT was used, which was deeply impacted by teachers' pedagogical beliefs (Ertmer et al., 2012a; Prestridge, 2012). Only 8 out of 43 interview respondents practised cognitively active, constructive and social learning approaches and tended to utilise ICT in ways consistent with student-centred approaches (e.g. videoconferencing with Skype and Moodle for collaboration) to transform the quality of teaching and learning. Their ways of using ICT were different from other teachers in that, via ICT, they engaged students in authentic and social activities to facilitate students' learning.

5.2 Research question 2: Factors influencing ICT use

The results of the bivariate correlation analysis showed 6 factors (out of 11 reported in Chapter 4) related to both preparatory and instructional use of ICT. These were positive beliefs, attitudes and experience, ease of use, perceived benefits for students, disadvantages for teachers, teacher perception of benefits and pressure from others (Table 4.8, Chapter 4).

Multiple regression analysis indicated that of the 11 selected factors, only 2 factors (i.e. disadvantages for teachers and positive beliefs, attitudes and experience) had significant relationships with both ICT for preparation and for teaching. Moreover, preparatory use correlated with pressure from others, while instructional use was related with leadership support and ease of use (see Tables 4.23 and 4.24, Chapter 4).

The data of this study came from the questionnaire which was based on the reviewed literature as well as the baseline unified model of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003) selected as the theoretical framework for the study. Therefore, it is necessary to verify the relevance of the UTAUT model to teachers at the case study university. As discussed in Chapter 4, the above-mentioned 11 factors were able to be conceptually incorporated into the four core constructs of the UTAUT.

Specifically, *performance expectancy construct* included two factors (perceived benefits for students and teacher perception of benefits); *effort expectancy construct* – one factor (ease of use); *social influence construct* – 7 factors (pressure from others; and *facilitating conditions construct* – positive beliefs, attitudes and experience, leadership support, guidelines, ICT training, limited access, disadvantages for teachers and technical problems. The results of multiple hierarchical regression analysis (Table 4.11, Section 4.2.2, Chapter 4) showed that the four UTAUT constructs were significant determinants of usage intention.

The baseline UTAUT model was originally designed for non-educational contexts (e.g. companies, enterprises and firms) (Venkatesh et al., 2003), whereas the context of this study was educational (i.e. university setting). However, there seems to be no contradiction between the 11 factors extracted from the educational context of this study and the 4 constructs of the UTAUT model. Therefore, the relevance of the UTAUT model to this study was verified and the 11 factors extracted from the data of this study were utilised for further analysis.

Bivariate correlation analysis was conducted to measure the amplitude of influence of each of 11 factors on ICT use for both preparation and teaching. The results showed that 6 factors significantly influenced both preparatory and instructional uses. Ranked in the degree of influence from high to low, these were positive beliefs, attitudes and experience, ease of use, perceived benefits for students, teacher perception of benefits, disadvantages for teachers and pressure from others. Leadership support and guidelines only related to ICT use for teaching, whereas limited access and ICT training only correlated with ICT use for lesson preparation. Age and gender showed negative relations with both preparatory and instructional use of ICT, implying that younger male teachers tend to use ICT more than older female colleagues. Teaching experience was found to be only significant for ICT use in classroom teaching such that more experienced teachers were more likely to use ICT for instruction.

PERFORMANCE EXPECTANCY - PERCEIVED BENEFITS FOR STUDENTS AND FOR TEACHERS

Performance expectancy was found to have a significant relation with ICT use for both preparation and for teaching in the bivariate correlation analysis but was overridden by facilitating conditions (i.e. positive beliefs, attitudes and experience) in the multiple regression analysis.

Perceived benefits for students had higher correlation values with usage than did teacher perception of benefits (Table 4.8). This finding means that when teachers made preparatory or instructional use of ICT, they were more likely to think about how ICT would benefit students' learning. The results from the questionnaire showed that in the views of most teachers, ICT promoted autonomous learning, helped students understand subjects more deeply, gain better results in their studies and enhance employability for students in the future (Table 1, Appendix 11) (Dang, 2011). Many interviewed teachers also reported that students were more engaged with and motivated by the use of PowerPoint presentations with animations and videos embedded. Therefore, teaching with ICT was believed by many teachers to be more enjoyable than teaching with traditional tools such as printed textbooks and non-electronic whiteboards. Angers and Matchmes (2005) found similar results in an ethnographic case study with exemplary teachers: "technology adds values to student learning and motivation" by "allowing students to be independent, make choices, and be responsible for themselves and their work" (p.786).

Some teachers in this study used ICT to prepare students for future employment. There were examples of teachers showing students authentic video clips of speakers making presentations at real-life conferences so that student interpreters could practise interpreting skills, develop coping tactics as well as be better prepared for real-world events after graduation. The results are in line with a major concern in education, i.e. preparation of today's students for future job-readiness, which is extensively mentioned in recent literature (Dede, 2007; Glenn, 2008; Lombardi, 2007). As Dede puts it: "To succeed in life and to keep our country strong and prosperous, all of today's students must graduate able to deal with ambiguity and capable of higher order analysis and complex communication" (2007, p. 13).

The study results showed that teaching staff did not need to be convinced of the educational benefits of ICT. Almost all teachers agreed or agreed a little that ICT helped them access extensive teaching resources on the internet (99.5%), improve their teaching performance (99.1%), better communicate with colleagues via email (99.1%), enhance lesson preparation (98.1%), increase productivity (96.7%), share teaching experiences with others (95.3%) and develop their professional expertise in their subject areas (94.9%) (Table 1, Appendix 11). Those benefits are also mentioned in the literature by other authors (Davies & Hewer, 2012; Murray, 2008).

Interestingly, while most survey participants (95.3%) perceived that ICT could make it easier for teachers to share their experiences with others, about 60% of survey respondents reported that a culture of sharing experiences in ICT use in language teaching was still absent at the case study university. In other words, there is still a gap between teachers' perception of sharing teaching experiences and their actual practice (Dang, Nicholas, & Lewis, 2012a). Some interviewed teachers expressed concern that if they shared their teaching materials, those resources might be used by others, which would mean that they would have to prepare new materials and therefore increase their workloads. Consequently, they wanted to keep materials for themselves.

EFFORT EXPECTANCY - EASE OF USE

Effort expectancy was the second strongest predictor of ICT use (for both preparation and teaching) as indicated by the bivariate correlation analysis, while it only correlated with ICT for preparation in the multiple regression analysis. A partial explanation could be that in the classrooms teachers mainly used PowerPoint presentations, Word and internet applications, which were considered easy for teachers. Therefore, effort expectancy was not important in the classroom context. Within the duration of a lesson (90 minutes), under the pressure to finish the syllabus on time, teachers were likely to stick to what was easy and what was practical. In contrast, effort expectancy played an important role when teachers had to choose among a wide variety of ICT applications available for their preparatory usage. The level of difficulty increased when it came to the use of applications to edit photo, audio and video files, causing low usage of those tools (Dang et al., 2012a). Therefore, applications which were regarded as easier to operate were more frequently used by teachers.

SOCIAL INFLUENCE - PRESSURE FROM OTHERS

The results of this study showed that social influence was an important predictor of both preparatory and instructional use of ICT with stronger influence (or pressure) coming from students.

Multiple regression analysis showed that social influence (i.e. pressure from others) was only related to ICT for preparation, possibly because the pressure from students was stronger than that from peer teachers and superiors (see Table 1, Appendix 11). When teachers used ICT for preparation, they did so for the benefits of their students. They possibly wanted to meet students' expectations because most of the current generation of students has grown up with ICT around them (Oblinger & Oblinger, 2005; Prensky,

2001; Tapscott, 2009). The influence from peer teachers or superiors was not high for two possible reasons: i) ICT use was voluntary; and ii) there were neither rewards nor public recognition for ICT use nor penalties for not using ICT at the case study university.

FACILITATING CONDITIONS - POSITIVE BELIEFS, ATTITUDES AND EXPERIENCE

In the bivariate analysis, facilitating conditions (i.e. positive beliefs, attitudes and experience) had the strongest relation to ICT use for both preparation and teaching. The results are consistent with other studies, which have also reported that teachers' positive beliefs and attitudes were strong determinants of successful ICT integration (Hernández-Ramos, Martínez-Abad, García Peñalvo, Esperanza Herrera García, & Rodríguez-Conde, 2013, in press; Hew & Brush, 2007; Keengwe, Onchwari, & Wachira, 2008; Mama-Timotheou & Hennessy, 2013; Prestridge, 2012; Sánchez et al., 2012; Teo, Chai, Hung, & Lee, 2008; Underwood, 2012).

Teachers' ICT integration tends to be affected by their beliefs about ICT values or benefits (Ertmer & Ottenbreit-Leftwich, 2010; Tondeur, Hermans, et al., 2008). In other words, if teachers believe that ICT is beneficial, they are likely to use it (Watson, 2006; Zhao et al., 2002). This study showed the same results, reflecting teacher beliefs about ICT benefits for both students and teachers.

Such conceptual notions as workloads, equipment costs, time, leadership support, ICT guidelines, access to ICT facilities and ICT training can be grouped into the UTAUT construct facilitating conditions. In this study, those notions leaned towards 'the lack of' or 'inadequate' conditions but conceptually they may still be organised into facilitating conditions construct to be further analysed below.

(LACK OF) FACILITATING CONDITIONS - DISADVANTAGES FOR TEACHERS

In the multiple regression analysis, disadvantages for teachers (DFT) were found to have the strongest relation with ICT use for classroom teaching. DFT, in this study, encompassed such notions as heavy workload, costs of equipment and time consumption. Those burdens were the same as the barriers identified in other studies (Beggs, 2000; Wee & Bakar, 2006). This view was also shared by over 60% of the survey participants in this study. Using ICT required teachers to spend extensive time, first to learn how to operate a new application, next to use it for lesson preparation, which was mostly done at home, and then to use it in classroom teaching. As a result,

over 60% of respondents reported that attempting to implement ICT made their workload heavier (Table 1, Appendix 11). As indicated in the literature, trying to use ICT in instruction while being burdened with a heavy workload may result in superficial use of ICT to reinforce old practices rather than leading to improved performance (Abuhmaid, 2011). This suggests a need for reduction of teaching load so that teachers can have more time to learn how to integrate ICT into their teaching.

Teachers had to buy their own equipment and bring it to class if they could not access computers in computer labs or the university library. In Vietnam, computers are not cheap. On average, a netbook computer (about $300) costs a teacher the equivalent of their salary for one to two months. Consequently, probably not all teachers can afford buying a computer, adding to the problem of limited access.

Interestingly, the positive relation between DFT and ICT use means that awareness of those disadvantages did not prevent teachers from using ICT. Possible explanations could be that it was time consuming to use ICT at first, especially for novice ICT-using teachers, but over time and especially when teachers became more competent, ICT could save teachers a lot of time. This was in accord with the finding of the Transforming School Workforce Pathfinder Project in the UK in 2002 (Selwood & Pilkington, 2005). Another reason that greater awareness of disadvantages did not inhibit ICT usage could be that ICT-enhanced lessons could be used again. Interviewed teachers revealed that they could re-use those materials in other settings outside Hanoi University, for example in private classes, evening centres or other provincial training institutions. Therefore, despite knowledge of the disadvantages, the ability to use the ICT based lessons in a number of educational settings overcame any tendency to be overcome by this awareness. This is an interesting finding, which needs further research in the future. So far little research has been done about the use of ICT by the same users across multiple settings. It is even possible to argue that the positive relationship between DFT and ICT use was caused by greater usage of ICT leading to greater awareness of the associated disadvantages. That is, the more engaged teachers were with ICT in their teaching, the more aware they became of the difficulties, for example, how expensive it was both in terms of time and money. Hence, even if increased awareness of disadvantages could have led to less usage, a stronger opposing relationship could occur between usage and awareness, whereby more usage resulted in

greater awareness of the disadvantages that needed to be overcome. Hence, the overall relationship was positive.

Perhaps a strong reason why most teachers used ICT despite any challenges or disadvantages was because they shared a firm belief that ICT was beneficial both for their students and for themselves (see Performance expectancy analysis above).

(LACK OF) FACILITATING CONDITIONS - LEADERSHIP SUPPORT AND GUIDELINES

Instructional use of ICT needs a supportive environment and support from educational administrators at different levels (Davies, 2010). The results of this study indicated that leadership support and guidelines only significantly influenced ICT use for classroom teaching but were not significant for preparatory use (see Table 4.8, Chapter 4). Vietnamese culture is seen to be influenced by Confucian heritage cultural traditions in which the power distance is high (Hofstede et al., 2010). In this cultural context, leadership support is important for success of ICT implementation. Fortunately, the leadership strongly supported usage of ICT at Hanoi University by upgrading ICT facilities in computer labs and the library as well as issuing ICT guidelines which they said were embedded in some key documents and reports of the university. However, most teachers reported that they neither saw computers in the classroom (except in some computer labs and the library) nor were aware of the existence of the ICT guidelines. The problem lay in deployment of ICT facilities and dissemination of information from leaders to teachers. Many teachers reported that they would be more likely to use ICT in classroom teaching if they received more specific support from the administrators.

Teachers reported that the current support for ICT use at the university level and departmental level was only verbal encouragement. Like other public universities, HANU had no budget line to provide financial incentives for ICT use. There was a lack of public recognition for good usage. Those who implemented ICT effectively in their teaching did not receive any rewards or official recognition. In addition, no penalty was applied to teachers who did not use ICT. As a result, teachers' use of ICT was not motivated by leadership support but by their perception about ICT benefits for students' learning and their professional needs. Consequently, innovative uses of ICT, if any, happened at the teacher level rather than at the institutional level.

(LACK OF) FACILITATING CONDITIONS - LIMITED ACCESS AND ICT TRAINING

The results showed that lack of facilitating conditions (i.e. limited access and inadequate ICT training) influenced ICT use for preparation only. Interviewed teachers revealed that university computers were limited and of poor quality. Consequently, teachers avoided doing preparatory work at the university and often prepared their lessons at home where facilities tended to be of better quality (Table 3, Appendix 11).

When it came to ICT use for lesson preparation, it seemed that the majority of teachers did not feel confident or competent, possibly due to lack of adequate training. Official training workshops that had been organised by the university were attended by only a small number of teachers (35.5%). This was possibly due to a clash between the time of ICT training and teachers' timetables (e.g. classroom teaching during week days or administering tests during weekends) preventing teachers' attendance (Dang, Nicholas, & Lewis, 2013). For example, one teacher said "I know the university has organised some ICT training courses but unfortunately I could not attend those courses because I had some classes to teach and could not manage the time" (ID 08).

Teachers also perceived the duration of ICT training as insufficient. On average, academic staff received between one and ten hours of ICT training over 2 years. Consequently, most teachers reported low levels of competency and confidence in ICT integration (Table 10, Appendix 11), resulting in limited use of ICT.

In addition, the results showed that ICT training focused on discrete skills rather than on how to use those skills to prepare for and/or to teach specific subjects/language skills. The training content mainly covered basic and generic skills such as internet searching, word processing and PowerPoint presentation rather than focusing on specific programs with potentially more specific relevance for language teachers, such as audio editing, video editing and e-lecture creation. Official training programs did not cover Web 2.0 tools such as wikis, blogs, and VoiceThread. As a result, despite the availability of many ICT applications, teachers' actual use of ICT tools was restricted to Microsoft Office and the internet for search and download functions (Dang et al., 2013). Even if academic staff could ideally absorb all ICT skills introduced in the training sessions, their ICT mastery was possibly not sufficient for the integration of ICT into everyday teaching and learning (Trucano, 2005).

Informal learning of ICT skills was more widespread than the formal training conducted by the university (e.g. 89% of teachers were self-learning and 70% learnt ICT skills from colleagues), possibly because teachers could decide what skills to learn, and where, when and how to learn those skills. One teacher revealed: "I mainly teach myself ICT skills. There are plenty of books teaching you how to use different software. I buy those self-study books from the bookshops and read them at home" (ID 23) (Dang et al., 2013). Therefore, it is necessary to set up ICT peer support groups so that teachers could help each other learn the ICT skills which they needed. This is consistent with the literature about ICT training for language teachers (Healey, 2013; Towndrow, 2013).

AGE, GENDER, TEACHING EXPERIENCE AND ICT USE

Independent regression analysis showed that age and gender had a negative, significant relation with ICT use for both preparation and teaching but gender lost its significance when major factors were entered in the multiple regression analysis (see Tables 4.23 and 4.24, Chapter 4). The results indicated that in general, younger male teachers tended to be more interested in using ICT more frequently than female colleagues.

Similar results on gender differences in ICT use have been reported in other studies (Markauskaite, 2006; Peeraer & Van Petegem, 2011a; Yuen & Ma, 2002). For instance, Peeraer and Petegem (2011a) conducted research on ICT integration with 863 teacher educators in Vietnam and found that "women tend to a more limited use of ICT for teaching practice than men and age has a negative influence on intensity and diversity" (p.241). It is worth noting that there are inconclusive results in the literature about gender and ICT use. Some studies have reported that female teachers tended to use ICT less than male teachers due to their lack of interest, ICT skills and high level of computer anxiety (Broos, 2005; Huang, Hood, & Yoo, 2013; Li & Kirkup, 2007; Mahdi & Al-Dera, 2013; Volman & van Eck, 2001). Other studies reported no effect of gender on ICT use by teachers (Markauskaite, 2006; Rahimi & Yadollahi, 2011; Teo, 2008). With such inconsistent results, there is an argument that it is psychological gender (i.e. individuals' orientation toward masculinity and femininity) rather than biological gender (i.e. males/females) that influences ICT use (Ursavaş & Karal, 2009). Todman and Day (2006) suggest that individuals with higher degrees of masculinity tend to have less computer anxiety than femininity identity individuals. Future studies need to explore the relationship between psychological gender and ICT use.

Studies on relations between teaching experience and ICT use often indicate that veteran teachers tend to be reluctant to use ICT due to their lack of ICT confidence and competence (Bingimlas, 2009; Snoeyink & Ertmer, 2002), lack of feeling of readiness for ICT integration (Inan & Lowther, 2010), having little prior experience with ICT before becoming teachers (Jimoyiannis & Komis, 2007) and perceiving that it is difficult to learn new technologies (Morris et al., 2005; Tapscott, 2009). However, in this study I found no significant relation between teaching experience and ICT use.

5.3 Summary of Chapter Five

The pedagogy * technology model (Lin et al., 2012) helps interpret teachers' use of ICT and reveals an imbalance between technological and pedagogical dimensions. It seemed that teachers focused more on technology elevation than on pedagogy progression. Technologically, most teachers were at level 3 (utilising internet applications) and level 4 (creating multimedia teaching materials). There were teachers reaching level 5 (customising multimedia resources) and even advanced levels (level 6: producing simple instructional application and level 7: implementing sophisticated instructional systems). Pedagogically, most teachers used ICT to supplement their existing teaching styles, which were mainly teacher-centred and direct teaching (level A). Very few teachers demonstrated student-centred uses of ICT such as cognitively active learning (level B), constructive learning (level C) and social learning (level D). Therefore, it was fair to say that not much innovative change was made in terms of pedagogical ICT practices.

The 11 factors (which were extracted from the data of this study) were compared with 4 core constructs of the baseline unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003) (which was the theoretical framework of this study) to better understand the influence of those constructs/factors on ICT use. There is no contradiction between 4 constructs of the UTAUT model (originally designed for non-educational contexts) and 11 factors of this study (coming from the educational context). They are restructured in different ways. In bivariate correlation analysis, 6 factors showed significant influence on ICT use for both preparation and teaching and were ranked from high to low as follows (see Table 4.8, Chapter 4): positive beliefs, attitudes and experience (UTAUT construct: facilitating conditions), ease of use (UTAUT construct: effort expectancy), perceived benefits for students and teacher

perception of benefits (UTAUT construct: performance expectancy), disadvantages for teachers (UTAUT construct: facilitating conditions), and pressure from others (UTAUT construct: social influence). Age and gender showed negative relation with both preparatory and instructional use of ICT. Teaching experience was only significant for ICT use for classroom teaching.

In the multiple regression analysis (Table 4.9 and Table 4.10, Chapter 4) when all 11 factors were entered and when age, gender and teaching experience were controlled, ICT for preparation was strongly influenced by positive beliefs, attitudes and experience (UTAUT construct: facilitating conditions); pressure from others (UTAUT construct: social influence); and lack disadvantages for teachers (UTAUT construct: facilitating conditions). Instructional use of ICT could be predicted by disadvantages for teachers (UTAUT construct: facilitating conditions); positive beliefs, attitudes and experience (UTAUT construct: facilitating conditions); lack of leadership support (UTAUT construct: facilitating conditions); and ease of use (UTAUT construct: effort expectancy).

It is interesting that some factors, which are often grouped into inhibiting factors in the literature (such as disadvantages for teachers, pressures from others, limited access, lack of adequate ICT training, lack of guidelines, lack of leadership support) were found to have a positive relation with ICT use. They did not prevent teachers from using ICT. Therefore, the reasonable explanation could be that those factors should be regarded as challenges (rather than barriers) during ICT implementation. When teachers engaged more in ICT, they were more aware of those difficulties, yet teachers found ways to bypass the problems. Some interviewed teachers explained that it was because ICT was very beneficial for teachers' work and students' learning. Furthermore, teachers could re-use ICT-enhanced materials in other settings outside the case study university.

Chapter 6: CONCLUSION AND IMPLICATIONS

In this final chapter I engage with the key results and contributions of the study. Implications focusing on pedagogy and policy are presented. New research issues and some recommendations for future research together with some limitations of the study are discussed. Finally, key conclusions are drawn.

6.1 Key results of the study

In this thesis I have sought to find empirical evidence to support answers to two main research questions: i) What is the current use of ICT by teachers of foreign languages at Hanoi University (HANU)? and ii) Which factors affect teachers' use of ICT in foreign language teaching at HANU? Below is the summary of key results from my data analyses:

6.1.1 ICT use by teachers

The unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003) treats ICT use as a monolithic construct and was not specifically designed for educational contexts. This study has shown that this model is not informative enough to explain different nuances of teachers' use of ICT.

ICT use by teachers is not a monolithic construct but can be further unpacked using the lens of the pedagogy * technology model for information and communications technology integration in education (Lin et al., 2012). This model reveals that for technological use, there were two main but not similarly-sized groups of teachers: i) the small group of ICT non-using teachers (accounting for under 10% of survey respondents), who did not use ICT due to two major barriers: low ICT competency and lack of ICT facilities; and ii) the much larger group of ICT-using teachers (representing over 90% of survey respondents), who believed that ICT would enhance learning outcomes, increase study motivation, promote autonomous learning, enhance employability for students, increase productivity and improve teaching performance.

The popularity of ICT use in this study aligns with most of the current literature, which indicates widespread integration of ICT into instruction (Buabeng-Andoh, 2012; Davidson et al., 2004; Davies & Hewer, 2012; O'Hara & Pritchard, 2013).

The study results also showed that despite the availability of many ICT applications, only a small number of applications were used by the teachers who responded. In preparation for classes, these teachers frequently used the internet to search for teaching materials, downloaded relevant materials onto their computers or USB devices, then processed them using mainly word processing and presentation software to create customised teaching materials in the forms of worksheets for students and presentation slides for teachers. Emails were used to maintain communication between teachers and students or among teachers.

Unsurprisingly, those teachers who used ICT during their lesson preparation were more likely to apply ICT in their classroom teaching. This is in line with the previous work of other researchers (Cox et al., 2000; Hennessy et al., 2010). The most frequently used application for classroom practice was PowerPoint for presentations, followed by internet searching, use of a browser, word processing and voice recording. ICT was utilised to teach listening and speaking skills much more than other language skills or subjects.

These results are consistent with research findings revealing that foreign language teachers tend to mainly use PowerPoint presentation, word processing and internet applications in their instruction while there is a low use of other applications, possibly due to the teachers' limited ICT self-efficacy (Aydin, 2013; Li & Walsh, 2011).

As indicated in Chapters 4 and 5, many applications were hardly used by teachers, such as Web 2.0 tools (e.g. wikis, blogs and VoiceThread), reducing the range of support for collaborative learning. This result is inconsistent with the literature, which cites popular use of Web 2.0 tools in language teaching and learning (McAuley, Stewart, Siemens, & Cormier, 2010; Wang & Vásquez, 2012). The result in my study may be due to a lack of ICT competence on the teachers' part, which is partly caused by an absence of Web 2.0 content in ICT training sessions and appropriate facilities in classrooms at the case study university. Another explanation could be that the teacher-centred approach is possibly still dominant in Vietnam (Nguyen, 2008; T. H. T. Pham, 2010), an

observation which might be significant for other countries with similar approaches to pedagogy (Schneckenberg, 2009).

There was an imbalance between technological and pedagogical uses of ICT for the language teachers in this study with the weight leaning more towards the technological side. Technologically, most teachers in this study were at level 3 (utilising internet applications) and level 4 (creating multimedia teaching materials). About 25% of the interviewed teachers provided evidence of reaching level 5 (customising multimedia resources) and 14% of the interviewed teachers were at the advanced levels, i.e. level 6 - producing simple instructional application and level 7 - implementing sophisticated instructional systems.

Pedagogically, most teachers were found to be using ICT to supplement their existing teaching styles, which mainly reflected a teacher-centred, direct teaching method (level A). About 14% of the interviewed teachers demonstrated student-centred uses of ICT in the cognitively active learning (level B), constructive learning (level C) and social learning (level D) methods. In other words, ICT was not widely utilised to facilitate more sophisticated styles, which are believed to be the most beneficial for students' needs and superior to teacher-centred approaches (Maclellan, 2008). There was not much evidence of innovative pedagogical practices associated with the use of ICT in the study. This result is consistent with the findings of previous studies in that despite its potential, ICT seems to be most widely used to supplement teachers' long standing teaching (traditional, teacher-centred) methods rather than making transformative changes in students' learning (Schneckenberg, 2009; Sherman & Howard, 2012). It is known from the literature that pedagogy needs to be placed before technology (Watson, 2001) but that is not really reflected in the reported ICT practices in the classrooms of the teachers in this study. This result is in accord with other studies that also find a gap between teachers' reported pedagogical beliefs and their observed ICT practices in classrooms (Ertmer & Ottenbreit-Leftwich, 2010). In this study, it seems that teachers may be drawn to the excitement of the functionality of new ICT applications and therefore focus on improving their own ICT self-efficacy more than on supporting students' interactions and learning, which is consistent with Petko's study (2012). Another possibility could be that teachers use ICT tools for the functions and convenience offered by those tools rather than because of their capacity to address

students' needs. Such an interpretation is consistent with Law and Chow's study (2008) about pedagogical practices and ICT use around the world.

The preparatory and instructional uses of ICT by teachers can possibly be better explained by looking at the impacts of major influencing factors.

6.1.2 Factors affecting ICT use

Exploratory factor analysis was conducted and resulted in the extraction of 11 factors influencing teachers' use of ICT, namely teacher perception of benefits, perceived benefits for students, ease of use, positive beliefs, attitudes and experience, technical problems, ICT training, limited access, guidelines, leadership support, pressure from others and disadvantages for teachers.

The data came from the questionnaire, which was based on the reviewed literature that included the baseline unified model of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003) used as part of the theoretical framework of the study. It should be noted that the baseline UTAUT model was originally designed for non-educational contexts (e.g. enterprises, industries and workplaces) (Venkatesh et al., 2003), whereas this study was placed in a university setting.

To explore the relationship between the UTAUT model and the findings of this study, the above-mentioned 11 factors were conceptually incorporated into the four core constructs of the UTAUT. The term 'construct(s)' is used to refer to the core constructs of the UTAUT model, and the term 'factor(s)' refers to the 11 factors constructed on the basis of the factor analysis reported in Chapter 3. Two factors (perceived benefits for students and teacher perception of benefits) were associated with the UTAUT construct: performance expectancy; one factor (ease of use) with the UTAUT construct: effort expectancy; one factor (pressure from others) with the UTAUT construct: social influence; 7 factors (positive beliefs, attitudes and experience, leadership support, guidelines, ICT training, limited access, disadvantages for teachers and technical problems) with the UTAUT construct: facilitating conditions. The 11 factors were not in conflict with the 4 UTAUT constructs but were organised in a different way. Multiple hierarchical regression analysis was conducted with the four UTAUT constructs and the results showed that those constructs were significant determinants of usage intention. While this demonstrates that the UTAUT model can be shown to be applicable in

relation to the uptake of technology for teaching, this finding was not the most significant outcome.

Having verified the UTAUT model in relation to my data, the relationship of the 11 factors to ICT usage was considered. Bivariate correlation analysis was conducted to measure the amplitude of influence of individual factors on ICT use for both preparation and teaching. The results showed that the following 6 factors significantly and positively correlated with both preparatory and instructional uses of technology. Ranked in the degree of relationship from high to low, the factors are: positive beliefs, attitudes and experience; ease of use; perceived benefits for students; teacher perception of benefits; disadvantages for teachers and pressure from others. Leadership support and guidelines only related to ICT use for teaching, whereas limited access and ICT training only correlated with ICT use for lesson preparation. Age and gender showed negative relations with both preparatory and instructional use of ICT, implying that younger male teachers tend to use ICT more than older female colleagues. Teaching experience was found to be significant only for ICT use in classroom teaching, where the relationship was positive. It is surprising that two factors (i.e. disadvantages for teachers and limited access), which are often referred to as barriers in the literature, positively correlated with ICT usage in this study. This means that they did not prevent teachers from using ICT and therefore should be regarded as challenges. This will be discussed in more detail in Section 6.2.

To determine the unique explanatory power of each of the 11 factors in predicting ICT usage, (rather than exploring the one-on-one relationship between each factor and ICT use as above), multiple regression analysis was conducted with all 11 factors entered, while age, gender and teaching experience were controlled. Preparatory uses of ICT were most strongly predicted by a group of 3 factors (i.e. positive beliefs, attitudes and experience; pressure from others and disadvantages for teachers). Instructional uses of ICT were most strongly predicted by a group of 4 factors: i) disadvantages for teachers, ii) positive beliefs, attitudes and experience, iii) leadership support and iv) ease of use. Only three variables, i) disadvantages for teachers, ii) positive beliefs, attitudes and experience, and iii) age (as a moderator), showed significant relations with both ICT for preparation and for teaching. The results about positive beliefs, attitudes and experience are in alignment with previous studies (Buabeng-Andoh, 2012; Ertmer et al., 2012a; Kim et al., 2013; Mama-Timotheou & Hennessy, 2013; Ng & Nicholas, 2009; Snoeyink

& Ertmer, 2002; Teo et al., 2008; Voogt et al., 2012). Unlike most of the literature, which regards disadvantages for teachers (e.g. heavy workload, costs of equipment and time demands of using ICT) as barriers to ICT use (Becta, 2003; Buabeng-Andoh, 2012; Jones, 2004), this study shows a positive relation between disadvantages for teachers and ICT use. These disadvantages did not inhibit teachers from using ICT, even though this is the standard relationship described in the literature. The explanation appears to be that the more teachers used ICT, the more aware teachers became of the challenges. However, this awareness was not a disincentive for use. Presumably these challenges were perceived as something that needed to be overcome and the process of identifying the challenges may have assisted the process of overcoming them.

Because the 11 independent factors were closely inter-related (see Table 15, Appendix 11), a second order factor analysis was conducted to identify whether they could be grouped into a smaller cluster of factors. The results of this analysis identified two groups of factors. The first group identified a variable labelled as *inhibiting factors* or *barriers* as widely used in the literature and included 7 factors: pressure from others, disadvantages for teachers, technical problems, lack of adequate training, limited access to ICT facilities, (lack of) ICT guidelines and (lack of) leadership support. Interesting, this group was found to have a positive relationship with ICT use, meaning that they did not prevent teachers from using ICT. As indicated in Chapter 5, the factors in the first group should be regarded as challenges (rather than barriers) to ICT implementation. This is different from the literature. The second group produced a variable called *facilitating factors* or *enablers* as often called in the literature and contained 4 factors: teacher perception of benefits, perceived benefits for students, ease of ICT use and positive beliefs, attitudes and experience. The findings are in accord with previous studies looking at facilitating factors to ICT use (Cox et al., 2000; Drent & Meelissen, 2008; Mumtaz, 2000; Pelgrum, 2001; Scrimshaw, 2004).

So the 11 factors which affect teachers' use of ICT in teaching foreign languages can possibly be viewed from another perspective: discouraging and facilitating factors which are different from the UTAUT model.

The results of this study make important contributions to current knowledge and practices.

6.2 Major contributions of this study

This study makes two substantial contributions to knowledge: a theoretical contribution and a country-specific contribution.

6.2.1 Theoretical contribution

The baseline UTAUT model was originally designed for non-educational contexts (e.g. enterprises, industries and workplaces), targeting "users that may be less inclined to adopt and use new systems" (Venkatesh et al., 2003, p. 426).

This study expands the baseline UTAUT model in a new context, i.e. ICT use for teaching foreign languages (a less-studied use context) at a university in Vietnam (a developing country). To that end, this study has found that the UTAUT model is not informative enough to accommodate the workings of the influences of major factors on ICT usage by university teachers. The UTAUT model seems to be most suitable for ICT users during the early stages of adoption and experience (Venkatesh et al., 2003). In this study most of the teachers were ICT-using teachers who had often moved beyond the stage of adoption towards expansion of use in their teaching. Therefore, the degree of influence of each construct on usage is different. In non-educational contexts, the UTAUT model indicates that performance expectancy is the strongest determinant, followed by effort expectancy, social influence and facilitating conditions. In the context of these university teachers' use of ICT to teach foreign languages in Vietnam, the most important predictors were: social influence, facilitating conditions, performance expectancy and effort expectancy as for the use of ICT in lesson preparation; and facilitating conditions, effort expectancy, performance expectancy and social influence as for the use of ICT in classroom teaching (see Table 4.11, Chapter 4).

The UTAUT model was originally designed to be neutral in relation to context therefore 'use behaviour' is presented within it as a monolithic construct. In the educational context of this study, this model fails to explain specific nuances of ICT use, especially pedagogical aspects of ICT use. While pedagogies may not be important in non-educational contexts (e.g. industries, companies and firms), they are essential in educational settings (e.g. universities, colleges and schools) (Koehler, Mishra, Kereluik, Shin, & Graham, 2014; Vieluf, Kaplan, Klieme, & Bayer, 2012). In this study, in combination with the pedagogy * technology model for teachers' ICT integration (Lin et al., 2012), the UTAUT construct of 'use behaviour' has been expanded to

accommodate a more powerful view of both teachers' technological uses (8 levels) and their pedagogical uses (4 levels) of ICT.

A further interesting result relates to the use of ICT across multiple institutions. It seems that the UTAUT model has been applied to technology users working in one setting (e.g. in a same organisation, same firm) (Venkatesh et al., 2003). The situation of many of the language teachers in this study is different. There was a similar pattern of ICT practice across all languages at the case study university but there was a difference in ICT use for lesson preparation between teachers teaching English and teachers teaching other languages (see Table 4.15, Chapter 4). It seemed that teachers of English used ICT more than anybody else in lesson preparation and may, therefore, have been more aware of ICT challenges. As English is a popular foreign language in Vietnam, it may be easier for teachers of English to find (casual) work in settings outside the case study university (e.g. in other institutions in the same or different geographical locations, in evening language centres, foreign-invested language centres and private classes at home) where ICT-prepared materials can be re-used. Under the influence of internationalisation and casualisation of employment in higher education (Hartmann, 2010; Percy & Beaumont, 2008), it is likely that more and more teachers both in Vietnam and elsewhere will possibly work for different institutions or in different settings. As a result, the findings of this study suggest that research using the UTAUT model needs to consider ICT use across multiple institutions.

As indicated in Section 6.1.2 above, the second order factor analysis reduced the 11 factors identified in the initial factor analysis to 2 groups (broader variables). The 7 factors in the first group are often regarded as barriers in the literature (Bingimlas, 2009; Buabeng-Andoh, 2012; Goktas et al., 2013; Jones, 2004; Mumtaz, 2000; Reid, 2012; Touray, Salminen, & Mursu, 2013). In contrast to the established view of the role of these factors, in this study they had a positive relationship with use for lesson preparation, meaning that those 'barriers' did not prevent ICT usage. In fact, they should be regarded as challenges or factors that need to be overcome when teachers decide to take on the use of ICT in their teaching. The dominant relationship between ICT usage and awareness of challenges appears to be based on the fact that the more teachers used ICT, the more aware they become of the challenges. There may be an explanation from a cultural perspective. Vietnamese people are well known for resilience with no fear of difficulties and hardship as a result of strong determination

and bravery fostered by years of defending the country from wars and foreign invasion (Hunt, 2002; Leong, Airriess, Li, Chen, & Keith, 2007). Additionally, what the teachers perceived as benefits for students and for themselves possibly outweigh those disadvantages. This interpretation suggests that there is a need for further research on the impact of culture (i.e. national culture or professional culture of university teaching) on ICT use by university teachers. This issue has also been raised in previous research (Boulter, 2007). In summary, the direction of relationship between latent constructs/factors and use behaviour can be seen to operate in both ways, i.e. the 7 discouraging factors influence usage and vice versa usage raises awareness of teachers on the 7 discouraging factors.

6.2.2 Country-specific contribution

Currently, much has been written about ICT use in teaching and learning in higher education in developed countries especially the USA and the UK but there is limited research about this topic in Vietnam. Therefore, in terms of country-specific contribution, this study provides an updated view of the practices of ICT for lesson preparation and classroom teaching as well as key factors affecting usage in teaching foreign languages at the tertiary level in a less studied country such as Vietnam. This knowledge can be of value for different stakeholders in Vietnam, i.e. university policy makers, university teachers and ICT support staff. The empirical evidence of this study can inform and assist them in the development of relevant strategies for innovative and transformative integration of ICT into teaching and learning in general and foreign language teaching and learning in particular.

6.3 Implications of the study

The above-mentioned 11 major factors should not be considered a definitive list of elements affecting ICT integration by university teachers, but more appropriately a valuable input for consideration by different stakeholders, i.e. university leaders, university teachers, and ICT support staff to ponder when developing or elaborating an appropriate, contextualised and evolving strategy to further encourage academic staff usage of ICT in the future.

The study results suggest some practical implications for university leaders, language teachers and ICT support staff.

6.3.1 Implications for university leaders

The results of the study show that an important element in encouraging these teachers to use ICT more is more leadership support. In the context of Vietnam where the power distance is high (Hofstede et al., 2010), university leadership plays an powerful role in creating facilitating conditions in terms of ICT training, ICT guidelines, institutional culture of sharing, and provision of ICT facilities and incentives.

One of the main aims of ICT training needs to be equipping teachers with ICT skills relevant to their teaching (Abuhmaid, 2011). However, the study results showed that ICT training to date has focused on discrete technical skills rather than on how to use those skills to prepare for and/or to teach specific subjects/language skills (Dang et al., 2013). Moreover, even if academic staff had been able to absorb all the ICT skills introduced in the training sessions, their ICT mastery appears to be a necessary rather than a sufficient condition for the integration of ICT into everyday teaching and learning (Trucano, 2005). It is generally agreed that ICT cannot and will not replace teachers, but teachers who use ICT will have more advantages and can replace teachers who do not use ICT (Clifford, 1987; Kessler, 2013). Therefore, if ICT training is to become more influential, teachers need to be provided with more support in implementing innovative pedagogies and consulted on the set of ICT skills relevant to the subjects they are seeking to teach using these practices. Importantly, teachers should be trained in how to integrate ICT (especially Web 2.0 tools) according to actively cognitive learning, constructive and social learning methods in order to transform the quality of teaching and learning languages by facilitating students' learning (as discussed in Chapter 5). Most teachers in this study had picked up ICT skills through self-training or learning from other colleagues. This is a common issue in many countries (Kessler, 2007). The availability of these resources within the current teaching force suggests that it is a good idea to have an ICT peer support group in each department to provide on-demand and just-in-time assistance (Dang et al., 2013; Dempster, Benfield, & Francis, 2012). Drawing on resources in this way also calls for attention to the ways in which teachers think and work. In general, teachers think creatively and learn new things in different ways (Leach, Ahmed, Makalima, & Power, 2005). So it is sensible that ICT professional development should be organised in

various ways to accommodate those differences, e.g. combining face-to-face with online training, using both printed materials and digital resources on the internet. One advantage of this is that ICT training sessions could be recorded and uploaded to a repository to support anytime, anywhere learning and revision of ICT skills. Relevant ICT training resources could also be collected or developed and stored in an online repository for 24/7 access by teachers. An example of such practice is the website of teacher training videos (Stannard, 2011), among many others, providing short, step-by-step online training tutorials on the use of different ICT tools.

The identified role for leadership indicates that institution-wide ICT vision and guidelines are important to provide staff with clear purposes, expectations and directions of ICT use in a higher education institution (Kirkwood, 2013; Plomp, 2006). The substantial work towards developing such policies around the world means that local guidelines can draw on existing relevant documents such as the TESOL (Teaching English to Speakers of Other Languages) technology standards framework (Healey et al., 2008), UNESCO ICT competency framework for teachers (UNESCO, 2011), and national educational technology standards (NETS) for teachers (ISTE, 2008). As there is no one-size-fits-all framework, country- and institution-specific contexts as well as teachers should be invited to contribute their local expertise to guidelines, consequently developing a sense of ownership, which will later facilitate the integration process (Kirkwood, 2013). In integrating local and international perspectives, it is essential to start with identifying clear purposes for ICT use (e.g. to facilitate students' learning and to improve learning outcomes or teaching quality) to be achieved through appropriate pedagogical and technological uses of ICT. This approach has also been suggested by DePauw University (Trinkle, 2005).

The considerations outlined above mean that an organisational culture of collaboration and sharing should be cultivated, nurtured and promoted. Different teachers, as individuals, tend to be potentially good at different ICT skills and access different resources on the internet according to their interests. When those resources and good practices are kept at the individual teacher level, general improvements in teaching and learning quality can hardly be made or seen. The potential of ICT can be brought into full play if and when teachers' ICT skills, resources and good practices are shared. As a result, teachers can have access to many more materials, save time in lesson preparation and become familiar with more ways to integrate ICT in their teaching. Increasing the

range of engagement opportunities means that their beliefs and attitudes about ICT will be likely to be increased (Ertmer et al., 2012a; Mama-Timotheou & Hennessy, 2013). The culture of sharing is beneficial to teachers and institutions as a whole and certainly takes time to develop but may be facilitated by the leadership at different levels through discussion forums and leading by example (Chittleborough et al., 2012; Dempster et al., 2012).

However, the study also shows that leadership alone is insufficient. The results revealed that technical problems discouraged teachers from using ICT in their teaching. Therefore, ICT facilities, especially the internet connection (both wired and wireless) and computers (hardware and software) should be well maintained and regularly updated. These findings provide evidence that ICT use is closely linked with provision of ICT facilities (Buabeng-Andoh, 2012; Dang, 2011). Teachers in this study, for example, expressed that they would be more likely to use ICT if there were internet connections and computers in the classrooms (rather than only in some computer labs) (see Table 5, Appendix 11). While it is more expensive to install computers in all classrooms, one possibility is to make the internet connection, preferably a wireless connection, available in all classrooms, making it easier for both teachers and students to access the internet for teaching and learning purposes while they are in the classrooms. To complement the introduction of wireless access, the university should install at least one computer in each classroom to facilitate the actual usage of ICT in everyday classroom practice. This computer could be fixed to the teacher table or placed on a movable cart or could be a portable notebook computer to be carried to classrooms as VHS players and TV monitors are still used in many places. While budget constraint is a chronic issue in higher education in Vietnam, a realistic strategy is to launch a BYOD (bring your own device) movement in order to encourage teachers and students to bring their own ICT equipment (e.g. notebook computers, speakers or data projectors, etc.) to the classrooms and the university will provide internet connection. This approach can lessen the financial burden on the university's limited budgets but it will also heighten the need for policy development to elaborate protocols that will manage the diversity of platforms, protocols and security issues that are a consequence of a BYOD approach.

To assist the wider language teaching community to gain access to the local knowledge of innovators, a clear policy of ICT incentives should be put in place to motivate teachers' integration of ICT into teaching (Wastiau et al., 2013). Those staff who are known to be good at using ICT to facilitate teaching and learning should receive public recognition in ways that are locally recognised such as rewards, commendation badges and the like. This study has demonstrated that such rewards are unlikely to motivate substantially more teachers to take up ICT, but these practices will acknowledge the collaborative relationships that will be needed to make ICT use effective for pedagogic purposes.

Teachers can be sent to conferences, both domestic and international, to keep them up to date with ICT practices. Upon return they then share the information of those conferences with other colleagues and disseminate good practices which in turn strengthen positive beliefs and attitudes about ICT use.

Table 5 (Appendix 11) shows both financial incentives and spiritual incentives can encourage teachers to use ICT more in their instruction, e.g. public praise at departmental or university meetings or a commendation paper even though this influence may not be dramatic. More powerfully, workloads should be reduced so that teachers can find more time to keep updated with emerging technologies and/or to study pedagogical integration of ICT.

6.3.2 Implications for language teachers

As teachers in this study were well aware of the extensive benefits and potential of ICT, it is important to help teachers move from awareness to actual usage of ICT in their teaching and make ICT promises come true. Nevertheless, as shown in this study (see Table 5, Appendix 11) and the literature, teachers are likely to use ICT if they have more evidence for the usefulness of ICT in their teaching areas (Chittleborough et al., 2012; Ertmer & Ottenbreit-Leftwich, 2010; Ottenbreit-Leftwich et al., 2010). Consistent with the collaborative approach discussed above, ICT-savvy teachers can be invited to showcase and share their success stories as well as positive experience with others, focusing on the pathways of progression between technology and pedagogy dimensions, and pedagogical use of a specific tool to teach a specific subject or skill (Ertmer et al., 2007). According to some interviewed teachers, professional development sessions are also good opportunities to raise teachers' awareness about the availability of numerous

tools and train academic staff in how to use those tools effectively. It may be a good idea to present a suggested list of software or websites useful for language teachers, accompanied by step-by-step explanation on such practical aspects as what this ICT tool can do, which skills each can promote, how it can be used for lesson preparation and for classroom teaching, and where to get help.

Teachers' workloads can be reduced by making full use of extensive open access online resources. Some useful sources of teaching materials have been mentioned by the study participants and in the literature, e.g. YouTube, TeacherTube, MIT Opencourseware, educational blogs and massive open online courses (MOOCs) (Coursera, 2013; Davies & Hewer, 2012; Tuomi, 2013; Udacity, 2013). Those readily available materials can save teachers a lot of time compared to designing materials from the scratch.

As indicated in Section 6.1.1 above, ICT was used mainly to reinforce traditional teaching styles. The implication is that pedagogy should be put before technology (Watson, 2001) and should take into consideration change factors and cultural norms. Moreover, it is important to shift teachers' pedagogies towards student-centred methods, such as cognitively active learning, constructivist and social learning, to create transformative changes in the ways ICT will be used to support students' knowledge creation, collaborative, autonomous and in-depth learning. This issue has also been identified by previous studies (Ertmer et al., 2012a; Jimoyiannis, Tsiotakis, Roussinos, & Siorenta, 2013; Mama-Timotheou & Hennessy, 2013; Prestridge, 2012; Voogt et al., 2012).

6.3.3 Implications for ICT support staff

The study results showed that technical problems occurred in the classrooms, causing difficulties for teachers during ICT implementation. Academics are not ICT experts therefore they need technical support. Interviewed teachers revealed that when there was a technical problem in the classroom they had to go and find ICT support staff. Therefore, there should be a clear procedure for teachers in case of a technical problem, e.g. a hot line number, an emergency phone in each classroom, or a checklist of problems-solutions, and the like.

Out of 8 levels of technology competence as described in the pedagogy * technology model (Lin et al., 2012), most teachers in this study were at level 3 (utilising internet applications) and level 4 (creating multimedia teaching materials) as indicated in

Section 6.1.1. ICT staff can be of great assistance to provide technological training for language teachers to help them reach higher levels, for instance level 5 (customising multimedia resources), level 6 (producing simple instructional application) and level 7 (implementing sophisticated instructional systems) once the overall purposes and pedagogies have been clearly established, as outlined above.

Interviewed teachers showed that they were unable to review training sessions because those session were not recorded. With the available facilities at the case study university, ICT support staff can assist in digitally video-recording ICT training sessions, storing those video clips in the university server, making access ubiquitous for teachers' revision and review whenever there is a need.

6.4 Limitations of the study

Although great care was taken in different aspects of this study, there are still unavoidable limitations.

The questionnaire items and interview questions were developed from the review of literature and various studies conducted in contexts different from Vietnam. A majority of those studies come from Western and developed countries (e.g. the USA and the UK) where the education systems and technical facilities are often different from Vietnam. For example, schools and universities in developed countries have more ICT facilities and better quality equipment than those in Vietnam which is still a developing country.

As indicated in Chapter 3, not all language departments and centres at Hanoi University were equally represented. Of the 13 language departments and 3 language centres, three units were strongly under-represented (i.e. Russian, Chinese Departments and Distance Education Centre). Consequently, there was a little compromise in the ability to generalise the language departments and centres at HANU. Fortunately, the response rate from the remaining language departments was satisfactory.

It is noticed that only published work is quoted in this thesis, consequently leaving other unpublished work unexplored. According to Pham (2010), recently the government of Vietnam has sent many postgraduate students to different universities worldwide to obtain doctoral degrees. It may be assumed that some of the on-going studies could deal with topics similar to this thesis. If those unpublished works had been incorporated in this study, there would have been a better understanding of ICT use in teaching foreign

languages in Vietnam. However, there is no way yet to search for those unfinished studies (Dang, Nicholas, & Lewis, 2012b).

This study was overt research where the objectives of the study were clearly stated to the participants in the information sheet from the outset of data collection. Well aware of the objectives of this research, i.e. ICT use in teaching foreign languages and factors affecting ICT use by teachers, there may be a possibility of a "Hawthorne effect", i.e. the participants might possibly provide a socially acceptable response to the survey items and interview questions simply because they knew that they were being studied (Cohen et al., 2011, p. 186).

The responses in the questionnaire and interviews reflected participants' self-report about ICT use and factors affecting ICT use in foreign language teaching at HANU. Teachers had to recall what and how they had used ICT. A possible limitation of self-report may be a discrepancy between recall and what is happening in reality (Brutus, Aguinis, & Wassmer, 2013). Nonetheless, this limitation may be reduced by having involvement of teachers from different language departments talking about the same issues: ICT use and factors affecting usage.

In the interviews, there was no participation of teachers who did not use ICT in their teaching. Although great efforts were made to invite such teachers to the interviews, they were not willing to take part. Possibly it is because they thought that as they did not use ICT, so they had nothing to contribute. However, some open-ended questions in the questionnaire captured some of their views on the reasons for not using ICT in teaching.

Although the combination of the unified theory of acceptance and use of technology (UTAUT) and the pedagogy * technology model can provide useful lenses to adequately interpret factors influencing teachers' ICT usage and possible progression of ICT use in a milieu of technology and pedagogy dimensions, other possibly emerging models relating to technology acceptance and use may not be reflected in this study.

The above-mentioned limitations could possibly be remedied by further research in the future.

6.5 Recommendations for a new research agenda

The above-mentioned key results, contributions, implications and limitations of the study lead to a new research agenda and some recommendations for further investigations.

The theoretical contributions of this study raise some issues, which may be used to construct a new research agenda regarding the expansion of the unified theory of acceptance and use of technology (UTAUT) of Venkatesh et al. (2003):

- Contexts of use: The results of this study indicate that because the UTAUT model is designed for context-neutral use of technology, it fails to interpret use behaviours in educational contexts, which can include both pedagogical and non-pedagogical uses of technology. Therefore there is a need to further research the expansion of the UTAUT in a more specific context such as the context of higher education.
- Role of profession: The results of this study point to the need to consider pedagogies in ICT usage. If the UTAUT model is applied for other professions, which other dimensions may need to be taken into consideration?
- Multiple settings: The UTAUT model tends to focus on technology use in one setting. The study results reveal that teachers of languages that are in high demand (for instance English, French, Chinese, Korean and Japanese) often have opportunities to work in different institutions. So far there has been little research on this issue. This raises the need for further studies on ICT use by the same users in multiple settings.
- Inhibiting and facilitating conditions: The baseline UTAUT model (2003) has 4 core constructs (performance expectancy, effort expectancy, social influence and facilitating conditions) and the extended UTAUT model (Venkatesh et al., 2012) has 3 additional constructs (hedonic motivation, price value and habit). It may be implied that presence or absence of those constructs will possibly create facilitators or inhibitors for ICT use respectively. However, this study produced 11 factors and the second order factor analysis could reduce those 11 factors to two distinct groups, often labelled as inhibiting factors (or barriers) and facilitating factors (or enablers) in the literature. Therefore, a future technology acceptance model may need to consider reorganising or regrouping its core constructs in a way to reflect inhibiting and facilitating conditions for ICT use in relation to specific professional contexts.

This is consistent with the recommendation in Buchanan et al.'s study (2013) examining factors associated with ICT use by higher education faculty in the UK.

- Cultural impact: The teachers in this study still used ICT despite many challenges and difficulties during the implementation. This may be because of Vietnamese cultural traits of resilience. However, the role of cultural impact on ICT use is not clearly known and may need further research, e.g. the role of national culture and of the profession of university teaching.
- Stage of ICT use: As the UTAUT model is targeted for users at the early stage of adoption, it seems inadequate for users at a stage of usage expansion such as that of the ICT-using teachers in this study. Further research is needed to investigate the expansion of the UTAUT model to users beyond the stage of technology adoption or uptake.

Further research recommendations focus on sample size, the impact of ICT use on language teaching, technology competency standards for language teachers with the focus on specific ICT skills essential for language teachers to teach different language skills (e.g. ICT skills for teaching listening, speaking, reading, writing, etc.), pedagogical use of ICT, appropriate forms of on-going ICT training for language teachers, good practices for ICT use in language teaching and ICT use across multiple institutions.

A bigger sample size is likely to be more representative. To chart the overall landscape of ICT practice in teaching foreign languages in higher education in Vietnam, it is ideal to have representative participation of language teachers in a representative sample of universities in Vietnam.

Further research may be needed to identify appropriate forms of training for language teachers in how to use ICT effectively to improve pedagogical practices (e.g. using online, self-study tutorial videos and peer support groups) in a shift towards more innovative educational practices.

The impact of ICT use on language teaching and learning is another area which needs further investigation. As indicated by survey respondents, teachers are more likely to use ICT in their teaching if they are convinced by evidence that ICT can really help improve teaching quality and academic performance of students. It is recommended that

further research be carried out into this linkage to strengthen teachers' beliefs in specific purposes for using particular technologies in particular ways.

ICT competency standards for language teachers should be further researched with the focus on suggested ICT skills (corresponding with various levels of technology and pedagogy competence in the two dimensional model) essential for teachers to teach different language skills, e.g. specific ICT skills useful for teaching listening, speaking, reading, writing and so on. In this regard, relevant and existing technology standards should be taken into consideration, such as TESOL (Teaching English to Speakers of Other Languages) technology standards framework (Healey et al., 2008), UNESCO ICT competency framework for teachers (UNESCO, 2011) and NETS (national educational technology standards) for teachers (ISTE, 2008). Additionally, ICT use is contextualised, therefore local context needs to be considered as well.

Superficial use of ICT to supplement traditional teacher-centric methods does not lead to any changes in the teaching and learning practices (Dang et al., 2013; Ertmer & Ottenbreit-Leftwich, 2010). It is therefore necessary to further study the pedagogical use of ICT by teachers, i.e. the use of ICT in constructivist and social learning manner to facilitate students' learning and to transform the quality of teaching and learning foreign languages. The matter is to help teachers find appropriate ways to reach the levels of progression relevant to their capacity and needs.

Appropriate forms of on-going ICT training for language teachers should be further studied. Consideration should be given to the training content, frequency of training, modes of training to meet different needs by different teachers teaching different skills/subjects, e.g. face to face training, online training or hybrid mode (i.e. blending face-to-face with online training), recording and storing recorded training sessions online for anywhere, anytime access and review.

It is essential to further study good practices for ICT use in teaching different language skills, and then to disseminate the results to teachers so that academics can learn from good examples and boost their attitudes about ICT. Good practices are inspiring. It is generally agreed that while researchers are interested in 'why it works', teachers are more interested in 'what works' and 'what can ICT do for me' (Hargreaves, 1997; Price & Kirkwood, 2013, in press). Good practices could be categorised according to different language skills and be justified and evaluated to be valid and convincing.

In this study, there was an absence of ICT non-using teachers in the interviews. Therefore ICT non-users should be further studied to better understand their position and to discard "the blaming discourses that unfairly position them as the weak link in an otherwise linear, robust and unproblematic chain of deterministic assumptions" (Perrotta, 2013, p. 326).

6.6 Conclusions

In this study I have demonstrated that teachers working in the same institution with the same ICT facilities, same leadership and same technical support have different levels of ICT use. Most teachers are using ICT and tend to focus on technological uses of ICT more than pedagogical uses. ICT is being utilised to reinforce traditional, teacher-centred teaching style rather than to make innovative changes in teaching and learning practices. That is probably because teachers' integration of ICT is affected by many factors. Teachers' positive beliefs and attitudes, among influencing factors, turn out to be the strongest predictor of ICT usage. A change in teachers' behaviour (about ICT use) can be feasible with a change in teachers' beliefs (Ertmer et al., 2012a; Kagan, 1992; Ng et al., 2010; Pajares, 1992; Prestridge, 2012).

Emerging from the data is the need for establishing a solid foundation of relevant pedagogical competency for university teachers. It is essential to move away from types of ICT use that merely reinforce existing (traditional, teacher-centred) teaching methods and move towards innovative student-centred ways of using ICT to facilitate students' collaborative, constructive and social learning through effective pedagogy-before-technology ICT training focusing (Ertmer et al., 2012a; Jimoyiannis et al., 2013; Mama-Timotheou & Hennessy, 2013; Prestridge, 2012; Voogt et al., 2012).

Facilitating conditions (including teachers' beliefs) turned out to be the strongest predictor of ICT use in foreign language teaching. In fact, teachers' beliefs in ICT usefulness provide an effective way to overcome challenges to ICT implementation. As a result, if the aim is to encourage more teachers to integrate ICT into teaching foreign languages, university policy makers need to provide more facilitating conditions, specifically focusing on creating positive beliefs and attitudes about ICT use by spreading usefulness of ICT, promoting ICT peer-support groups (e.g. younger teachers assisting older colleagues in how to integrate ICT) as well as teacher-centric ICT professional development leaning towards constructive and social learning uses of ICT.

Furthermore, ICT vision and guidelines need to be well disseminated to teaching staff by different channels of information.

While ICT provides powerful tools with extensive and diverse potential, ICT per se does not change pedagogy, teachers and administrators do. Teachers need to be placed at the centre of the ICT integration process because they decide whether and how ICT is integrated in the classrooms. This study has revealed that if the aim of ICT use is to facilitate students' learning, teachers' pedagogy needs to be shifted towards student-centred methods, which requires a view of innovative uses of ICT, which in turn creates transformative changes in the quality of teaching and learning foreign languages.

This study has provided a modified view of theories of ICT acceptance and use and has added increased clarity to the current knowledge about the construct 'use behaviour' in the UTAUT model by incorporating the pedagogy * technology model of Lin et al. (2012) . It has emphasised the important role of teachers' beliefs (as a part of the facilitating conditions construct in the UTAUT model) in informing and influencing teachers' ICT practices in the classrooms. It has also highlighted the importance of a clear and explicit understanding of the contexts and purposes of uses of ICT as part of an overall technology acceptance model. A new research agenda for the UTAUT model has been suggested to expand a future model of technology acceptance and use in new contexts, professions and stages of use.

This thesis started with two research questions regarding ICT use and factors affecting ICT use in teaching foreign languages at an innovative university in Vietnam. The results of this study inform future practices of ICT. A good knowledge of those factors can help the current and future teachers and administrators to take initiatives in finding appropriate strategies for successful ICT integration to transform the quality of teaching and learning foreign languages in Vietnam. The argument is not about which factor is the most urgent and should be tackled first. Rather, an all-embracing approach should be undertaken to address the relevant factors in a comprehensive manner.

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APPENDICES

Appendix 1: Survey questionnaire – English

Survey questionnaire:

INTEGRATING THE USE OF

INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT)

IN LANGUAGE TEACHING IN HANOI UNIVERSITY

Date of survey: 20 August, 2010

This survey is part of the doctoral research project of **Dang Xuan Thu - English Department**, on the use of ICT in foreign language teaching at Hanoi University (**HANU**). Your responses to the following questions are highly appreciated. All the information in this survey will be kept confidential and will be used for the research purpose only. The questionnaire should take about 30 minutes to complete. Please help answer the questionnaire within one or two weeks from the date of receipt, then give the survey, in a sealed envelope, to the Administrative Assistant of your Department/Centre. **Thank you very much.**

PART 1 – TECHNICAL FACILITIES

1. What kinds of facilities at HANU are available for your language teaching?
You may tick (✓) more than one box below if appropriate.

❒ Desktop computer ❒ Laptop computer ❒ Internet connection
❒ LCD projector ❒ Interactive whiteboard ❒ Computer lab
❒ Others: *(please specify)*

……

2. As part of your lesson preparation or teaching, how often do you …? *Please circle your choice.*

	Never 0%	Rarely around 10%	Sometimes around 40%	Often around 70%	Always around 90%
use a computer at home	N	R	S	O	A
use the Internet at home	N	R	S	O	A
use a computer at HANU	N	R	S	O	A
use the Internet at HANU	N	R	S	O	A

3. Please comment on the adequacy of your ICT … *(Please circle your choice)*

	N/A	Very inadequate	A little inadequate	Adequate	Better than adequate	Much better than adequate
Internet at home	NA	MLTA	LTA	A	BTA	MBTA
Computer(s) at home	NA	MLTA	LTA	A	BTA	MBTA
Internet at HANU	NA	MLTA	LTA	A	BTA	MBTA
Computers at HANU	NA	MLTA	LTA	A	BTA	MBTA

PART 2 - ICT TRAINING AT HANU

4. Which of the following experiences have contributed to your learning of ICT skills?
You may tick (✓) more than one box if appropriate.

❒ Self taught ❒ Learning from other colleagues at HANU
❒ General ICT courses organised by HANU ❒ Specific Software Courses organised by HANU
❒ Others: *(Please specify)*

……

……

5. Have you participated in ICT training courses organised by HANU?
❒ Yes *(continue Item 6)* ❒ No *(move to Item 8)*

6. Over the last two academic years, for how many hours in total have you received ICT training from HANU?
❒ not sure ❒ 1-5 hours ❒ 6-10 hours ❒ 11-15 hours ❒ 16-20 hours ❒ over 20 hours

7. What have you covered in ICT courses organised by HANU?
You may tick (✓) more than one box if appropriate.
❒ Word processing ❒ Use of Excel ❒ Use of Powerpoint ❒ E-lecture preparation
❒ Internet search skills ❒ Audio editing ❒ Video editing ❒ Others: *(Please specify)*

……

……

PART 3 - ICT IN LANGUAGE TEACHING AT HANU

8. Do you apply ICT in your language teaching? *Please tick (✓) one box which suits you.*

❒ **YES** If you answer YES, please write the main reason why	❒ **NO** If you answer NO, please write the main reason why not

9. How confident do you feel regarding ICT use in your teaching? *Please tick (✓) one box which suits you.*
❒ Not confident ❒ A little confident ❒ Confident ❒ Very confident

10. How competent do you feel regarding ICT use in your teaching? *Please tick (✓) one box which suits you.*
❒ Not competent ❒ A little competent ❒ Competent ❒ Very competent

11. Which types of ICT are you using and how are you using them to teach the following subjects?
Please select two (2) subjects or skills (which you know best) from the list below.
If you do not use ICT in your teaching, please move to Part 4.

Listening,	Speaking,	Reading,	Writing,	Pronunciation,
Vocabulary,	Grammar,	Literature,	Interpreting,	Translation,
Phonetics,	Lexicology,	Cultures & Civilisation,		Others *(please specify)*

Subject/ Skill	Software programs or websites I have used or heard about and would be happy to recommend to other people
1	
2	

NOTE: You may check your bookmarks in your computer, and then email your suggested websites to: thuict@gmail.com.

Appendix 1

12. Please tick (✓) the appropriate column(s). Do not tick the software/website which you do not use.

I use the following software/websites (examples):	To prepare for my teaching	To teach in classroom	How easy ? Hard ⇔ Easy			How useful? Not useful ⇔ Very useful		
1. Word processing (e.g. MS Word)	❒	❒	❒	❒	❒	❒	❒	❒
2. Spreadsheet (e.g. Excel)	❒	❒	❒	❒	❒	❒	❒	❒
3. Presentation with PowerPoint	❒	❒	❒	❒	❒	❒	❒	❒
4. Email (e.g. Gmail, Yahoo mail)	❒	❒	❒	❒	❒	❒	❒	❒
5. Voice chat (e.g. Yahoo messenger)	❒	❒	❒	❒	❒	❒	❒	❒
6. Video conferencing (e.g. Skype)	❒	❒	❒	❒	❒	❒	❒	❒
7. Web browser (e.g. Internet explorer)	❒	❒	❒	❒	❒	❒	❒	❒
8. Voice recording (e.g. GoldWave, JetAudio)	❒	❒	❒	❒	❒	❒	❒	❒
9. Audio editing (e.g. GoldWave, Sound Forge)	❒	❒	❒	❒	❒	❒	❒	❒
10. Movie making (e.g. Windows Movie Maker, Ulead)	❒	❒	❒	❒	❒	❒	❒	❒
11. Video editing (e.g. CyberLink)	❒	❒	❒	❒	❒	❒	❒	❒
12. Photo editing (e.g. Photoshop)	❒	❒	❒	❒	❒	❒	❒	❒
13. E-lecture making (e.g. LectureMaker)	❒	❒	❒	❒	❒	❒	❒	❒
14. Internet search engine (e.g. Google)	❒	❒	❒	❒	❒	❒	❒	❒
15. Internet download (e.g. Internet Download Manager)	❒	❒	❒	❒	❒	❒	❒	❒
16. Hot Potatoes	❒	❒	❒	❒	❒	❒	❒	❒
17. Screencasting	❒	❒	❒	❒	❒	❒	❒	❒
18. VoiceThread	❒	❒	❒	❒	❒	❒	❒	❒
19. Mind mapping (e.g. Mind-mapping)	❒	❒	❒	❒	❒	❒	❒	❒
20. Podcast (e.g. podomatic)	❒	❒	❒	❒	❒	❒	❒	❒
21. Education Blogs (e.g. The English Blog)	❒	❒	❒	❒	❒	❒	❒	❒
Other Software/ websites: (*Please specify*)								
22.	❒	❒	❒	❒	❒	❒	❒	❒
23.	❒	❒	❒	❒	❒	❒	❒	❒

PART 4 – ENABLERS AND INHIBITORS OF ICT USE IN LANGUAGE TEACHING AT HANU

13. Regarding enabling or inhibiting factors for ICT use in language teaching at HANU, to what extent do you agree or disagree with the following statements?

Please circle your choice.	Disagree	Disagree a little	Agree a little	Agree
Rationale for ICT use				
1. I use ICT in teaching because I am aware of the benefits of ICT.	D	DA	AA	A
2. I use ICT in teaching due to my personal preference.	D	DA	AA	A
3. I use ICT in teaching due to the pressure from students.	D	DA	AA	A
4. I use ICT in teaching due to the pressure from teachers.	D	DA	AA	A
5. I use ICT in teaching because of directives from my superiors.	D	DA	AA	A
Perceived usefulness of ICT				
6. I believe that ICT is very useful for language teaching.	D	DA	AA	A
7. Using ICT improves my teaching performance.	D	DA	AA	A
8. Using ICT increases my productivity.	D	DA	AA	A
9. Using ICT helps develop my expertise in my subject areas.	D	DA	AA	A
10. Using ICT facilitates sharing of teaching experiences.	D	DA	AA	A
11. Using ICT enhances my lesson preparation.	D	DA	AA	A
12. ICT-enhanced lessons can be re-used.	D	DA	AA	A
13. ICT helps me access extensive teaching resources on the Internet.	D	DA	AA	A
14. Email is a useful tool for me to communicate with colleagues and students.	D	DA	AA	A
15. Using ICT helps students gain better results in their studies.	D	DA	AA	A
16. Using ICT increases study motivations for students.	D	DA	AA	A
17. Using ICT helps students understand subjects more deeply.	D	DA	AA	A
18. Using ICT promotes autonomous learning.	D	DA	AA	A
19. Using ICT helps students practise language skills ubiquitously.	D	DA	AA	A
20. Using ICT enhances employability for students in the future.	D	DA	AA	A

In this study, ICT refers to generic software applications + specific software & websites for language teaching and learning

Perceived ease of use of ICT				
21. I find it easy to use a computer .	D	DA	AA	A
22. I find it easy to use the Internet.	D	DA	AA	A
23. I find it easy to use ICT in lesson preparation.	D	DA	AA	A
24. I find it easy to use ICT in language teaching in the classroom.	D	DA	AA	A
25. I find it easy to use ICT to share my teaching experiences with others.	D	DA	AA	A
26. I find it easy to train myself how to use ICT in language teaching.	D	DA	AA	A
Modes of teaching				
27. I feel comfortable with the face-to-face teaching mode and do not want ICT in my teaching.	D	DA	AA	A
28. I believe that teaching with ICT is more enjoyable than teaching without ICT.	D	DA	AA	A
29. Teaching languages totally online is appropriate for HANU.	D	DA	AA	A
30. Face-to-face teaching blended with online teaching is appropriate for HANU.	D	DA	AA	A
Experiences of ICT use in teaching	D	DA	AA	A
31. I have no time to learn how to use ICT.	D	DA	AA	A
32. It is very time consuming to use ICT in lesson preparation.	D	DA	AA	A
33. It is expensive to use ICT in teaching.	D	DA	AA	A
34. I believe that ICT increases workloads for teachers.	D	DA	AA	A
35. I cannot control the content of materials downloaded from the Internet.	D	DA	AA	A
36. I have difficulty in classroom management when using ICT.	D	DA	AA	A
37. I have had negative experiences with using ICT in classrooms before.	D	DA	AA	A
38. I have succeeded in using ICT in teaching	D	DA	AA	A
39. Technical problems often happen and waste a lot of time in lessons.	D	DA	AA	A
40. The speed of Internet connection at HANU discourages teachers from using ICT.	D	DA	AA	A
41. Assessment & testing practices at HANU are still not ICT-based.	D	DA	AA	A
42. The Internet easily distracts students from their studies.	D	DA	AA	A
43. ICT would facilitate students' violation of intellectual property rights.	D	DA	AA	A
44. ICT has been integrated into the current curriculum at the departmental level at HANU.	D	DA	AA	A
Access to equipment				
45. Teachers have limited access to HANU computers.	D	DA	AA	A
46. Teachers have to share HANU computers with others.	D	DA	AA	A
47. Only some classrooms at HANU are equipped with computers and Internet connection.	D	DA	AA	A
48. HANU computers are concentrated in computer labs and in the library.	D	DA	AA	A
49. HANU computers rarely have technical problems.	D	DA	AA	A
50. Most HANU computers have software that I can use for language teaching.	D	DA	AA	A
51. Computer software is updated by HANU on a regular basis.	D	DA	AA	A
Support for ICT use				
52. ICT training is customised according to the level of ICT skills of HANU teachers.	D	DA	AA	A
53. The content of ICT training courses at HANU meets my need.	D	DA	AA	A
54. The frequency of ICT training courses at HANU meets my need.	D	DA	AA	A
55. I cannot resolve technical problems when they occur.	D	DA	AA	A
56. At HANU, technical problems in using ICT in classroom are often solved fast.	D	DA	AA	A
57. I receive strong support for ICT use from HANU leaders.	D	DA	AA	A
58. I receive strong support for ICT use from the leaders of my Department/Centre.	D	DA	AA	A
59. HANU has an official document guiding the use of ICT in teaching and learning.	D	DA	AA	A
60. The official ICT guidelines have been well disseminated to all staff in HANU.	D	DA	AA	A
61. At HANU there is a culture of sharing experiences in ICT use in language teaching.	D	DA	AA	A

14. Are you aware of any other <u>enabling factors</u> for ICT use in your teaching at HANU? (Please describe them)

……

……

……

15. Are you aware of any other <u>inhibiting factors</u> for ICT use in your teaching at HANU? (Please describe them)

……

……

……

……

In this study, ICT refers to generic software applications + specific software & websites for language teaching and learning

Appendix 1

16. I would be more likely to use ICT in my teaching if:

Please circle your choice	Disagree	Disagree a little	Agree a little	Agree
1. I had access to more computers in my classes.	D	DA	AA	A
2. I had access to LCD projectors in my classes.	D	DA	AA	A
3. I had access to interactive whiteboards in my classes.	D	DA	AA	A
4. I had access to the Internet in my classrooms.	D	DA	AA	A
5. The speed of Internet connection in my classrooms was faster.	D	DA	AA	A
6. I had up-to-date information about good practices for ICT use in my subject areas.	D	DA	AA	A
7. I received more professional development about how to use ICT in teaching.	D	DA	AA	A
8. I received more technical support.	D	DA	AA	A
9. I was publicly praised for using ICT in teaching.	D	DA	AA	A
10. I was given financial incentives.	D	DA	AA	A
11. I had a chance to be promoted to a higher position because of my ICT use in teaching.	D	DA	AA	A
12. I had more evidence for the usefulness of ICT in my teaching area.	D	DA	AA	A
13. My teaching workload involved a maximum of 3 days a week at HANU.	D	DA	AA	A
14. I had more time to learn how to make full use of ICT in teaching.	D	DA	AA	A
15. I received more support from the HANU leaders.	D	DA	AA	A
16. I received more support from the leaders of my department/centre.	D	DA	AA	A
17. Others: *(please specify)*				
	D	DA	AA	A

PART 5 - GOOD PRACTICES OF ICT USE IN LANGUAGE TEACHING AT HANU

17. Please select two (2) subjects or skills (which you know best) from the list below and make 1 or 2 suggestions for the use of ICT in teaching these subjects/skills better in the future.

Listening,	Speaking,	Reading,	Writing,	Pronunciation,
Vocabulary,	Grammar,	Literature,	Interpreting,	Translation,
Phonetics,	Lexicology,	Cultures & Civilisation,		Others *(please specify)*

Subject/ Skill	Suggestions for ICT use in teaching these subjects/skills better at HANU in the future
1	
2	

NOTE: Your further suggestions can be emailed to: thuict@gmail.com

18. Please provide the names of two teachers who are very good at using ICT in teaching in your Department/Centre:

1) …… 2) ……

19. Would you like to add anything else about ICT use in teaching foreign languages at HANU *(e.g. about HANU computers, internet, ICT use in teaching languages, ICT training, ICT policy, enablers and/or inhibitors of ICT use at HANU, etc.)***?**

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PART 6 - DEMOGRAPHICS - BACKGROUND

20. Your age: _____ **21. Sex**: ❒ Male ❒ Female

22. Place of work in HANU: *Please tick (✓) the appropriate box below.*

❒ English Department	❒ French Department	❒ Russian Department	❒ Chinese Department
❒ Dept of Foundation Studies	❒ Japanese Department	❒ Italian Department	❒ German Department
❒ Portuguese Division	❒ In-service Department	❒ Korean Department	❒ Spanish Department
❒ Dept of Vietnamese Studies	❒ Vietnamese Lang Centre	❒ Distance Education. Centre	❒ International Education Centre

23. Current position:

❒ Dean	❒ Deputy Dean	❒ Head of Section	❒ Deputy Head of Section	
❒ Director of Centre	❒ Deputy Director of Centre	❒ Senior lecturer	❒ Lecturer	❒ Tutor

24. How are you currently employed by HANU? ❒ Tenured ❒ Contracted

25. How many years have you been teaching at HANU? *Please tick (✓) the appropriate box below.*

❒ <5 years ❒ >5 years – 10 years ❒ >10 years – 15 years ❒ >15 years – 20 years ❒ >20 years

26. On average, how many hours/week do you have to teach at HANU? _____ hours/week.

27. How often do you use the following teaching mode? *Please circle your choice.*

Teaching mode \ Frequency	Never 0%	Rarely around 10%	Sometimes around 40%	Often around 70%	Always around 90%
27.1 Face-to-face teaching	N	R	S	O	A
27.2 Online teaching	N	R	S	O	A
27.3 Others: *(Please specify)*	N	R	S	O	A

28. I would like to invite you to a follow-up interview from 20 September to 14 October 2010, would you be willing to participate? *Please tick (✓) the appropriate box below.*

❒ NO

❒ YES, I can be contacted on:

Telephone: ……

Email: ……

Please indicate a possible time/date for an interview:

Time: ……., Date: ……../……../2010

Tentative venue: at HANU, specific venue will be confirmed later.

Upon completion of this survey,

Please leave it with the Admin Assistant in your Department/Centre.

THANK YOU VERY MUCH FOR YOUR COOPERATION & SUPPORT!

If you need any further information, please contact:

- **Research student:** **Xuan Thu Dang**
- **Supervisors:** **Dr. Howard Nicholas & Prof. Ramon Lewis**
- **Email**: **thuict@gmail.com**

Survey questionnaire – Vietnamese:

LA TROBE UNIVERSITY

KHẢO SÁT VỀ ỨNG DỤNG
CÔNG NGHỆ THÔNG TIN, TRUYỀN THÔNG (ICT)
TRONG GIẢNG DẠY NGOẠI NGỮ TẠI TRƯỜNG ĐẠI HỌC HÀ NỘI

Ngày 20 tháng 8 năm 2010

Khảo sát này là một phần trong đề tài nghiên cứu tiến sĩ của nghiên cứu sinh **Đặng Xuân Thu – Khoa tiếng Anh**, về ứng dụng công nghệ thông tin, truyền thông trong giảng dạy ngoại ngữ tại Trường Đại học Hà Nội (**HANU**). Tác giả xin cảm ơn phần trả lời của đồng nghiệp **giáo viên** đối với các câu hỏi dưới đây. Mọi thông tin trong bản khảo sát này sẽ được giữ kín và chỉ dùng vào mục đích nghiên cứu. Trả lời các câu hỏi này ước tính hết khoảng 30 phút. **Anh/chị làm ơn giúp trả lời khảo sát trong vòng một hoặc hai tuần kể từ ngày nhận**, sau đó cho vào phong bì gửi kèm theo đây, dán kín, gửi lại cho Trợ lý giáo vụ của đơn vị anh/chị. **Xin chân thành cảm ơn sự cộng tác và giúp đỡ của anh/chị.**

PHẦN 1 –CƠ SỞ HẠ TẦNG, THIẾT BỊ

1. Tại HANU anh/chị có thể sử dụng những thiết bị nào dưới đây để dạy học trên lớp?
Có thể đánh dấu (✓) vào một hoặc nhiều ô dưới đây nếu phù hợp.

❒ Máy tính để bàn
❒ Máy chiếu đa năng LCD
❒ Máy tính xách tay
❒ Bảng trắng tương tác với máy tính *(interactive white board)*
❒ Internet
❒ Phòng máy tính
❒ Thiết bị khác: *(nêu cụ thể)*

……

2. Khi soạn bài và/hoặc giảng dạy, anh/chị có thường xuyên sử dụng máy tính và internet không?

Khoanh tròn sự lựa chọn	**Không bao giờ = 0%**	**Hiếm khi** Khoảng **10%**	**Thỉnh thoảng** Khoảng **40%**	**Thường xuyên** Khoảng **70%**	**Luôn Luôn** Khoảng **90%**
Sử dụng máy tính ở nhà	KBG	HK	TT	TX	LL
Sử dụng Internet ở nhà	KBG	HK	TT	TX	LL
Sử dụng máy tính ở HANU	KBG	HK	TT	TX	LL
Sử dụng Internet ở HANU	KBG	HK	TT	TX	LL

3. Anh/chị cho nhận xét về … *(Khoanh tròn sự lựa chọn)*

	Không có	Chậm hơn nhiều so với mong đợi	Chậm hơn mong đợi	Như mong đợi	Nhanh hơn mong đợi	Nhanh hơn nhiều so với mong đợi
Internet ở nhà	KC	CHNSVMD	CHMD	NMD	NHMD	NHNSVMD
Máy tính ở nhà	KC	CHNSVMD	CHMD	NMD	NHMD	NHNSVMD
Internet ở HANU	KC	CHNSVMD	CHMD	NMD	NHMD	NHNSVMD
Máy tính ở HANU	KC	CHNSVMD	CHMD	NMD	NHMD	NHNSVMD

PHẦN 2 - TẬP HUẤN ICT TẠI HANU

4. Anh/chị học kỹ năng ICT dưới hình thức nào? *Có thể đánh dấu (✓) vào một hoặc nhiều ô phù hợp.*

❒ Tự học
❒ Khoá đào tạo ICT căn bản do HANU tổ chức
❒ Học hỏi từ đồng nghiệp tại HANU
❒ Các khoá học sử dụng phần mềm cụ thể do HANU tổ chức
❒ Hình thức khác: *(nêu cụ thể)*

……
……

5. Anh/chị đã từng tham gia khoá tập huấn sử dụng ICT do HANU tổ chức không?
❒ Có *(xin tiếp tục trả lời Câu 6)* ❒ Không *(xin chuyển tiếp sang Câu 8)*

Trong nghiên cứu này, thuật ngữ ICT được hiểu là ứng dụng máy tính + Internet + phần mềm thông dụng + phần mềm và trang web phục vụ cho việc dạy và học ngoại ngữ.

6. Trong 2 năm qua, anh/chị được HANU tập huấn về kỹ năng ICT tổng số là bao nhiêu giờ?
❒ không nhớ ❒ 1-5 giờ ❒ 6-10 giờ ❒ 11-15 giờ ❒ 16-20 giờ ❒ hơn 20 giờ

7. Anh/chị đã học nội dung gì trong khoá tập huấn ICT của HANU? *Có thể đánh dấu (✓)vào một hoặc nhiều ô.*
❒ Soạn thảo văn bản ❒ Sử dụng Excel ❒ Sử dụng Powerpoint ❒ Soạn bài giảng điện tử
❒ Kỹ năng tìm thông tin trên Internet ❒ Xử lý âm thanh ❒ Xử lý video ❒ Nội dung khác: *(nêu cụ thể)*

……

……

PHẦN 3 - ỨNG DUNG ICT TRONG GIẢNG DAY NGOẠI NGỮ TẠI HANU

8. Anh/chị có ứng dụng ICT khi giảng dạy ngoại ngữ không? *Đánh dấu (✓) vào ô tương ứng.*

❒ **CÓ ứng dụng ICT** **Nếu trả lời CÓ** - xin cho biết **một lý do chính** tại sao	❒ **KHÔNG ứng dụng ICT** **Nếu trả lời KHÔNG** - xin cho biết **một lý do chính** tại sao không

9. Xin cho biết mức độ tự tin của anh/chị khi ứng dụng ICT vào giảng dạy. *Đánh dấu (✓) vào ô tương ứng.*
❒ Không tự tin ❒ Khá tự tin ❒ Tự tin ❒ Rất tự tin

10. Xin cho biết mức độ thành thạo của anh/chị khi ứng dụng ICT vào giảng dạy. *Đánh dấu (✓) vào ô tương ứng.*
❒ Không thành thạo ❒ Khá thành thạo ❒ Thành thạo ❒ Rất thành thạo

11. Hãy chọn hai (2) môn học/kỹ năng mà anh chị thành thạo nhất từ danh sách trong ô dưới đây, rồi cho biết anh/ chị ứng dụng ICT như thế nào trong việc giảng dạy các môn học/kỹ năng đó.
Nếu anh/chị không ứng dụng ICT, xin chuyển sang Phần 4.

Nghe	Nói	Đọc	Viết	Phát âm
Từ vựng	Ngữ pháp	Văn học	Dịch nói	Dịch viết
Ngữ âm học	Từ vựng học	Văn hoá & Văn minh		Khác *(nêu cụ thể)*

Tên môn học/ kỹ năng	**Phần mềm hoặc trang web tôi đã sử dụng hoặc có nghe nói và muốn giới thiệu với mọi người**
1	
2	

GHI CHÚ: Anh/chị có thể kiểm tra lại phần đánh dấu bookmark các trang web ưa thích trong máy tính của mình rồi email những trang web đề xuất tới địa chỉ: thuict@gmail.com. Nếu không đủ chỗ viết, anh/chị có thể viết thêm vào một tờ giấy mới.

Trong nghiên cứu này, thuật ngữ ICT được hiểu là ứng dụng máy tính + Intenet + phần mềm thông dụng + phần mềm và trang web phục vụ cho việc dạy và học ngoại ngữ.

12. Đánh dấu (✓) vào cột tương ứng hoặc để trống nếu anh/chị KHÔNG sử dụng phần mềm/trang web đó.

Tôi sử dụng phần mềm/trang web dưới đây (thí dụ):	Để soạn bài trước khi lên lớp	Để dạy học trên lớp	Mức độ dễ sử dụng			Mức độ hữu ích		
			Khó ⇔		Dễ	Không hữu ích ⇔		rất hữu ích
1. Chương trình soạn thảo văn bản (TD: MS Word)	❒	❒	❒	❒	❒	❒	❒	❒
2. Chương trình Excel	❒	❒	❒	❒	❒	❒	❒	❒
3. Chương trình Powerpoint	❒	❒	❒	❒	❒	❒	❒	❒
4. Thư điện tử - Email (TD: Gmail, Yahoo mail)	❒	❒	❒	❒	❒	❒	❒	❒
5. Chat thoại - Voice chat (TD: Yahoo Messenger)	❒	❒	❒	❒	❒	❒	❒	❒
6. Hội thảo có hình ảnh - Video conferencing (TD: Skype)	❒	❒	❒	❒	❒	❒	❒	❒
7. Trình duyệt Web (TD: Internet Explorer)	❒	❒	❒	❒	❒	❒	❒	❒
8. Phần mềm ghi âm (TD: GoldWave, JetAudio)	❒	❒	❒	❒	❒	❒	❒	❒
9. Xử lý âm thanh (TD: GoldWave, Sound Forge)	❒	❒	❒	❒	❒	❒	❒	❒
10. Làm phim (TD: Windows Movie Maker, Ulead)	❒	❒	❒	❒	❒	❒	❒	❒
11. Xử lý video (TD: Cyberlink)	❒	❒	❒	❒	❒	❒	❒	❒
12. Xử lý ảnh (TD: Photoshop)	❒	❒	❒	❒	❒	❒	❒	❒
13. Soạn bài giảng điện tử (TD: LectureMaker)	❒	❒	❒	❒	❒	❒	❒	❒
14. Tìm kiếm thông tin trên internet (TD: Google)	❒	❒	❒	❒	❒	❒	❒	❒
15. Download tài liệu từ internet (TD: Flashget)	❒	❒	❒	❒	❒	❒	❒	❒
16. Chương trình "Hot Potatoes"	❒	❒	❒	❒	❒	❒	❒	❒
17. Phần mềm ghi lại màn hình dưới dạng video	❒	❒	❒	❒	❒	❒	❒	❒
18. Chương trình "VoiceThread"	❒	❒	❒	❒	❒	❒	❒	❒
19. Chương trình vẽ sơ đồ tư duy (TD: Mind-mapping)	❒	❒	❒	❒	❒	❒	❒	❒
20. Chương trình podcast (TD: podomatic)	❒	❒	❒	❒	❒	❒	❒	❒
21. Blog phục vụ học tập (TD: The English Blog)	❒	❒	❒	❒	❒	❒	❒	❒
Phần mềm/trang web khác: (*Nêu cụ thể*)								
22.	❒	❒	❒	❒	❒	❒	❒	❒
23.	❒	❒	❒	❒	❒	❒	❒	❒

GHI CHÚ: Nếu không đủ chỗ viết, anh/chị có thể viết thêm vào một tờ giấy mới hoặc email ứng dụng của mình tới địa chỉ: thuict@gmail.com.

PHẦN 4 –NHÂN TỐ TAO THUẬN LỢI HOẶC CẢN TRỞ ỨNG DUNG ICT VÀO GIẢNG DẠY TẠI HANU

13. Về nhân tố tạo thuận lợi hoặc cản trở ứng dụng ICT trong giảng dạy ngoại ngữ tại HANU, xin anh/chị cho biết mức độ đồng ý hoặc không đồng ý đối với những câu dưới đây.

Khoanh tròn một lựa chọn cho mỗi câu dưới đây.	Không đồng ý	Hơi không đồng ý	Hơi Đồng ý	Đồng ý
Lý do ứng dụng ICT				
1. Tôi ứng dụng ICT trong giảng dạy do nhận thức được lợi ích của ICT.	KĐY	HKĐY	HĐY	ĐY
2. Tôi ứng dụng ICT trong giảng dạy do sở thích cá nhân.	KĐY	HKĐY	HĐY	ĐY
3. Tôi ứng dụng ICT trong giảng dạy do sức ép từ phía sinh viên.	KĐY	HKĐY	HĐY	ĐY
4. Tôi ứng dụng ICT trong giảng dạy do sức ép từ phía đồng nghiệp giáo viên.	KĐY	HKĐY	HĐY	ĐY
5. Tôi ứng dụng ICT trong giảng dạy vì phải làmm theo chỉ thị của cấp trên của tôi.	KĐY	HKĐY	HĐY	ĐY
Nhận thức về lợi ích của ICT				
6. Tôi tin rằng ICT rất hữu ích cho việc dạy ngoại ngữ.	KĐY	HKĐY	HĐY	ĐY
7. ICT giúp tôi giảng dạy tốt hơn.	KĐY	HKĐY	HĐY	ĐY
8. Ứng dụng ICT giúp tôi làm việc năng suất hơn.	KĐY	HKĐY	HĐY	ĐY
9. ICT giúp tôi nâng cao nghiệp vụ chuyên môn.	KĐY	HKĐY	HĐY	ĐY
10. ICT giúp tôi chia sẻ kinh nghiệm giảng dạy với những giáo viên khác.	KĐY	HKĐY	HĐY	ĐY
11. ICT giúp tôi soạn bài hay hơn.	KĐY	HKĐY	HĐY	ĐY
12. Bài giảng soạn bằng ICT có thể sử dụng lại nhiều lần.	KĐY	HKĐY	HĐY	ĐY
13. ICT giúp tôi truy cập dễ dàng nhiều nguồn tài nguyên giảng dạy trên internet.	KĐY	HKĐY	HĐY	ĐY
14. Email là công cụ hữu hiệu để tôi liên lạc với đồng nghiệp và sinh viên.	KĐY	HKĐY	HĐY	ĐY
15. ICT giúp sinh viên nâng cao kết quả học tập.	KĐY	HKĐY	HĐY	ĐY
16. ICT giúp sinh viên hứng thú học tập hơn.	KĐY	HKĐY	HĐY	ĐY
17. ICT giúp sinh viên hiểu bài sâu hơn.	KĐY	HKĐY	HĐY	ĐY

Trong nghiên cứu này, thuật ngữ ICT được hiểu là ứng dụng máy tính + Intenet + phần mềm thông dụng + phần mềm và trang web phục vụ cho việc dạy và học ngoại ngữ.

18. ICT giúp sinh viên chủ động trong học tập.	KĐY	HKĐY	HĐY	ĐY
19. ICT giúp sinh viên thực hành các kỹ năng tiếng mọi lúc, mọi nơi.	KĐY	HKĐY	HĐY	ĐY
20. ICT tạo cho sinh viên khả năng xin việc tốt hơn trong tương lai.	KĐY	HKĐY	HĐY	ĐY
Nhận thức về sự dễ dàng khi ứng dụng ICT				
21. Tôi thấy sử dụng máy tính rất dễ.	KĐY	HKĐY	HĐY	ĐY
22. Tôi thấy sử dụng Internet rất dễ.	KĐY	HKĐY	HĐY	ĐY
23. Tôi thấy rất dễ ứng dụng ICT để soạn bài.	KĐY	HKĐY	HĐY	ĐY
24. Tôi thấy rất dễ ứng dụng ICT để dạy học trên lớp.	KĐY	HKĐY	HĐY	ĐY
25. Tôi thấy rất dễ ứng dụng ICT để chia sẻ kinh nghiệm giảng dạy với mọi người.	KĐY	HKĐY	HĐY	ĐY
26. Tôi thấy rất dễ tự học cách ứng dụng ICT vào giảng dạy.	KĐY	HKĐY	HĐY	ĐY
ICT trong giảng dạy				
27. Tôi thấy thoải mái với phương thức dạy học gặp mặt trực tiếp học viên trên lớp do đó không muốn ứng dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
28. Tôi tin rằng giảng dạy có ứng dụng ICT thú vị hơn giảng dạy không ứng dụng ICT.	KĐY	HKĐY	HĐY	ĐY
29. Dạy ngoại ngữ hoàn toàn thông qua mạng Internet là phương thức phù hợp với HANU.	KĐY	HKĐY	HĐY	ĐY
30. Dạy học gặp mặt trực tiếp trên lớp kết hợp với dạy học trực tuyến là phương thức phù hợp với HANU.	KĐY	HKĐY	HĐY	ĐY
Kinh nghiệm ứng dụng ICT trong giảng dạy				
31. Tôi không có thời gian học cách ứng dụng ICT.	KĐY	HKĐY	HĐY	ĐY
32. Ứng dụng ICT vào soạn bài tốn rất nhiều thời gian.	KĐY	HKĐY	HĐY	ĐY
33. Ứng dụng ICT vào giảng dạy thật tốn kém.	KĐY	HKĐY	HĐY	ĐY
34. Tôi tin rằng ICT làm tăng khối lượng công việc của giáo viên.	KĐY	HKĐY	HĐY	ĐY
35. Tôi không kiểm soát được nội dung của tài liệu tải từ mạng internet xuống.	KĐY	HKĐY	HĐY	ĐY
36. Tôi gặp khó khăn trong việc quản lý lớp học khi ứng dụng ICT.	KĐY	HKĐY	HĐY	ĐY
37. Tôi đã từng thất bại khi ứng dụng ICT vào dạy học và cảm thấy mất thể diện.	KĐY	HKĐY	HĐY	ĐY
38. Tôi đã ứng dụng thành công ICT vào dạy học.	KĐY	HKĐY	HĐY	ĐY
39. Trục trặc kỹ thuật thường xảy ra và làm phí nhiều thời giờ của buổi học.	KĐY	HKĐY	HĐY	ĐY
40. Tốc độ đường truyền internet tại HANU chậm, làm nản lòng người ứng dụng ICT.	KĐY	HKĐY	HĐY	ĐY
41. Cách kiểm tra, đánh giá tại HANU vẫn dựa trên giấy, chưa sử dụng ICT.	KĐY	HKĐY	HĐY	ĐY
42. Internet dễ làm sinh viên sao nhãng học tập.	KĐY	HKĐY	HĐY	ĐY
43. Nhờ có ICT, sinh viên dễ vi phạm quyền sở hữu trí tuệ hơn trước.	KĐY	HKĐY	HĐY	ĐY
44. ICT đã được lồng ghép vào chương trình giảng dạy chi tiết ở cấp Khoa/Trung tâm.	KĐY	HKĐY	HĐY	ĐY
Tiếp cận trang thiết bị				
45. Giáo viên được sử dụng máy tính của HANU một cách hạn chế.	KĐY	HKĐY	HĐY	ĐY
46. Giáo viên phải dùng chung máy tính của HANU với nhiều người khác.	KĐY	HKĐY	HĐY	ĐY
47. Chỉ có một số lớp học tại HANU được trang bị máy tính và kết nối internet.	KĐY	HKĐY	HĐY	ĐY
48. Máy tính của HANU được tập trung ở phòng máy tính và thư viện.	KĐY	HKĐY	HĐY	ĐY
49. Máy tính của HANU ít bị trục trặc kỹ thuật.	KĐY	HKĐY	HĐY	ĐY
50. Hầu hết máy tính của HANU có phần mềm tôi có thể dung để dạy ngoại ngữ.	KĐY	HKĐY	HĐY	ĐY
51. Phần mềm máy tính thường xuyên được HANU cập nhật.	KĐY	HKĐY	HĐY	ĐY
Hỗ trợ ứng dụng ICT				
52. Tập huấn ứng dụng ICT được tổ chức tuỳ theo trình độ ICT của giáo viên.	KĐY	HKĐY	HĐY	ĐY
53. Nội dung khoá tập huấn ICT tại HANU đáp ứng được nhu cầu của tôi.	KĐY	HKĐY	HĐY	ĐY
54. Tần suất tổ chức khoá tập huấn ICT tại HANU đáp ứng được nhu cầu của tôi.	KĐY	HKĐY	HĐY	ĐY
55. Tôi không biết cách giải quyết khi trục trặc kỹ thuật xảy ra.	KĐY	HKĐY	HĐY	ĐY
56. Tại HANU, trục trặc kỹ thuật khi ứng dụng ICT trên lớp được giải quyết rất nhanh.	KĐY	HKĐY	HĐY	ĐY
57. Tôi được lãnh đạo HANU hỗ trợ mạnh mẽ việc ứng dụng ICT vào giảng dạy.	KĐY	HKĐY	HĐY	ĐY
58. Tôi được lãnh đạo Khoa/đơn vị hỗ trợ mạnh mẽ việc ứng dụng ICT vào giảng dạy.	KĐY	HKĐY	HĐY	ĐY
59. HANU có văn bản chính thức hướng dẫn sử dụng ICT trong giảng dạy và học tập.	KĐY	HKĐY	HĐY	ĐY
60. Văn bản về ứng dụng ICT đã được phổ biến tới toàn thể cán bộ của HANU.	KĐY	HKĐY	HĐY	ĐY
61. HANU có văn hoá chia sẻ thông tin về ứng dụng ICT vào giảng dạy ngoại ngữ.	KĐY	HKĐY	HĐY	ĐY

14. Anh/chị còn thấy nhân tố nào khác <u>tạo thuận lợi</u> cho việc ứng dụng ICT vào giảng dạy tại HANU không?

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Trong nghiên cứu này, thuật ngữ ICT được hiểu là ứng dụng máy tính + Intenet + phần mềm thông dụng + phần mềm và trang web phục vụ cho việc dạy và học ngoại ngữ.

15. Anh/chị còn thấy nhân tố nào khác <u>gây trở ngại</u> cho việc ứng dụng ICT vào giảng dạy tại HANU không?

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16. Tôi sẽ ứng dụng ICT nhiều hơn trong giảng dạy tại HANU nếu:

<u>Khoanh tròn</u> lựa chọn của anh/chị.	Không đồng ý	Hơi không đồng ý	Hơi Đồng ý	Đồng ý
1. Trong lớp của tôi có nhiều máy tính hơn.	KĐY	HKĐY	HĐY	ĐY
2. Trong lớp của tôi có máy chiếu đa năng (LCD projector).	KĐY	HKĐY	HĐY	ĐY
3. Trong lớp của tôi có bảng trắng tương tác với máy tính *(interactive white board)*.	KĐY	HKĐY	HĐY	ĐY
4. Lớp học của tôi có kết nối Internet.	KĐY	HKĐY	HĐY	ĐY
5. Tốc độ đường truyền Internet trong lớp của tôi nhanh hơn.	KĐY	HKĐY	HĐY	ĐY
6. Tôi được cập nhật thông tin về cách ứng dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
7. Tôi được tập huấn nhiều hơn về ứng dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
8. Tôi được hỗ trợ kỹ thuật nhiều hơn.	KĐY	HKĐY	HĐY	ĐY
9. Tôi được tuyên dương trước tập thể về việc ứng dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
10. Tôi được khuyến khích về tài chính khi sử dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
11. Tôi có cơ hội thăng chức nhờ sử dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
12. Tôi có thêm bằng chứng về hiệu quả ứng dụng ICT trong giảng dạy.	KĐY	HKĐY	HĐY	ĐY
13. Khối lượng giảng dạy của tôi tối đa là 3 ngày/tuần tại HANU.	KĐY	HKĐY	HĐY	ĐY
14. Tôi có thêm thời gian để học cách ứng dụng ICT vào giảng dạy.	KĐY	HKĐY	HĐY	ĐY
15. Tôi được lãnh đạo HANU hỗ trợ nhiều hơn nữa đối với việc ứng dụng ICT.	KĐY	HKĐY	HĐY	ĐY
16. Tôi được lãnh đạo Khoa/Trung tâm hỗ trợ nhiều hơn nữa đối với ứng dụng ICT.	KĐY	HKĐY	HĐY	ĐY
17. Lý do khác: *(nêu cụ thể)*				
	KĐY	HKĐY	HĐY	ĐY

<u>PHẦN 5 - CÁCH LÀM TỐT VỀ ỨNG DUNG ICT TRONG GIẢNG DAY NGOAI NGỮ TAI HANU</u>

17. Anh/chị hãy lựa chọn <u>hai (2) môn học/kỹ năng</u> (mà anh/chị thành thạo nhất) từ danh sách dưới đây, rồi cho biết <u>1-2 đề xuất</u> về khả năng ứng dụng ICT vào giảng dạy môn học/kỹ năng này trong tương lai.

Nghe	Nói	Đọc	Viết	Phát âm
Từ vựng	Ngữ pháp	Văn học	Dịch nói	Dịch viết
Ngữ âm	Từ vựng học	Văn hoá & Văn minh		Khác *(nêu cụ thể)*

Môn học/ kỹ năng	Đề xuất của anh/chị về việc ứng dụng ICT để giảng dạy môn học/kỹ năng này tốt hơn trong tương lai
1	

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2	

GHI CHÚ: Anh/chị có thể gửi email những đề xuất của mình tới địa chỉ: thuict@gmail.com

18. Xin cho biết tên của hai giáo viên thành thạo ứng dụng ICT trong giảng dạy tại đơn vị của anh/chị:

1) …… 2) ……

19. Anh/chị có thêm bất kỳ ý kiến hoặc bình luận gì nữa không *(TD: về tình hình máy tính, internet, ứng dụng ICT trong giảng dạy ngoại ngữ, tập huấn sử dụng ICT, chính sách sử dụng ICT tại HANU, hỗ trợ của lãnh đạo cấp Khoa, cấp Trường đối với việc ứng dụng ICT tại HANU, yếu tố tạo thuận lợi/cản trở việc ứng dụng ICT, v.v…)***?**

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PHẦN 6 - THÔNG TIN CÁ NHÂN

20. Tuổi: _____ **21. Giới tính**: ❒ Nam ❒ Nữ

22. Đơn vị công tác trong HANU: *Đánh dấu (✓) vào ô tương ứng dưới đây.*

❒ Khoa tiếng Anh	❒ Khoa tiếng Pháp	❒ Khoa tiếng Nga	❒ Khoa tiếng Trung
❒ Khoa Đại cương	❒ Khoa tiếng Nhật	❒ Khoa tiếng Italia	❒ Khoa tiếng Tây Ban Nha
❒ Khoa tiếng Đức	❒ Khoa Tại chức	❒ Khoa tiếng Hàn Quốc	❒ Bộ môn Bồ Đào Nha
❒ Khoa Việt Nam học	❒ Trung tâm tiếng Việt	❒ Trung tâm Đào tạo từ xa	❒ Trung tâm Giáo dục quốc tế

23. Chức danh/chức vụ hiện nay:

❒ Trưởng Khoa ❒ Phó Trưởng Khoa ❒ Trưởng Bộ môn ❒ Phó Trưởng Bộ môn

❒ Giám đốc Trung tâm ❒ Phó Giám đốc Trung tâm ❒ Giảng viên chính ❒ Giảng viên ❒ Trợ giảng

24. Anh/chị hiện nay là cán bộ biên chế hay hợp đồng của HANU? ❒ Biên chế ❒ Hợp đồng

25. Anh/chị giảng dạy cho HANU được bao nhiêu năm? *Đánh dấu (✓) vào ô lựa chọn.*

❒ <5 năm ❒ >5 năm – 10 năm ❒ >10 năm – 15 năm ❒ >15 năm – 20 năm ❒ >20 năm

26. Anh/chị dạy học trung bình bao nhiêu giờ/tuần tại HANU? _____ giờ /tuần.

27. Xin anh/chị cho biết mức độ thường xuyên khi sử dụng phương thức giảng dạy dưới đây.
Khoanh tròn lựa chọn.

Phương thức giảng dạy / Tần suất	Không bao giờ = 0%	Hiếm khi Khoảng 10%	Thỉnh thoảng Khoảng 40%	Thường xuyên Khoảng 70%	Luôn Luôn Khoảng 90%
Giảng dạy trực tiếp tại lớp	KBG	HK	TT	TX	LL
Giảng dạy trực tuyến qua mạng	KBG	HK	TT	TX	LL
Phương thức khác: *(nêu cụ thể)*	KBG	HK	TT	TX	LL

Trong nghiên cứu này, thuật ngữ ICT được hiểu là ứng dụng máy tính + Intenet + phần mềm thông dụng + phần mềm và trang web phục vụ cho việc dạy và học ngoại ngữ.

28. Tôi muốn mời anh/chị tham gia phỏng vấn trong khoảng thời gian từ 20/9/2010 đến 14/10/2010, anh/chị có đồng ý nhận lời không? *Đánh dấu (✓) vào ô lựa chọn.*

❒ KHÔNG

❒ CÓ, nếu nhận lời, xin cho biết thêm thông tin để tiện liên lạc ngày, giờ, địa điểm phỏng vấn:

Điện thoại: ……

Email: ……

Địa điểm dự kiến: tại HANU, sẽ thông báo địa điểm cụ thể sau.

Xin cho biết ngày, giờ (*dự kiến*) anh/chị có thể tham gia phỏng vấn

Ngày: ……/……/2010 Giờ: ……

Sau khi hoàn thành trả lời bản khảo sát này,
xin gửi lại cho Trợ lý giáo vụ tại đơn vị của anh/chị.

XIN CHÂN THÀNH CẢM ƠN SỰ CỘNG TÁC VÀ GIÚP ĐỠ CỦA ANH/CHỊ!

Nếu cần thêm thông tin, xin liên hệ:

- Nghiên cứu sinh: Đặng Xuân Thu
- Giáo viên hướng dẫn: TS. Howard Nicholas & GS. Ramon Lewis
- Email: thuict@gmail.com

Trong nghiên cứu này, thuật ngữ ICT được hiểu là ứng dụng máy tính + Intenet + phần mềm thông dụng + phần mềm và trang web phục vụ cho việc dạy và học ngoại ngữ.

Appendix 2: Interview protocols

Three groups of participants:

i) Language teachers (as ICT users);
ii) ICT support staff (as ICT trainers); and
iii) Leadership of Hanoi University (as ICT policy makers)

Main focus:

- How ICT is used in teaching foreign languages at Hanoi University
- Factors influencing language teachers' use of ICT in their teaching at Hanoi University from different perspectives: ICT users (language teachers), ICT trainers (ICT support staff) and ICT policy makers (leadership)

Considerations:

- Listening with no interruption
- Ensuring anonymity of participants
- Prompted questions below are subject to changes to suit contexts and responses of participants

Tentative questions for language teachers

- Are you using ICT in your teaching? Can you give me some examples of how you use it? To teach what skills? What subjects? How often do you use it?
- Which software or applications are you using? To teach what skills/subjects? How are you using them? Can you possibly give me some examples?
- How do you use ICT to prepare for your lessons and to deliver those lessons in the classroom? Can you possibly give me some examples?
- Results from the questionnaire show that teachers face some challenges when they use ICT, for example, lack of access to ICT facilities, slow speed of internet connection, lack of incentives for ICT use and so on. What problems or difficulties do you face when you use ICT in lesson preparation and classroom teaching? Can you possibly give me some example? If there are many challenges or problems as such, why are you still using ICT in your teaching?
- Do you use ICT-prepared lessons in other settings outside Hanoi University? Can you elaborate on that?
- What are some of good uses of ICT in teaching foreign languages which you observe in your department or at the university?
- What do you think of your ICT skills on the rating scale from 1 to 5; 1 meaning very bad and 5 meaning very good? Are you confident in using ICT in your teaching?
- How do pick up ICT skills? Going to ICT training courses organised by Hanoi University? Learning from other colleagues? Learning from your family members? Learning from training courses outside Hanoi University?
- Do you feel any pressure to use ICT in your teaching? From your superiors? From your students? From other sources? What are they?
- Have you read any document about ICT plan or guidelines at Hanoi University? Do you think this kind of document is necessary? Why? (Why not?)
- What has encouraged you to use ICT in your teaching? And what will help you use ICT more in the future? Do you have any suggestions for ICT use in teaching foreign languages at HANU in the future?

Tentative questions for ICT support staff

- Can you possibly tell me about the ICT facilities available at the university, for example the number of desktop computers, laptop computers, interactive white boards, data projectors, computer labs, etc.?
- What about the internet connection and internet speed at HANU at the moment?
- What's your involvement in the ICT training for language teachers at the university? How long is a training session? How often is ICT training organised? How is it organised? What ICT skills are taught? Do you consider levels of ICT skills of individual teachers? What are the contents of recent ICT training courses? How many teachers attended those courses? Which ICT skills and applications are teachers interested in learning? What is the mode of ICT training: face-to-face or online training? Are those training courses recorded and stored online for teachers' revision?
- Which software programs are installed in the university computers? How often are they updated? Which software or application is particularly useful for language teaching? Do you have any plan to install new software in the next few months/years? If yes, what are those new programs?
- What kinds of ICT support are available at the university? What are technical problems which language teachers often face and call you for technical support? How do teachers contact you in case of technical problems in the classroom? How fast is the technical support? Can you please give me a recent example of your technical support?
- What will an ideal ICT infrastructure look like in the next 5 years? Are there any changes in ICT infrastructure you want to suggest to the university leadership? If yes, what are they?

Tentative questions for HANU leadership

- Some teachers say in the questionnaire that they have never seen or read any ICT plan at HANU, what can you say about this? Is there an ICT plan at HANU? Where can teachers find it? What is the vision of ICT use at HANU? What do the university leaders expect from the use of ICT in teaching at the university?
- Many teachers think that more computers should be installed to increase access and to encourage teachers to use ICT in their teaching, how do you respond to those suggestions? Will investment in ICT facilities be a priority of the university?
- How is ICT training is organised? Are teachers consulted on the training content? What is your involvement in organisation of ICT training for teachers?
- Teachers also say that they have to teach many hours per week, consequently they don't have time to attend training. Can you possibly do anything to reduce teachers' workload?
- What kind of leadership support can you possibly provide to facilitate ICT use by teachers of foreign languages?
- Do you receive any complaints from teachers about problems they face during ICT implementation at the university? What are they? How do you respond?
- If a teacher uses ICT well in their teaching, do you have any reward for that teacher? Have you got a system of incentives, rewards or recognition for good use of ICT at the university? If a teacher does not use ICT in teaching, will there be any form of punishment?
- Will ICT be a priority in the next 5-year plan of the university? What do you think is the ideal model of ICT use for Hanoi University?

Appendix 3: Selected quotes from interviews:Vietnamese & English

Different levels of ICT use

#	Vietnamese	English
1	Bộ môn nói thì em hay vào trang web hơn chứ không sử dụng phần mềm nhiều... Các trang web đó cung cấp nhiều tài liệu phù hợp, phong phú, mình có thể chọn và các tài liệu khá là có giá trị. (ID 13)	For speaking skills I use the internet resources more often than computer software... Websites provide many suitable materials and I can choose valuable resources. (ID 13)
2	Đối với các file video thì hiện tại vẫn chỉ là em copy từ trên mạng xuống, tức là download từ trên mạng xuống. Sử dụng một số phần mềm như là RealPlayer có thể dễ dàng download các file video xuống để cho sinh viên xem. Thế còn cũng chưa có một cái thao tác nào gọi là mình can thiệp vào để chỉnh sửa. (ID 30)	For video files I mainly copy from the internet, I mean download from the internet. RealPlayer can easily help download those video files to show to our students. I don't do anything to edit those files. (ID 30)
3	... Để thu thì em dùng RealPlayer hay là phần ứng dụng Windows Media Player để thu hình hoặc là thu âm và khi dạy lại ở trên lớp thì cũng dùng luôn các phần đó. Thế còn trong thực hành tiếng em còn dùng Audacity để cắt, cúp rồi làm chậm các file âm thanh để phục vụ cho các đối tượng sinh viên mới học.Thế còn trong dịch thì cũng chủ yếu dùng RealPlayer và Audacity để cắt. File hình ảnh, xử lý video thì bản thân, em có nghe nhưng em chưa xử lý video để dạy bao giờ. (ID 03)	... For voice recording, I use RealPlayer or Windows Media Player to record video or voice, and I also use those software programs in class. I use Audacity to edit, cut or slow down audio files to suit different groups of students. For interpreting skills, I mainly use RealPlayer and Audacity to edit audio files. I have heard about some video editing software programs but personally I have never used them. (ID 03)
4	Tôi sử dụng phần soạn thảo văn bản để soạn các bài nghe, bài ngữ pháp và soạn câu hỏi, v.v… (ID 09)	I use word processing to prepare for listening activities, grammar exercises and questions, etc. (ID 09)
5	Tôi sử dụng phần soạn thảo văn bản để soạn các dạng bài tập thực hành khác nhau, soạn bài kiểm tra và đề thi như là điền vào chỗ trống, trả lời câu hỏi và ghép cấu, v.v… (ID 12)	I use word processing to prepare for different types of practice exercises, tests and exams such as blank filling, answering questions and matching, etc. (ID 12)
6	Tôi ứng dụng chương trình soạn thảo văn bản word cho sinh viên luyện dịch viết.Tôi sử dụng ứng dụng Word để soạn lại các bài tập dịch cho phù hợp với đối tượng sinh viên khác nhau. (ID 27)	I use MS Word for my students to practise translation skills. I used Word functions to prepare different translation exercises to suit different groups of students. (ID 27)
7	Với sự phát triển của công nghệ thông tin bây giờ thì việc sử dụng máy tính là thường xuyên rồi, ngoài máy tính thì còn có các phần mềm như soạn bài giảng, nhiều lúc đơn giản chỉ là Power Point, hoặc phần mềm để cắt dán file âm thanh, file hình ảnh. (ID 27)	With the rapid development of ICT, computers are frequently used, and apart from computers I use other software programs to prepare for my lessons, sometimes simply PowerPoint or audio or video editing software. (ID 27)
8	Và thông thường thầy, cô cũng chỉ dùng để tải tài liệu vào máy rồi mang đến lớp show cho học sinh thôi. (ID 20)	In general, we, teachers, often download materials onto our laptop computers then show those materials to our students in the classroom. (ID 20)
9	Lúc dạy ở trên lớp thì em cũng sử dụng Powerpoint hoặc là Internet để cho các em tra cứu thông tin, làm các bài tập theo yêu cầu của mình. (ID 10)	In the classroom I often use PowerPoint or use the internet for students to look for information or do exercises according to my instruction. (ID 10)
10	… nếu một âm nào đó bị sai hoặc không chính xác thì có thể truy cập vào các trang web mà có cung cấp về ngữ âm để kiểm tra hoặc cho các em nghe người bản địa nói. (ID 14)	…if any word is mispronounced, we can access a website to check the pronunciation of that word or let students hear how native speakers pronounce that word. (ID 14)

11	Tôi dùng PowerPoint soạn bài về một chủ đề phim nào đó, về nền văn minh của một nước hoặc tạo các hiệu ứng để tập trung sự chú ý vào một số hiện tượng ngữ pháp hoặc từ vựng, v.v… (ID 09)	I use PowerPoint for preparing a lesson about a film topic, about civilisation of a particular country or creating special effects to draw attention to specific grammar items or vocabulary, etc. (ID 09)
12	Khi dạy dịch nói trên lớp cũng như trên phòng luyện tiếng, tôi sử dụng PowerPoint để cung cấp cho sinh viên những ý chính sẽ xuất hiện trong file âm thanh.(ID 27)	During an interpreting lesson in the language lab, I use PowerPoint to provide students with key points which will appear in the audio file that they are going to hear. (ID 27)
13	Ví dụ trong dạy chuyên đề Du lịch: sử dụng PowerPoint để chiếu hình ảnh các địa danh, gắn file audio, videoclip, chèn đường link...; cho sinh viên nhìn hình ảnh (tự động chạy) để tập thuyết trình...Trong giảng dạy Thực hành tiếng: dùng để trình chiếu hình ảnh về văn hóa, những đồ vật, sản phẩm đặc trưng...; những hình ảnh liên quan đến bài giảng để sv luyện tập các mẫu câu hỏi-đáp, kể chuyện, miêu tả... (ID 30)	For example, when I teach the special topic about tourism, I use PowerPoint to show photos of various locations; I insert audio files or video clips or web links into the PowerPoint slides; let students watch the self-running photo slideshow to practise presentation skills. In language practice, I use PowerPoint to show images about things or products representing a particular culture, any images relating to the lecture so that students can practise questions-and-answers, storytelling or description, etc. (ID 30)
14	Thường thì giáo viên chúng em tự mang theo máy tính của mình, tự mang đi cả loa nữa. (ID 16)	We, teachers, usually have to bring our own laptops and speakers to class. (ID 16)
15	Rất đơn giản chẳng hạn như là có thể cho sinh viên, nếu có đường truyền internet trực tiếp, xem các video clip online để các em nghe hiểu, rồi tìm ý chính, sau đó dịch. Rồi có thể lấy các bài báo trực tiếp trên mạng, khai thác trực tiếp với sinh viên. Rồi nếu một âm nào đó bị sai hoặc không chính xác thì có thể truy cập vào các trang web mà có cung cấp về ngữ âm để kiểm tra hoặc cho các em nghe người bản địa nói. (ID 14)	If there is internet connection, very simple, we can let students watch some video clips online for listening comprehension, getting the main ideas and then do interpreting. Furthermore, we can obtain online newspaper articles, use them directly with students. And if any word is mispronounced, we can access a website to check the pronunciation of that word or let students hear how native speakers pronounce that word. (ID 14)
16	Thế rồi học sinh có thể dùng video clip mà giáo viên sử dụng để dùng làm elicitor, anh xem cái đoạn video rồi cho biết cảm tưởng, cho biết sản phẩm giống như xem một đoạn phóng sự trên vô tuyến, sau đó các diễn giả người ta được nói lên cái cảm nghĩ của mình. Đó là cái công cụ phát triển ngôn ngữ. (ID 22)	Students can use video clips shown by teachers to express themselves. They watch video clips, then express views and impressions, for example: watching an excerpt of a TV documentary then expressing their thoughts and opinions. That is the tool for language development. (ID 22)
17	Các em khi mà phát âm nó nhìn vào khẩu hình của người làm mẫu trên video đấy thì nó sẽ khắc phục được tốt hơn.Ngoài ra còn tập đọc các câu dài. Rõ ràng là trên video người ta còn thể hiện được cả dòng chữ giống như là Karaoke… Không chỉ chúng ta nghe thấy âm thanh mà chúng ta còn phải nhìn thấy âm thanh nữa... Còn khi mà học sinh nói thì mình thu lại và mình xếp hai cái khung hình của âm thanh cạnh nhau. Mình có thể nhìn vào cái khung hình ấy mà phân tích...Có evidence thì không phải chỉ học sinh mà ngay cả đồng nghiệp họ cũng thấy rằng những cái phần đấy là học sinh cần luyện... Bây giờ công nghệ, phần mềm của máy tính giúp chúng ta làm việc đó. (ID 22)	When students do pronunciation practice with videos, they can see the speakers and learn better. Moreover, they can practise reading long sentences out loud. Obviously the scripts can appear in the videos just like Karaoke....We not only hear the sound but also see the sound ... when students speak we record their voice, then put the two frames of sound waves next to each other for analysis ... Now with this evidence, not only students but also our colleagues can be aware of the areas which need further practice... Now technology and computer software can help us do that. (ID 22)

18	Tất nhiên một buổi học thì hiệu quả của môn học phụ thuộc rất nhiều vào giáo viên, vào cách diễn đạt cũng như khả năng sư phạm của giáo viên. Nhưng nếu như có phần mềm hay sự hỗ trợ về công nghệ thì buổi học sẽ hứng thú hơn, ví dụ như có thiết bị nghe nhìn, hình ảnh thì sinh viên sẽ thấy hứng thú hơn. Đó là cái động lực cho sinh viên học cũng như cho giáo viên dậy. (ID 16)	Of course the effectiveness of a lesson depends very much on teachers, on their way of expression as well as their pedagogies. However, if a technology or software is used, lessons will be more enjoyable, for example, students will feel more excited with audio-visuals. That is the motivation for students as well as teachers. (ID 16)
19	ICT giúp sinh viên nắm bắt, tiếp thu và cập nhật thông tin một cách nhanh, hiệu quả. (ID 09)	ICT helps students absorb and update information fast and effectively. (ID 09)
20	ICT giúp giáo viên rất nhiều trong việc chuẩn bị bài giảng cũng như giúp giáo viên truyền tải nội dung bài giảng đến sinh viên hiệu quả hơn. (ID 12)	ICT helps teachers a lot in lesson preparation as well as helps teachers transmit lesson content to students more effectively. (ID 12)
21	Cũng tùy xem giáo viên hiểu thuật ngữ "chất lượng" giảng dạy như thế nào nhưng cá nhân tôi nghĩ rằng "có". ICT giúp tôi có được những thông tin đầu vào làm nội dung giảng dạy phục vụ cho bài giảng của tôi bằng cách tìm kiếm trên mạng các chủ đề phù hợp với mục tiêu bài giảng mà tôi sắp dạy. Video trên YouTube minh họa rất tốt cho nội dung bài giảng của tôi, đặc biệt là dạng ghi hình phỏng vấn và chuyên gia từ khắp nới trên thế giới trả lời. (ID 21)	It depends on how different teachers understand the term "quality" in teaching but I personally think "yes". ICT helps me to get inputs, teaching points for my lectures by web-browsing across the topics relevant to the objectives of the lessons I am about to teach. Video clips from YouTube illustrate very well my points, especially those with interviews and answers from experts recorded in different corners of the world. (ID 21)
22	ICT giúp sinh viên tìm kiếm thông tin nhanh và hiệu quả hơn, tiết kiệm rất nhiều thời gian và sức lực, từ đó dẫn đến kết quả học tập cũng chất lượng hơn. (ID 12)	ICT helps students search information faster and more effectively, saving a lot of time and efforts, resulting in better learning outcomes. (ID 12)
23	Theo tôi nghĩ là có vì hiện nay sinh viên cũng rất thích sử dụng ICT trong học ngoại ngữ. Nếu giáo viên có ứng dụng ICT và hướng dẫn sinh viên làm theo thì chất lượng học tập sẽ được nâng lên. Ví dụ, tôi thường gửi file âm thanh, văn bản cho sinh viên trước khi buổi học bắt đầu. Như vậy sinh viên có thể chuẩn bị bài tốt hơn, và sẽ học tốt hơn.Sau buổi học tôi cũng gửi file âm thanh lên trang web để sinh viên có thể tải về luyện thêm. Tuy nhiên kết quả học tập có được nâng lên hay không còn phụ thuộc vào nhiều yếu tố khác như sự chịu khó rèn luyện của sinh viên, tâm lý khi làm bài thi, vv. (ID 27)	I think that now students are interested in using ICT in learning languages. If teachers use ICT and ask students to do the same, then the quality of learning will be improved. For example, I often send audio files and other learning materials to students before each lessons so that they can make better preparation and will learn better. After each lesson I also upload audio files to the internet for students to download for further practice. However, that the learning outcomes are enhanced or not depends very much on many factors such as students' practice or test taking techniques, etc. (ID 27)
24	Khi đưa ICT vào giảng dạy thì sinh viên cảm thấy hứng thú hơn, giáo viên dễ dàng đạt được mục tiêu của bài giảng. Còn về việc nâng cao kết quả học tập hay không thì không chắc chắn vì chưa có số liệu cụ thể nào. (ID 30)	When ICT is used in teaching, students feel more enjoyment and it is easier for teachers to fulfil the aims of the lessons. About the increase in learning outcomes, I am not sure because I don't have any statistics. (ID 30)
25	Về Internet thì em không dám mạo hiểm dạy trên lớp vì sợ đang dạy lại bị mất mạng hoặc nhanh, chậm. (ID 03)	As for the internet, I dare not risk using the internet in the class because I fear a sudden internet disconnection or slow connection. (ID 03)
26	Dù trường Đại học Hà Nội cũng đầu tư khá nhiều [vào cơ sở hạ tầng công nghệ thông tin] tuy nhiên cũng còn nhiều hạn chế như: đường truyền internet nhiều khi không được như mong muốn, đôi khi còn chậm; hai nữa là các thiết bị nhiều khi trục trặc mà bên kỹ thuật hỗ trợ không kịp thì cũng gây ra trở ngại trong việc khai thác. (ID 14)	Although Hanoi University has made heavy investments [in ICT infrastructure], there are still many limitations, for example, the internet transmission is not as fast as we wish, often slow; secondly technical problems often happen, and if the technical support does not come in time, the ICT usage will be very difficult. (ID 14)

27	Tôi nghĩ nội dung thì chưa đâu bởi vì giáo viên mỗi người có một nhu cầu. Có người thì có nhu cầu sử dụng các công nghệ liên quan đến âm thanh và hình ảnh. Có người thì lại sử dụng các công nghệ liên quan đến tìm kiếm và tổ chức thông tin. Tôi nghĩ là muốn đáp ứng được nhu cầu của tất cả mọi người thì chúng ta phải có nhiều cái nhóm và các nhóm đó sẽ đi vào từng cái nội dung ... (ID 26)	I think that the training content is not enough because each teacher has a different need. Some need technology relating to audio and video while others need technology to search for and organise information. So I think that if we want to meet the needs of everyone, we need to divide teachers into different groups and each group will focus on learning the content they are interested in ... (ID 26).
28	Ở trường chúng tôi thù lao rất là khiêm tốn như vậy giáo viên thường có tâm niệm là nếu với thù lao ít thế này mà mình phải đầu tư công sức nhiều vào công nghệ thế kia thì cũng chưa đáng và do vậy họ cũng thường thôi tổ chức dạy học sao cho nhanh nhất, cho hết bài và đấy là thiệt thòi rất lớn cho cả nhà trường và cho học sinh. (ID 26)	In our university, the remunerations are very modest, consequently teachers often think that for such modest remunerations, why they have to make effort to use technologies. As a result, teachers often teach their lessons in the fastest way, just to finish their lessons, and that's the greatest loss for the university and students. (ID 26)
29	Nhiều người cho rằng nếu tôi đưa lên mạng thì tôi có thể bị lấy hết bản quyền hoặc tôi mất bản quyền thì tôi không đi dậy những chỗ khác được (ID 24)	Many teachers think that if they share their lessons on the internet, their materials will be copied, they will lose the copyright, then they will not be able to use those materials in other institutions. (ID 24)
30	Về tuổi tác của giáo viên, thí dụ các giáo viên mà già già một chút rồi thì việc ứng dụng [CNTT] đối với họ thì họ không quan tâm vì họ đã có rất nhiều kinh nghiệm giảng dạy rồi. Họ cảm thấy hài lòng với những gì họ truyền đạt cho học sinh chính vì thế mà họ không cập nhật. (ID 04)	About the age of teachers, for example, teachers who are kind of old do not show interest [in ICT use] because they have extensive teaching experience already. They feel satisfied with what they are passing on to students and perhaps that's why they don't want to update themselves. (ID 04)
31	Mọi người dùng để check email là chính cho nên nó bận thường xuyên. (ID 09)	Teachers mainly check their emails so the computers are busy all the time. (ID 09)
32	Thực ra điều mà tôi mới làm được chủ yếu là đưa bài giảng lên Internet và thông báo cho sinh viên qua địa chỉ thư điện tử để sinh viên tải về và tự luyện, sau đó nếu sinh viên có khó khăn gì trong phần luyện thì sẽ viết thư trực tiếp trao đổi hoặc gọi điện thoại trao đổi. Quan trọng nhất là mình phải đảm bảo được những bài giảng mình đưa lên thì sinh viên phải biết ngay trong vòng 1, 2 ngày, nếu để lâu sinh viên sẽ quên không biết có bài trên đó. (ID 27)	Actually what I have done is mainly to upload lectures on the internet and then inform my students via email so that they can download those materials for practice, and then if students have any difficulty during practice, they can email me or phone me. Most importantly we need to ensure that our students can be aware of our uploaded materials within one or two days, otherwise students will forget that there are materials out there on the internet waiting for them. (ID 27)
33	Chúng tôi cũng không thể soạn bài bằng những máy tính cũ ấy bởi vì chúng chậm lắm, và không có nhiều phần mềm mà chúng tôi có thể dùng. (ID 26)	We cannot use those old computers to prepare our lessons because they are so slow and don't have software which we can use. (ID 26)
34	Bộ môn Nghe thì em dạy [tên mộn học] thì có CD sẵn rồi, mình chỉ việc lấy CD đó thôi. (ID 13)	For teaching listening skills, I teach [name of subject] and I just use available CD. (ID 13)
35	Vài năm trở lại đây cách đây chúng tôi bắt đầu dùng CD tức là mình chọn những bài cảm thấy là tốt … ví dụ như trong các sách tiếng [tên tiếng nước ngoài] dạy họ có đĩa CD với các giáo trình chúng tôi chủ yếu là sử dụng cái đó với giáo trình. (ID 21)	Over the past few years we have moved to using CD, that means we select units which we feel appropriate … for example some [name of language] textbooks are accompanied with CDs and we can use those CDs when we teach that textbook. (ID 21)

36	Băng cassette thì nó quá cũ rồi, nó rất nhiều trở ngại khi dùng, bản thân Khoa [tên của khoa] bây giờ 100% không dùng băng cassette nữa rồi mà dùng đĩa CD rồi, giảm đi rất nhiều chi phí. (ID 12)	Cassette tapes are out of date and cause many problems when we use them. In our Department of [name of department] we 100% use CDs in replacement of cassette tapes and save a lot of costs. (ID 12)
37	Vẫn có nhiều người dùng CD vì nó cũng tiện và dễ tua. (ID 20)	Many people use CD because it is convenient and easy to rewind to previous cues. (ID 20)
38	Phát âm thì mình cũng có một số đĩa phần mềm của người [tên tiếng nước ngoài] dạy phát âm đặc biệt là giai đoạn đầu là các em học bảng chữ cái và sau đấy luyện phát âm. Mình cho các em nghe cả giọng nam và giọng nữ cho nó khác đi. Mình cho các em nghe nhiều giọng thì các em có thể phân biệt và các em có thể biết được là người [tên tiếng nước ngoài] người ta phát âm như thế nào. (ID 04)	About pronunciation, I have some [name of language] CD-based software to teach pronunciation especially for beginners, e.g. pronunciation of the alphabet. There are both male and female voices. I let students listen to different accents so that they are familiar with [name of language] pronunciation. (ID 04)
39	Và thông thường thầy cô cũng chỉ dùng để tải tài liệu vào máy rồi mang đến lớp show cho học sinh thôi. (ID 20)	In general, we, teachers, often download materials onto our laptop computers then show those materials to our students in the classroom. (ID 20)
40	Rất đơn giản chẳng hạn như là có thể cho sinh viên, nếu có đường truyền internet trực tiếp, xem các video clip online để các em nghe hiểu, rồi tìm ý chính, sau đó dịch. Rồi có thể lấy các bài báo trực tiếp trên mạng, khai thác trực tiếp với sinh viên.Rồi nếu một âm nào đó bị sai hoặc không chính xác thì có thể truy cập vào các trang web mà có cung cấp về ngữ âm để kiểm tra hoặc cho các em nghe người bản địa nói. (ID 14)	If there is an internet connection, very simple, we can let students watch some video clips online for listening comprehension, getting the main ideas and then do interpreting. Furthermore, we can obtain online newspaper articles, use them directly with students. And if any word is mispronounced, we can access to a website to check the pronunciation of that word or let students hear how native speakers pronounce that word. (ID 14)
41	Hiện nay khi lên lớp, giáo viên thường mang theo máy tính xách tay và vào trực tiếp các trang web của các tổ chức nước ngoài của tiếng đó để lấy chương trình nghe đó. Ví dụ tiếng Pháp có thể lấy ở TV5, tiếng Anh ở BBC.(ID 24)	Now when teachers go to the classroom, they often bring their laptops and directly log on useful websites of a particular foreign language, such as channel TV5 for French, BBC for English, etc. (ID 24)
42	… Khoa mình có hai thế hệ. Các cô già hẳn thì các cô chỉ sử dụng Microsoft Word thôi, hoặc là các cô cũng có sử dụng internet, chỉ ở mức lấy thông tin, còn các giáo viên trẻ, một số giáo viên trẻ thì họ rất tích cực trong việc sử dụng công nghệ thông tin. (ID 04)	…There are two generations of teachers in my Department. The older teachers use only Microsoft Word, or use the internet to collect information, whereas younger teachers are very active in using ICT. (ID 04)
43	Đối với các file video thì hiện tại vẫn chỉ là em copy từ trên mạng xuống, tức là download từ trên mạng xuống. Sử dụng một số phần mềm như là Realplayer có thể dễ dàng download các file video xuống để cho sinh viên xem. Thế còn cũng chưa có một cái thao tác nào gọi là mình can thiệp vào để chỉnh sửa. (ID 30)	For video files I mainly copy from the internet, I mean download from the internet. RealPlayer can easily help download those video files to show to our students. I don't do anything to edit those files. (ID 30)
44	Có các phần mềm soạn bài giảng, nhiều lúc đơn giản chỉ là Power Point. (ID 27)	I use other software programs to prepare for my lessons, sometimes simply PowerPoint. (ID 27)
45	Tôi ứng dụng chương trình soạn thảo văn bản word cho sinh viên luyện dịch viết.Tôi sử dụng ứng dụng word để soạn lại các bài tập dịch cho phù hợp với đối tượng sinh viên khác nhau. Đồng thời tôi cũng yêu cầu sinh viên gửi bản dịch cho tôi theo định dạng word và tôi sửa ngay trong đó, sử dụng track changes. (ID 27)	I use MS Word for my students to practise translation skills. I used Word functions to prepare different translation exercises to suit different groups of students. At the same time I also ask students to send me their translation works in the Word format and I use 'track changes' function to do that. (ID 27)

46	Thí dụ như trong giờ dạy dịch viết, em dùng Word để chữa bài dịch cho sinh viên ngay trên lớp, thí dụ: gạch chân, in đậm những điểm chính, bật chức năng 'track changes' lên để hiển thị những thay đổi hoặc mở tài liệu gốc đặt cạnh bản dịch để dễ so sánh đối chiếu (ID 30)	For example, in a translation lesson, I use Word to correct students' translation works right in the class, e.g. underling, highlighting important points, turn on 'track changes' to show changes, or open original document side by side with the translation version for the ease of comparison. (ID 30)
47	Ví dụ kỹ năng nghe thì ở đây mình muốn nhấn mạnh hai phần. Thứ nhất là mình có thể sử dụng các file có sẵn trên mạng, mình down xuống cho học sinh nghe. Thứ hai là mình có sẵn một số bài nhưng bài đấy lại chưa có các file ghi âm thì mình có thể sử dụng công nghệ ghi âm gì đó để ghi âm lại và cho học sinh nghe. (ID 04)	For example, I want to emphasise two things in listening. First, I can use any audio files available on the internet and download them. Second, I have some scripts without accompanied audio files, so I can use audio recording technology to record those scripts for students to listen. (ID 04)
48	Lúc dạy ở trên lớp thì em cũng sử dụng Powerpoint hoặc là Internet để cho các em tra cứu thông tin, làm các bài tập theo yêu cầu của mình. (ID 10)	In the classroom I often use PowerPoint or use the internet for students to look for information or do exercises according to my instruction. (ID 10)
49	Ví dụ trong dạy chuyên đề Du lịch: sử dụng PPT để chiếu hình ảnh các địa danh, gắn file audio, videoclip, chèn đường link...; cho sinh viên nhìn hình ảnh (tự động chạy) để tập thuyết trình...Trong giảng dạy Thực hành tiếng: dùng để trình chiếu hình ảnh về văn hóa, những đồ vật, sản phẩm đặc trưng...; những hình ảnh liên quan đến bài giảng để sv luyện tập các mẫu câu hỏi-đáp, kể chuyện, miêu tả... (ID 30)	For example, when I teach the special topic about tourism, I use PowerPoint to show photos of various locations; I insert audio files or video clips or web links into the PowerPoint slides; let students watch the self-running photo slideshow to practise presentation skills. In language practice, I use PowerPoint to show images about things or products representing a particular culture, any images relating to the lecture so that students can practise questions-and-answers, storytelling or description, etc. (ID 30)
50	Các em khi mà phát âm nó nhìn vào khẩu hình của người làm mẫu trên video đấy thì nó sẽ khắc phục được tốt hơn.Ngoài ra còn tập đọc các câu dài. Rõ ràng là trên video người ta còn thể hiện được cả dòng chữ giống như là Karaoke. Chữ chạy đến đâu, mầu chữ đổi đến chỗ nào thì học sinh đọc theo cái đó. Cái đấy dùng để làm luyện âm. (ID 22)	When students do pronunciation practice with videos, they can see the speakers and learn better. Moreover, they can practise reading long sentences out loud. Obviously the scripts can appear in the videos just like Karaoke. Students just read aloud, follow the words when the word colour changes. That is for pronunciation practice. (ID 22)
51	... Không chỉ chúng ta nghe thấy âm thanh mà chúng ta còn phải nhìn thấy âm thanh nữa... Còn khi mà học sinh nói thì mình thu lại và mình xếp hai cái khung hình của âm thanh cạnh nhau. Mình có thể nhìn vào cái khung hình ấy mà phân tích...Có evidence thì không phải chỉ học sinh mà ngay cả đồng nghiệp họ cũng thấy rằng những cái phần đấy là học sinh cần luyện... Bây giờ công nghệ, phần mềm của máy tính giúp chúng ta làm việc đó. (ID 22)	...We not only hear the sound but also see the sound ... when students speak we record their voice, then put the two frames of sound waves next to each other for analysis ... Now with this evidence, not only students but also our colleagues can be aware of the areas which need further practice... Now technology and computer software can help us do that. (ID 22)
52	Công cụ Sound Forge giúp cho giáo viên nói chung, những người mà có sử dụng các phần mềm tương tụ để biên tập âm thành là dùng để biên tập, dùng để phát này, dùng để thu này, và dùng để hiển thị cái khung âm thanh lên mà cắt nghĩa, giảng dải, đấy là một chứng cứ, là evidence. Nếu không ghi âm lại, không có evidence thì nói học sinh không tin.(ID 22)	The Sound Forge software helps teachers in general and those who use similar software to edit audio files, to play back, to do voice recording and to visualise sound waves for further explanation. That serves as evidence. If voice is not recorded, there will be no evidence and students will not believe us. (ID 22)

53	Thế rồi học sinh có thể dùng video clip mà giáo viên sử dụng để dùng làm elicitor, anh xem cái đoạn video rồi cho biết cảm tưởng, cho biết sản phẩm giống như xem một đoạn phóng sự trên vô tuyến, sau đó các diễn giả người ta được nói lên cái cảm nghĩ của mình. Đó là cái công cụ phát triển ngôn ngữ. (ID 22)	Students can use video clips shown by teachers to express themselves. They watch video clips, then express views and impressions, for example: watching an excerpt of a TV documentary then expressing their thoughts and opinions. That is the tool for language development. (ID 22)
54	Ví dụ như EDO, trong một tiếng rưỡi đồng hồ mà giáo viên không biết lồng ghép các hoạt động khác vào thì giáo viên sẽ cảm thấy khá là nhàm chán.Bởi vì cái đấy áp dụng self-study thì sẽ phù hợp hơn.Khi mà ta học trong cái phòng máy tính cũng có nhiều cái dở. Ngày xưa tôi đã trực tiếp dạy rất là nhiều và tôi thấy là như thế này, một cái lớp như thế thì thường bàn ghế đã fix, nên rất khó để thay đổi bàn ghế và chuyển về hoạt động classroom bình thường cho hoạt động đa dạng, ví như hoạt động nhóm chẳng hạn. Thế nên nếu các em ngồi đúng một tiếng rưỡi thì đúng là một các khó khăn cho các em. (ID 20)	Take EDO [English Discoveries Online] for example, in one and a half hours if teachers do not know how to integrate it with other activities, students will feel bored because I think EDO is more suitable for self-study. Then there are also many disadvantages of learning in computer labs. In the past I did a lot of classroom teaching and I found that desks and chairs were often fixed and difficult to move them around to organise group work for instance. So, if students have to sit down for one and a half hour, it will be difficult for them. (ID 20)
55	... để thu thì em dùng RealPlayer hay là phần ứng dụng Windows Media Player để thu hình hoặc là thu âm và khi dạy lại ở trên lớp thì cũng dùng luôn các phần đó. Thế còn trong thực hành tiếng em còn dùng Audacity để cắt, cúp rồi làm chậm các file âm thanh để phục vụ cho các đối tượng sinh viên mới học.Thế còn trong dịch thì cũng chủ yếu dùng RealPlayer và Audacity để cắt. File hình ảnh, xử lý video thì bản thân, em có nghe nhưng em chưa xử lý video để dạy bao giờ. (ID 03)	... For voice recording, I use RealPlayer or Windows Media Player to record video or voice, and I also use those software programs in class. I use Audacity to edit, cut or slow down audio files to suit different groups of students. For interpreting skills, I mainly use RealPlayer and Audacity to edit audio files. I have heard about some video editing software programs but personally I have never used them. (ID 03)
56	Đọc thì thực ra hiện nay số lượng bài đọc ở trên internet rất nhiều. Kho bài đọc rất là lớn, có thể down từ internet về và sau đấy sử dụng phần mềm Microsoft Word để sửa lại một số cái cho phù hợp với học sinh của mình hơn. (ID 04)	There are many reading materials on the internet. The resources are huge and can be downloaded from the internet and then I use Microsoft Word to make necessary changes to suit the levels of my students. (ID 04)
57	Bạn có thể soạn bài, tất nhiên soạn bài cũng có thể dùng phần mềm Hot Potatoes hay những phần mềm khác, nhưng Moodle cho phép ta có thể đưa lên nhưng file âm thanh hay file hình ảnh, thậm chí nó có những phần giáo viên có thể trao đổi với sv kiểu như video conferencing với sv bất kể lúc nào, nếu muốn có thể dùng Moodle cho việc thi, kiểm tra được. Tôi đã sử dụng Moodle cho một vài khóa sinh viên của đào tạo từ xa, sinh viên hầu như chỉ ở nhà và nhận bài, tất nhiên mình soạn bài đưa lên nó khác nhưng sinh viên có thể được thông báo hàng tuần những bài giảng và bài tập của thầy gửi đến và sinh viên làm bài nộp lên đó, tôi có thể biết rõ ngày ngày giờ sinh viên nộp bài xem có đúng thời điểm hay không. (ID 27)	You can make lesson preparation with software Hot Potatoes or other software programs, however Moodle program allows us to upload audio and video files, even allows teachers to communicate with students like videoconferencing at any time. And it is quite possible to use Moodle for testing if you like. I have used Moodle for some distance learning courses. Our students can stay at home and can access to lectures and homework which are uploaded to Moodle by the teacher on a weekly basis. Students can submit their work to Moodle and the teacher can check whether students submit their work on time or not. (ID 27)
58	Lúc dạy ở trên lớp thì em cũng sử dụng Powerpoint hoặc là Internet để cho các em tra cứu thông tin, làm các bài tập theo yêu cầu của mình. (ID 10)	In the classroom I often use PowerPoint or use the internet for students to look for information or do exercises according to my instruction. (ID 10)

59	... Thông tin đa chiều là thông tin được tổng hợp từ tôi là giáo viên và từ học sinh của tôi nó cũng có tính gọi là đa dạng và khách quan, nó chuẩn xác hơn. Và tôi thấy là khi tôi tổ chức lớp học có sử dụng công nghệ thông tin thì tôi nhàn hơn cái kiểu lecture thuyết giảng rất là nhiều. (ID 26)	...The information is multi-dimensional and can be combined from my source as a teacher and from my students' sources, therefore the information is more diversified, objective and accurate. And I see that when I use ICT in my teaching, I feel much less busy than when I use the lecturing mode. (ID 26)
60	Chúng tôi thỉnh thoảng cho những bài tập về nhà bắt học sinh lên trên mạng và tìm những cái ví dụ như là có một bài tập tìm những cách nói hoặc cách diễn đạt về một chủ đề nào đấy, sau đó học sinh tự tìm tòi và tập hợp thành một tập hợp nhất định sau đó chia sẻ với các bạn. (ID 09)	We sometimes give students homework, for example, to go online and search for examples of sentence patterns and expressions often used for a particular topic, then students come to the class to share with their classmates. (ID 09)
61	Thế thì khi mà mang những ghi hình, ghi âm, mang hơi thở cuộc sống vào trong lớp thì đến khi ra ngoài học sinh không ngỡ ngàng. (ID 22)	When we bring authentic video or audio recordings and the breath of life into the classroom, students will feel less surprised when they go outside. (ID 22)
62	Lập nhóm Facebook, Yahoo để trao đổi bài tập, thảo luận, giới thiệu một số trang web forum của [nước ngoài] để SV kết bạn với các bạn [nước ngoài]. (ID 09)	I created some groups on Facebook or Yahoo for my students to exchange their discussions; introduced some online forums in [name of country] so that my students could make friends with [name of language] students. (ID 09)
63	Đang thử nghiệm trên Moodle dưới dạng diễn đàn học tập.Ở đó, giáo viên đưa ra các chủ đề hoặc tài liệu tham khảo để sinh viên thảo luận và tải tài liệu về nghiên cứu. (ID 12)	I am experimenting with a study forum on Moodle where teachers introduce topics or upload reference materials, and then students can download those materials for research and discussions with other students. (ID 12)
64	Tôi dạy môn [tên môn học], đó là cái môn giao thoa văn hoá. Với lớp học của tôi thì theo truyền thống từ các thập kỷ trước thì thường được triển khai theo dạng là thầy và trò ở trên lớp theo dạng lecture, nhưng ngày nay với công nghệ thông tin tôi có thể tổ chức lớp học của tôi bằng nhiều phương pháp khác. Tôi có thể giao bài cho các em làm thêm ở nhà và có thể tổ chức các diễn đàn cũng như là các công cụ trên mạng .Tôi tổ chức một cái lớp học ảo ở trên mạng và chúng tôi thường xuyên học ở trên mạng với nhau, không chỉ học trên lớp mà chúng tôi còn tổ chức các hoạt động trên mạng. Chúng tôi tổ chức giao lưu với các sinh viên ở các nước khác và do vậy là cái nội dung thông tin mà chúng tôi có thể tích luỹ được rất đa dạng và nhiều nguồn rất có ích cho các em. (ID 26)	I teach the subject [name of subject], that is cross-cultural communication. My subject is normally taught in a traditional teaching method, i.e. lecture type, but now with the use of technology I can organise my class in different ways. I can assign homework to the students and can set up forums or use other online tools. I organise a virtual classroom on the internet and we usually conduct learning on the internet with each other, not only in the classroom but also on the internet. We conduct exchange with other students in different countries and so the information that we can accumulate is diversified, and many sources are useful for the students. (ID 26)
65	Soạn một bài cụ thể với ICT thì tốn rất nhiều thời gian, và nhiều thời gian như vậy thì lại không được trả thù lao tương xứng thì cũng là yếu tố mà giáo viên không hứng khởi lắm. (ID 24)	It is very time consuming to prepare a technology-enhanced lesson, but the remuneration is not worth the effort, so this is also discouraging for teachers. (ID 24)
66	Điều mà khuyến khích em nhất có lẽ vẫn là chất lượng giảng dạy, làm thế nào để bài giảng có hiệu quả nhất. Tức là mục tiêu của mình là để cho sinh viên có thể tiếp thu bài nhanh nhất chứ không hề quan tâm đến việc là khi mà mình áp dụng công nghệ như vậy thì nhà trường có chế độ như thế nào. (ID 30)	What is the most encouraging for me is perhaps the teaching quality, how to make the lessons most effective. I mean my goal is to help students to understand the lessons fastest rather than to pay attention to which incentives I will receive when I employ technology. (ID 30)

67	Thì thực ra bây giờ em thấy là nếu như mình không sử dụng các công nghệ đấy thì, ừm, sinh viên sẽ cảm thấy là, ừm, không...không theo kịp được thời đại. Tức là...bây giờ Internet, rồi máy tính, sử dụng rất là nhiều, nếu như giáo viên không áp dụng được những cái đấy thì bài giảng của giáo viên cũng không sinh động. (ID 10)	Actually now I see that if I don't use ICT, my students will think that I cannot catch up with the modern times. I mean at present the internet and computers are used a lot. If teachers don't employ ICT, their lessons will not be enjoyable. (ID 10)
68	Đối với riêng bản thân em thì em nghĩ là sinh viên không phải là một sức ép nhưng mà tự mình thấy là mình phải có, tự mình đòi hỏi là mình cần phải áp dụng công nghệ vào trong giảng dạy vì thực tế hiện nay là các nước đã áp dụng công nghệ vào trong giảng dạy từ rất lâu rồi; và em cũng có một thời gian thực tập ở [tên nước] và cũng đã từng tiếp xúc với tất cả các phương pháp giảng dạy áp dụng công nghệ rồi, thế nên là cũng nghĩ đấy là một sự cần thiết. (ID 30)	I personally think that students are not a source of pressure [for ICT use] but the pressure comes from me myself. I personally see the need to employ technologies in teaching because in reality technologies have been applied in teaching in other countries for a long time. I have spent some time as part of my internship in [name of country] and have been exposed to different teaching methods using technologies and I think it is really essential. (ID 30)
69	Dạ có ạ, ban chủ nhiệm khoa cũng như là nhà trường thường có khuyến khích, chỉ động viên tinh thần anh chị em. (ID 05)	The departmental as well as university leaders usually encourage us to use ICT, however, only spiritual encouragement. (ID 05)
70	Thưởng tiền thì không có ạ, nhưng khuyến khích thì có ạ. (ID 07)	There are no financial incentives but there is encouragement for ICT use. (ID 07)

Appendix 4: Study documents

INFORMATION SHEET FOR PARTICIPANTS

Project title: Integrating The Use Of Information & Communications Technology (ICT) In Language Teaching In Hanoi University

Name of investigators:

- **Xuan Thu Dang**, Doctor-of-Education student, Faculty of Education, La Trobe University, Bundoora, VIC 3086. Phone: +61 3 9479 2737; Email: thuict@gmail.com
- **Dr. Howard Nicholas,** principal supervisor, Faculty of Education, La Trobe University, Bundoora, VIC 3086. Phone: +61 3 9479 2744; Email: h.nicholas@latrobe.edu.au
- **Prof. Ramon Lewis,** secondary supervisor, Faculty of Education, La Trobe University, Bundoora, VIC 3086. Phone: +61 3 9479 2611; Email: r.lewis@latrobe.edu.au

FHEC No. R053/09

Date: ___/____/2010

A. What are the aims of the project?

This project 'Integrating The Use Of Information & Communications Technology (ICT) In Language Teaching In Hanoi University' is conducted by Mr Xuan Thu Dang, a lecturer of the English Department, Hanoi University (HANU), during his Doctor-of-Education candidature under the supervision of Dr. Howard Nicholas and Prof. Ramon Lewis, Faculty of Education, La Trobe University, Bundoora campus, Melbourne, Australia.

The project has three primary aims. First, it investigates the current use of ICT in language teaching by the HANU teaching staff (that is, using which ICT facilities to teach which aspects of language, availability of ICT resources, ICT training, ICT skills of the teaching staff). Second, it explores the staff's perceptions of ICT benefits, advantages and disadvantages of ICT, enablers and barriers to ICT in language teaching. Third, the project looks for effective ways of using ICT to improve the quality of language teaching at tertiary level in Vietnam. The findings may be applicable to other similar universities in Vietnam.

B. What does ICT mean in this project?

Within the scope of this study, the term ICT means computer-, and internet-based technologies which can be categorised into two types, namely, generic software applications (e.g. word processors, presentation software, email packages, and web browsers), and CALL (computer-assisted language learning) software applications and useful websites with a focus on purposeful language teaching and learning.

C. What does the project involve?

There are **two parts** in the project: **Survey questionnaire** and **interview**. We invite you to take part in the research project and highly appreciate your participation in **one or both**.

Part 1: Survey

This survey is written in Vietnamese and will be conducted during the first half of the year 2010. We estimate that it will take about 20 minutes to complete. You do not have to write your name on the questionnaire. Your participation in the survey is voluntary. By signing the Consent Form for the survey, we understand that you permit us to use the information you provide in it for future academic publications such as a thesis, a report, a journal article and a conference paper. At the end of the survey, we will ask whether you are willing to take part in a follow-up interview.

Part 2: Interview

We would like to invite you to participate in a 30-minute one-to-one interview which will be held in Vietnamese, on HANU campus, and out of class time. The interview is planned to take place in the second half of the year 2010 and will be audio recorded for the purpose of the research only. During the session, we would like to hear your ideas and experiences in using ICT to teach foreign languages at HANU, enablers of and barriers to ICT use, and effective practices of ICT in teaching foreign languages. If you are willing to take part in the interview, please fill in the last part of the survey, or give us your contact number or email address by emailing thuict@gmail.com. We will ask you to fill in a Consent Form before we start the interview.

D. Who could participate in this project?

The potential participants must be tenured or contracted (inclusive of long term, short term & sessional) staff of HANU during the period of this research. They must work for HANU Departments and Centres which teach languages at the undergraduate level. They deal with ICT facilities, training, services, planning and policy making at HANU.

E. Do I have to take part in this project?

Your participation in this project is voluntary. You are able to withdraw your interview data up to 4 weeks after the interview date. If you wish to withdraw your data from the interview, you are asked to complete the 'Withdrawal of Consent Form'. Your interview data will not be used in the project. There are now disadvantages or adverse consequences for those who withdraw from the interview. All information provided in the interview will be kept confidential. Any information which may identify you or your department will not be used. You have the right to access the information which you provide in the interview on request by emailing thuict@gmail.com.

F. What will be done with the results of the project?

The results of this project will be used in the doctoral thesis of Xuan Thu Dang, and may appear in other academic publications, e.g. a journal article, a report, a conference paper, or a similar future project on ICT use in teaching and learning. The results of the project will be available to you on request by email to thuict@gmail.com.

G. Will confidentiality of provided information be maintained?

The information you provide in the interview will be kept confidential throughout the study as well as after the study has been completed. All hard-copy data (e.g. completed questionnaires, interview notes …) will be stored in a safely locked drawer in the office of Xuan Thu Dang, room 338, EDUC1 building, La Trobe University, Bundoora campus. The soft-copy data (e.g. audio files, interview transcripts, data entry …) will be password protected and kept in the computer of Xuan Thu Dang.

H. Further information

This project is subject to ethics approval from the Faculty of Education Human Ethics Committee of La Trobe University. If you have any questions regarding this project, please do not hesitate to contact us, Dr. Howard Nicholas, Prof. Ramon Lewis, or Mr. Xuan Thu Dang (please see the contact details above). If you have any complaints or queries that we have not been able to answer to your satisfaction, you may contact the Secretary, Faculty of Education Human Ethics Committee of La Trobe University, PO Box 199, Bendigo, Victoria, 3552, phone (03) 5444 7983, email: educationethics@latrobe.edu.au.

We'd like to invite you to participate in this study.

Thank you very much for helping us with this project.

We look forward to getting your valuable input.

Doctor-of-Education candidate: Xuan Thu Dang

Supervisors: Dr. Howard Nicholas & Prof. Ramon Lewis

Information sheet -Vietnamese:

THÔNG TIN DÀNH CHO NGƯỜI THAM GIA ĐỀ TÀI NGHIÊN CỨU

Tên đề tài: Ứng dụng Công nghệ Thông tin, Truyền thông (ICT)vào Giảng dạy Ngoại ngữ ở Trường Đại học Hà Nội

Nghiên cứu sinh: Đặng Xuân Thu, nghiên cứu sinh Tiến sĩ, Khoa Giáo dục, Trường Đại học La Trobe, Bundoora, VIC 3086. Email: thuict@gmail.com

Mã số phê chuẩn của ĐH La Trobe: FHEC No. R053/09

A. Mục đích của đề tài nghiên cứu này là gì?

'Ứng dụng Công nghệ Thông tin, Truyền thông vào Giảng dạy Ngoại ngữ ở Trường Đại học Hà Nội' là đề tài nghiên cứu của Đặng Xuân Thu, giảng viên Khoa tiếng Anh, Đại học Hà Nội (HANU), hiện đang là nghiên cứu sinh tiến sĩ dưới sự hướng dẫn của Tiến sĩ Howard Nicholas và Giáo sư Ramon Lewis, Khoa Giáo dục, Trường Đại học La Trobe, cơ sở Bundoora, thành phố Melbourne, Australia.

Đề tài này có ba mục đích chính. Thứ nhất, khảo sát hiện trạng sử dụng ICT của giáo viên HANU trong giảng dạy ngoại ngữ (TD: sử dụng các tiện ích của ICT để dạy kỹ năng/môn học ngoại ngữ, cơ sở vật chất ICT, tập huấn về ICT, kỹ năng ICT của giáo viên). Thứ hai, tìm hiểu nhận thức của giáo viên về lợi ích của ICT, những yếu tố tạo thuận lợi cũng như gây trở ngại cho việc ứng dụng ICT trong giảng dạy ngoại ngữ tại HANU.Thứ ba, tìm kiếm cách sử dụng ICT hiệu quả nhằm nâng cao chất lượng giảng dạy ngoại ngữ ở HANU.Hy vọng kết quả nghiên cứu có thể ứng dụng vào những trường đại học khác ở Việt Nam có tình hình tương tự như HANU.

B. Thuật ngữ ICT trong đề tài này được hiểu như thế nào?

Trong phạm vi nghiên cứu của đề tài này, thuật ngữ ICT được hiểu là các công nghệ sự dụng trên nền máy tính và mạng Internet. Các công nghệ này có thể được chia làm hai loại chính: ứng dụng phần mềm phổ cập (như phần mềm soạn thảo văn bản, thuyết trình, thư điện tử và trình duyệt web), và ứng dụng phần mềm dùng để giảng dạy ngôn ngữ có sự hỗ trợ của máy tính và một số trang web hữu ích tập trung vào việc dạy và học ngữ.

C. Đề tài này có bao nhiêu phần?

Đề tài này gồm hai phần: Bản câu hỏi khảo sát và phỏng vấn. Tôi xin mời quý thầy/cô tham gia vào một hoặc cả hai phần của đề tài này.Tôi biết ơn sự cộng tác của thầy/cô.

Phần 1: Bản câu hỏi khảo sát dành cho giáo viên dạy tiếng

Trong tháng 8 năm 2010, bản câu hỏi khảo sát bằng tiếng Việt sẽ được phát cho giáo viên của các Khoa/Trung tâm dạy tiếng của HANU. Thời gian trả lời câu hỏi khoảng 30 phút.Thầy/cô không phải viết tên. Tham gia vào khảo sát này là hoàn toàn tự nguyện. Khi thầy/cô ký vào "Mẫu Đồng ý Tham gia Khảo sát" mà tôi gửi kèm theo đây cũng có nghĩa là thầy/cô cho phép tôi được sử dụng thông tin mà thầy/cô cung cấp trong bản khảo sát này để đăng trong các ấn phẩm mang tính học thuật, như luận văn tốt nghiệp, báo cáo, bài viết trên tạp chí khoa học, và

trình bày tại hội thảo. Ở cuối phần khảo sát này, tôi xin mời thầy/cô tiếp tục tham trả lời gia phỏng vấn.

Phần 2: Phỏng vấn dành cho giáo viên dạy tiếng, lãnh đạo HANU, lãnh đạo Khoa/Trung tâm dạy tiếng & chuyên viên ICT tại HANU.

Tôi xin mời quý thầy/cô tham gia phỏng vấn tại Trường Đại học Hà Nội, ngoài giờ dạy học. Thời gian phỏng vấn khoảng 15-30 phút, sẽ bắt đầu từ giữa tháng 9 năm 2010 và được ghi âm phục vụ nghiên cứu. Trong phần này, chúng tôi muốn nghe ý kiến và kinh nghiệm của quý thầy/cô về ứng dụng ICT trong giảng dạy ngoại ngữ, chính sách ICT và các vấn đề liên quan tới ICT tại HANU.Nếu nhận lời phỏng vấn, xin thầy/cô cung cấp địa chỉ email & số điện thoại để tiện liên lạc sau này.Trước khi phỏng vấn, quý thầy/cô sẽ ký vào "Mẫu Đồng ý Tham gia Phỏng vấn".Tham gia phỏng vấn hoàn toàn mang tính tự nguyện.

D. Những ai có thể tham gia vào đề tài nghiên cứu này?

Đối tượng tham gia là cán bộ biên chế hoặc hợp đồng (dài hạn và ngắn hạn) của HANU trong thời gian thực hiện đề tài này. Đây phải là người làm việc cho các Khoa, Bộ môn hoặc Trung tâm dạy tiếng ở bậc đại học, công việc liên quan tới giảng dạy kỹ năng tiếng, thiết bị, phục vụ, lập kế hoạch và hoạch định chính sách ICT tại HANU.

E. Tôi có phải bắt buộc tham gia vào đề tài này không?

Quý thầy/cô tham gia vào đề tài này hoàn toàn tự nguyện.Quý thầy/cô có thể rút lại tất cả dữ liệu phỏng vấn trong vòng 4 tuần kể từ ngày phỏng vấn.Nếu muốn rút lại thông tin đã phỏng vấn, thầy/cô ký vào "Mẫu rút lại dữ liệu phỏng vấn".Khi đó, tôi sẽ không sử dụng dữ liệu phỏng vấn của thầy/cô trong đề tài này nữa.Sẽ không có bất lợi hoặc hậu quả gì xảy ra đối với người xin rút lui khỏi phỏng vấn.Tất cả thông tin cá nhân của người tham gia đề tài sẽ được giữ kín trong mọi trường hợp. Quý thầy/cô có quyền tiếp cận thông tin đã cung cấp khi gửi yêu cầu bằng email tới địa chỉ thuict@gmail.com.

F. Kết quả của đề tài này sẽ được sử dụng như thế nào?

Kết quả của đề tài này sẽ được sử dụng trong luận văn tiến sĩ của nghiên cứu sinh Đặng Xuân Thu, và có thể được đăng trong các ấn phẩm mang tính học thuật khác như bài viết trên tạp chí chuyên ngành, báo cáo, bài trình bày tại hội thảo hoặc sẽ được sử dụng trong đề tài tương tự về ứng dụng ICT trong giảng dạy và học tập. Kết quả nghiên cứu sẽ được gửi tới người tham gia đề tài nếu có yêu cầu gửi bằng email tới địa chỉ thuict@gmail.com.

G. Thông tin cung cấp có được bảo mật không?

Mọi thông tin quý thầy/cô cung cấp trong đề tài này sẽ được bảo mật trong suốt thời gian nghiên cứu cũng như sau khi kết thúc nghiên cứu. Tất cả các bản in trên giấy (TD: bản câu hỏi khảo sát đã được điền, ghi chép phỏng vấn…) sẽ được lưu trong ngăn kéo có khoá tại văn phòng của nghiên cứu sinh Đặng Xuân Thu, phòng 338, toà nhà EDUC1, Trường Đại học La Trobe, cơ sở Bundoora. Dữ liệu kỹ thuật số (TD: tệp âm thanh, bản ghi lại nội dung phỏng vấn, dữ liệu đã nhập vào máy tính…) sẽ được bảo vệ bằng mật khẩu và giữ trong máy tính của nghiên cứu sinh Đặng Xuân Thu. Mọi thông tin do quý thầy/cô cung cấp chỉ sử dụng vào mục đích nghiên cứu cho đề tài này.

H. Thông tin thêm

Đề tài nghiên cứu này đã được phê chuẩn (Mã số phê chuẩn: FHEC No. R053/09) của Ủy ban Đạo đức Con người thuộc Khoa Giáo dục, Trường Đại học La Trobe. Nếu có bất kỳ câu hỏi nào liên quan tới nghiên cứu này, xin liên hệ với Tiến sĩ Howard Nicholas, Giáo sư Raymon Lewis, hoặc nghiên cứu sinh Đặng Xuân Thu tại địa chỉ email: thuict@gmail.com. Nếu có thắc mắc mà chúng tôi chưa trả lời thoả đáng, quý thầy/cô có thể liên hệ trực tiếp với Thư ký của Ủy ban Đạo đức Con người thuộc Khoa Giáo dục, Trường Đại học La Trobe, PO Box 199, thị trấn Bendigo, bang Victoria, 3552, điện thoại (+613) 5444 7983, email: educationethics@latrobe.edu.au.

Tôi kính mời quý thầy/cô tham gia trả lời khảo sát và tham gia phỏng vấn.

Tôi mong nhận được những thông tin đóng góp quý báu của quý thầy/cô.

Tôi xin cảm ơn sự cộng tác và giúp đỡ quý báu của quý thầy/cô đối với đề tài nghiên cứu này.

Nghiên cứu sinh: Đặng Xuân Thu

Giáo viên hướng dẫn: Tiến sĩ Howard Nicholas & Giáo sư Ramon Lewis

CONSENT FORM FOR PARTICIPANTS IN SURVEY

Project: Integrating The Use Of Information & Communications Technology (ICT) In Language Teaching In Hanoi University

Investigators: Dr. Howard Nicholas & Prof. Ramon Lewis (supervisors)

Xuan Thu Dang (research student)

Course: Doctor of Education (Ed.D)

FHEC No. R053/09

Please complete the following:

(a) I _____ (the participant) have read and understood the information provided in the Information Sheet, and any questions I have asked have been answered to my satisfaction.

(b) I agree to answer the questions in the Survey, realising that because my name is not required in the survey, I will not be able to withdraw my data after I complete and hand in the survey.

(c) I agree that the investigators may use data provided by me in this survey for future publications such as a thesis, a report, a journal article, and a conference paper, etc., or for similar future projects on the condition that neither my name nor any other identifying information is used.

(d) I understand that a copy of the Information Sheet and the Consent Form will be provided for me to keep.

Name of participant: _____

Signature of participant: _____ **Date**: ____/_____/_____

Name of investigators:

- Dr. Howard Nicholas, Signature: _____ **Date**: ____/_____/2010
- Prof. Ramon Lewis, Signature: _____ **Date**: ____/_____/2010
- Xuan Thu Dang, Signature: _____ **Date**: ____/_____/2010

Consent form for survey – Vietnamese:

MẪU ĐỒNG Ý THAM GIA KHẢO SÁT

Tên đề tài: Ứng dụng Công nghệ Thông tin, Truyền thông (ICT)vào Giảng dạy Ngoại ngữ ở Trường Đại học Hà Nội

Nghiên cứu sinh: Đặng Xuân Thu, nghiên cứu sinh Tiến sĩ, Khoa Giáo dục, Trường Đại học La Trobe, Bundoora, VIC 3086. Email: thuict@gmail.com

Mã số phê chuẩn của ĐH La Trobe: FHEC No. R053/09

Xin điền vào phần dưới đây:

(a) Tôi, _____, (người tham gia đề tài) đã đọc và hiểu thông tin ghi trong tờ Thông tin dành cho người tham gia đề tài nghiên cứu, và mọi thắc mắc của tôi đã được giải đáp thoả đáng.

(b) Tôi đồng ý trả lời các câu hỏi trong bản khảo sát, và biết rằng bản khảo sát không yêu cầu ghi tên cho nên tôi không thể rút lại thông tin sau khi đã điền và nộp bản khảo sát.

(c) Tôi đồng ý cho người thực hiện đề tài sử dụng dữ liệu mà tôi cung cấp tại bản khảo sát để viết trong các ấn phẩm học thuật như luận văn, báo cáo, bài viết trong tạp chí chuyên ngành, bài trình bày tại hội thảo …,hoặc sẽ được sử dụng trong các đề tài tương tự với điều kiện không được sử dụng tên của tôi hoặc thông tin có thể tiết lộ danh tính của tôi.

(d) Tôi biết rằng tôi được giữ một bản Thông tin Dành cho Người Tham gia Đề tài Nghiên cứu và một bản Mẫu Đồng ý Tham gia Khảo sát.

Tên người tham gia đề tài:_____

Chữ ký của người tham gia đề tài: _____ ngày___ tháng___ năm 2010

Tên của người thực hiện đề tài:

- Tiến sĩ Howard Nicholas, chữ ký: _____ ngày___ tháng___ năm 2010
- Giáo sư Ramon Lewis, chữ ký: _____ ngày___ tháng___ năm 2010
- Đặng Xuân Thu, chữ ký: _____ ngày___ tháng___ năm 2010

CONSENT FORM FOR PARTICIPANTS IN INTERVIEW

Project:	Integrating The Use Of Information & Communications Technology (ICT) In Language Teaching In Hanoi University
Investigators:	Dr. Howard Nicholas & Prof. Ramon Lewis (supervisors)
	Xuan Thu Dang (research student)
Course:	Doctor of Education (Ed.D)
FHEC No.	R053/09

Please complete the following:

(a) I _____ (the participant) have read and understood the information provided in the Information Sheet, and any questions I have asked have been answered to my satisfaction.

(b) I agree to participate in the interview, realising that I may withdraw at any time up until four weeks after the interview has been completed. I understand that the interview will be conducted face to face and will be audio-recorded. I also understand that any personal data about me that is collected in the interview will be available to me on request by email to thuict@gmail.com.

(c) I agree that research data provided by me in this interview may appear in publications such as a thesis, a report, a journal article, and a conference paper, etc., or may be used in similar future projects on the condition that neither my name nor any other identifying information is used.

(d) I understand that a copy of this Consent Form will be provided for me to keep.

Name of participant: _____

Signature of participant: _____ **Date**: ____/_____/_____

Name of investigators:

- Dr. Howard Nicholas, Signature: _____ **Date**: ____/_____/2010
- Prof. Ramon Lewis, Signature: _____ **Date**: ____/_____/2010
- Xuan Thu Dang, Signature: _____ **Date**: ____/_____/2010

Consent form for interview –Vietnamese:

MẪU ĐỒNG Ý THAM GIA PHỎNG VẤN

Đề tài:	Ứng dụng Công nghệ Thông tin, Truyền thông (ICT) vào Giảng dạy Ngoại ngữ ở Trường Đại học Hà Nội
Người thực hiện:	Tiến sĩ Howard Nicholas & Giáo sư Ramon Lewis (giáo viên hướng dẫn)
	Đặng Xuân Thu (nghiên cứu sinh)
Khoá học:	Tiến sĩ (Ed.D)
Mã số FHEC:	R053/09

Xin điền vào phần dưới đây:

(a) Tôi, _____, (người tham gia đề tài) đã đọc và hiểu thông tin ghi trong tờ Thông tin dành cho người tham gia đề tài nghiên cứu, và mọi câu hỏi của tôi đã được giải đáp thoả đáng.

(b) Tôi đồng ý trả lời các câu hỏi phỏng vấn, và hiểu rằng vì tôi có thể rút lại thông tin bất cứ lúc nào trong vòng 4 tuần sau khi kết thúc phỏng vấn. Tôi hiểu rằng phỏng vấn sẽ được tiến hành trực tiếp và ghi âm. Tôi cũng hiểu rằng mọi thông tin cá nhân về tôi trong cuộc phỏng vấn này sẽ được cung cấp cho tôi khi tôi yêu cầu bằng email gửi cho thuict@gmail.com.

(c) Tôi đồng ý cho nhóm thực hiện đề tài sử dụng dữ liệu mà tôi cung cấp trong phỏng vấn này để viết trong các ấn phẩm mang tính học thuật như luận văn, báo cáo, bài viết trong tạp chí chuyên ngành, bài trình bày tại hội thảo …,hoặc sẽ được sử dụng trong các đề tài tương tự với điều kiện không được sử dụng tên của tôi hoặc thông tin xác định được danh tính của tôi.

(d) Tôi hiểu rằng tôi được giữ một bản Mẫu Đồng ý Tham gia Phỏng vấn.

Tên người tham gia đề tài:_____

Chữ ký của người tham gia đề tài: _____ ngày___ tháng___ năm 2010

Tên của người thực hiện đề tài:

- Tiến sĩ Howard Nicholas, chữ ký: _____ ngày___ tháng___ năm 2010
- Giáo sư Ramon Lewis, chữ ký: _____ ngày___ tháng___ năm 2010
- Đặng Xuân Thu, chữ ký: _____ ngày___ tháng___ năm 2010

WITHDRAWAL OF CONSENT FORM FOR INTERVIEW

Project: Integrating The Use Of Information & Communications Technology (ICT) In Language Teaching In Hanoi University

Investigators: Dr. Howard Nicholas & Prof. Ramon Lewis *(supervisors)*
Xuan Thu Dang *(research student)*

Course: Doctor of Education (Ed.D)

FHEC No. R053/09

I,_____, wish to WITHDRAW my consent to the use of data arising from my interview. Data from my interview must NOT be used in this research project as described in item (E) of the Information Sheet and item (b) of the Consent Form for Participants in Interview. I understand that data arising from my participation in the interview will be destroyed provided this request is received within four weeks of the completion of the interview. I understand that this notification will be retained together with my Consent Form for Participants in Interview as evidence of the withdrawal of my consent to use the interview data I have provided specifically for this project.

Name of participant:_____

Signature of participant: _____ Date: ____/_____/2010

Name of investigators:

- Dr. Howard Nicholas, Signature: _____ Date: ____/_____/2010
- Prof. Ramon Lewis, Signature: _____ Date: ____/_____/2010
- Xuan Thu Dang, Signature: _____ Date: ____/_____/2010

Withdrawal of Consent Form for Interview – Vietnamese:

MẪU RÚT LẠI DỮ LIỆU PHỎNG VẤN

Đề tài:	Ứng dụng Công nghệ Thông tin, Truyền thông (ICT) vào Giảng dạy Ngoại ngữ ở Trường Đại học Hà Nội
Người thực hiện:	Tiến sĩ Howard Nicholas & Giáo sư Ramon Lewis *(giáo viên hướng dẫn)* Đặng Xuân Thu *(nghiên cứu sinh)*
Khoá học:	Tiến sĩ (Ed.D)
Mã số FHEC:	R053/09

Tôi, _____, xin RÚT LẠI dữ liệu mà tôi đã cung cấp trong cuộc phỏng vấn. Dữ liệu phỏng vấn của tôi sẽ KHÔNG ĐƯỢC sử dụng trong đề tài nghiên cứu này nữa như nội dung ghi tại mục (E) trong tờ Thông tin Dành cho Người Tham gia Đề tài và mục (b) trong Mẫu Đồng ý Tham gia Phỏng vấn. Tôi hiểu rằng dữ liệu mà tôi cung cấp trong cuộc phỏng vấn sẽ bị huỷ bỏ nếu như yêu cầu này được gửi đi trong vòng 4 tuần kể từ ngày phỏng vấn. Tôi hiểu rằng thông báo này sẽ được lưu cùng với Mẫu Đồng ý Tham gia Phỏng vấn của tôi để làm bằng chứng cho việc tôi rút lại sự đồng ý cho sử dụng dữ liệu phỏng vấn mà tôi đã cung cấp cho đề tài nghiên cứu này.

Tên người tham gia đề tài:_____

Chữ ký của người tham gia đề tài: _____ ngày___ tháng___ năm 2010

Tên của người thực hiện đề tài:

- Tiến sĩ Howard Nicholas, chữ ký: _____ ngày___ tháng___ năm 2010
- Giáo sư Ramon Lewis, chữ ký: _____ ngày___ tháng___ năm 2010
- Đặng Xuân Thu, chữ ký: _____ngày___ tháng___ năm 2010

Letter to the President of HANU –English:

Melbourne,12 November, 2009
Associate Prof.,Dr. Nguyen Dinh Luan
President of Hanoi University

Dear Associate Prof., Dr. Nguyen Dinh Luan,

Since the introduction of the Directive No.58/2008/CT-BGDĐT in 2008, information and communications technology (ICT) has been increasingly integrated in teaching and learning in various training institutions in Vietnam. As you may recall from our recent meeting during your working visit to Melbourne in May 2009, I have been working on the research proposal entitled 'Integrating the Use of Information and Communications Technology (ICT) in Language Teaching in Hanoi University'. At that time you showed your interest in the issues I proposed in my research. Now I am writing to ask for your support and approval for my data collection to be conducted at all language departments and centres of Hanoi University.

There are two instruments in my study: survey and follow-up interview. This study aims at investigating the current use of ICT in language teaching at HANU, with the focus on using which ICT facilities to teach which aspects of language, the teaching staff's ICT skills, ICT training, their perceptions of ICT benefits, inhibitors and enablers for ICT use in language teaching. Furthermore, the ultimate goal of this research is to find ways to use ICT effectively in order to improve the quality of language teaching at tertiary level in Vietnam. The results could be useful for HANU and similar universities in Vietnam.

The participants in this research will include the senior management staff of HANU, the teaching staff in different language departments, and the ICT technical staff of Hanoi University. The participation in this project is voluntary.

I include a copy of the information sheet and the proposed survey questionnaire and interview questions for your consideration.

I would appreciate it very much if you could issue a letter of approval for my data collection in the year 2010, and encourage all heads and staff of HANU language departments and centres to give their support to and full participation in this research.

I look forward to hearing from you soon.

Best regards,

Xuan Thu Dang
Doctor-of-Education student
Faculty of Education
La Trobe University
Email: xtdang@students.latrobe.edu.au

Letter to the President of HANU –Vietnamese:

Melbourne, ngày 12 tháng 11 năm 2009

Kính gửi: **PGS.TSKH Nguyễn Đình Luận**
Hiệu trưởng Đại học Hà Nội

Kể từ khi có Chỉ thị 58/2008/CT-BGDĐT năm 2008, công nghệ thông tin, truyền thông (ICT) ngày càng được ứng dụng nhiều hơn trong công tác giảng dạy và học tập tại nhiều cơ sở đào tạo ở Việt Nam. Trong chuyến công tác của thầy tới Melbourne hồi tháng 5 năm 2009, em đã có dịp báo cáo với thầy về đề tài nghiên cứu em đang thực hiện, với tiêu đề 'Ứng dụng Công nghệ Thông tin Truyền thông (ICT) vào Giảng dạy Ngoại ngữ ở trường Đại học Hà Nội'. Lúc đó thầy rất quan tâm tới những vấn đề được trình bày trong đề tài nghiên cứu của em. Bây giờ em viết thư này mong thầy ủng hộ và phê chuẩn cho em được tiến hành thu thập dữ liệu tại tất cả các Khoa tiếng và Trung tâm của trường Đại học Hà Nội (HANU).

Đề tài nghiên cứu của em sử dụng hai công cụ thu thập dữ liệu là: khảo sát và phỏng vấn. Mục đích của nghiên cứu là khảo sát thực trạng sử dụng ICT trong việc giảng dạy ngoại ngữ tại HANU, tập trung vào những nội dung như ứng dụng ICT trong việc giảng dạy các môn học/kỹ năng như thế nào, kỹ năng ICT của giảng viên, tập huấn về ICT, nhận thức của giảng viên về lợi ích, thuận lợi và cản trở đối với việc ứng dụng ICT trong giảng dạy. Mục đích lớn nhất của đề tài là cố gắng tìm ra cách ứng dụng ICT một cách hiệu quả để cải thiện chất lượng dạy ngoại ngữ ở bậc đại học tại Việt Nam.

Đối tượng tham gia đề tài nghiên cứu sẽ bao gồm: cán bộ quản lý chủ chốt, giảng viên của các Khoa và Trung tâm dạy ngoại ngữ, và cán bộ kỹ thuật ICT của HANU. Sự tham gia vào đề tài nghiên cứu này mang tính tự nguyện.

Em gửi kèm theo đây tờ thông tin giới thiệu đề tài, bảng câu hỏi khảo sát và câu hỏi phỏng vấn dự kiến để thầy có thêm thông tin.

Em rất biết ơn nếu thầy có thể viết cho em một bức thư cho phép em được tiến hành thu thập dữ liệu tại HANU trong năm 2010, đồng thời kêu gọi Trưởng Khoa và giảng viên của các Khoa và Trung tâm dạy tiếng ủng hộ, tham gia đầy đủ vào đề tài nghiên cứu này.

Em mong sớm nhận được thư của thầy.

Kính thư,

Đặng Xuân Thu
Nghiên cứu sinh tiến sĩ
Khoa Giáo dục
Trường Đại học La Trobe
Email: xtdang@students.latrobe.edu.au

Appendix 5: Approval letter of HANU President – English:

H A N O I U N I V E R S I T Y
Km 9 Nguyen Trai Road, Thanh Xuan, Hanoi, Vietnam
Telephone: (84-4) 38544338; Fax: (84-4) 38544550
Email: hanu@hanu.vn; Website: www.hanu.vn

Hanoi, 13 November, 2009

TO WHOM IT MAY CONCERN

As the President of Hanoi University (HANU), I hereby approve Xuan Thu Dang's request for access to HANU staff in connection with his data collection for his doctoral project 'Integrating the Use of Information and Communications Technology (ICT) in Language Teaching in Hanoi University'. The data collection will be administered in the year 2010. I hope that the research findings will be useful to HANU.

Xuan Thu Dang is the lecturer of the English Department, HANU. I would like the Heads and staff of all language departments and centres of HANU to give this research project your full support and participation.

Best regards,

Hiệu trưởng

PGS.TSKH Nguyễn Đình Luận

Associate Prof., Dr. Nguyen Dinh Luan

President of HANU

Approval letter of HANU President – Vietnamese:

H A N O I U N I V E R S I T Y

Km 9 Nguyen Trai Road, Thanh Xuan, Hanoi, Vietnam
Telephone: (84-4) 38544338; Fax: (84-4) 38544550
Email: hanu@hanu.vn; Website: www.hanu.vn

Hà Nội, ngày 13 tháng 11 năm 2009

GỬI CÁC BÊN HỮU QUAN

Với tư cách là Hiệu trưởng trường Đại học Hà Nội (HANU), tôi đồng ý cho Đặng Xuân Thu được tiếp cận cán bộ của HANU để tiến hành thu thập dữ liệu cho đề tài tiến sĩ 'Ứng dụng Công nghệ Thông tin Truyền thông (ICT) vào Giảng dạy Ngoại ngữ ở trường Đại học Hà Nội'. Công tác thu thập dữ liệu sẽ được tiến hành trong năm 2010. Tôi hy vọng kết quả nghiên cứu sẽ có ích cho HANU.

Đặng Xuân Thu là giảng viên của Khoa tiếng Anh, HANU. Tôi mong muốn Trưởng Khoa và cán bộ của tất cả các Khoa và Trung tâm dạy tiếng của HANU ủng hộ và tham gia đầy đủ vào đề tài nghiên cứu này.

Hiệu trưởng

Hiệu trưởng

PGS.TSKH Nguyễn Đình Luận

PGS.TSKH Nguyễn Đình Luận

Appendix 6: Human Research Ethics Committee Approvals

LA TROBE UNIVERSITY

Faculty of Education

PO BOX 199, Bendigo
Victoria 3552 Australia
T +61 3 5444 7885
F +61 3 5444 7899
latrobe.edu.au/education

14 February 2013

Xuan Thu Dang
Flat 6, 3 Cape Street
Eaglemont 3084

Dear Xuan

RE: Application for approval of a modification to your project
FHEC No: R053/09
Project/Activity Title: Integrating the Use of Information & Communications Technology (ICT) in Language Teaching in Hanoi University

Thank you for submitting your application to the Education Faculty Human Ethics Committee seeking ethics approval to modify your project.

The Chair of the Education FHEC has reviewed the application and has approved your request to:

To extend the approval period to the 1 September 2013.

The following standard conditions apply to your project:
• **Complaints** - If any complaints are received or ethical issues arise during the course of the project, researchers should advise the Secretary of the Education FHEC.

• **Limit of Approval** - Approval is limited strictly to the research proposal as submitted in your application while taking into account the conditions and approval dates advised by the FHEC.

• **Variation to Approval** - As a consequence of the previous conditions, any subsequent variations or modifications you wish to make to your project must be notified formally to the FEHC. This can be done using the 'Application for Approval of Modification to Research Project' which is available at:
http://www.latrobe.edu.au/research-services/ethics/HEC-application.htm

• A condition of approval is that you submit a Progress Report to the Committee annually throughout the approval period, to cover activities of the previous calendar year. Reports are due on **12 February.** Failure to submit a progress report may result in the withdrawal of Human Ethics approval. The form is available from http://www.latrobe.edu.au/rgso/ethics/human.htm.
Final reports are due within 6 months after the expiry date of the approval period.

On behalf of the Committee, best wishes with the success of your project.

Yours sincerely,

Joan Freeman
Executive Secretary, Education Faculty Hur

cc: Supervisor/s Dr H. Nicholas & Prof. R. Lewis

Appendix 7: Statement of Audit Trail

UNIVERSITY OF LANGUAGES & INTERNATIONAL STUDIES
VIETNAM NATIONAL UNIVERSITY
Pham Van Dong Road, Cau Giay District, Hanoi, Vietnam
Telephone: (84-4) 3754 7269; Fax: (84-4) 37548057
Website: http://ulis.vnu.edu.vn/english/

Statement of Audit Trail

Melbourne, 11th January, 2013

I have had the chance to read parts of the study by Xuan Thu Dang and certify that:

1. I have randomly sampled 10 interviews in Vietnamese (3 with university leaders, 6 with language teachers and 1 with ICT support staff) and found that the transcripts accurately match what is said in respective audio interview files.
2. The selection of interesting quotes to be used in chapters regarding results of data analysis and discussion is a fair representation of the respective interviews.
3. The English translation of interview quotes reflects accurately their meanings.
4. The open-ended materials in the questionnaire are fairly coded.
5. I have also checked the English - Vietnamese versions of the study documents (i.e. the Questionnaire, information sheet, consent forms and withdrawal forms) and found that the meanings of the two versions are the same.

Hoang Minh Do
Senior Lecturer of Translation and Interpreting
English Department,
University of Languages & International Studies
Vietnam National University Hanoi, Vietnam
Email: hoangdm@vnu.edu.vn
Telephone: +614 0251 9726
NAATI No. 34305 (Professional Translator, level 3)

Appendix 8: Useful ICT applications from the literature

Table #: Some ICT tools and resources for language teachers (from the literature)

Language skills	ICT tools & ICT resources
Listening	Active Listening in English: (http://skysoftwarehouse.com/programs-for-english-language-learners) Realistic listening passages in everyday situations. TED Talks/ED: inspirational talks good for listening http://www.ted.com/talks; http://ed.ted.com/lessons ESL cyber listening lab: http://www.esl-lab.com/ Breaking news English: http://www.breakingnewsenglish.com/listening.html Webcasts & broadcasting corporations: BBC Radio 4: http://www.bbc.co.uk/podcasts/radio4 BBC: http://www.bbc.co.uk/worldservice/learningenglish/ ABC: http://www.abc.net.au/services/podcasting/ ABC Learn (http://www.abc.net.au/learn/about.htm CNN: http://edition.cnn.com/video/standard.html RSA: www.thersa.org, http://www.thersa.org/events/rsaanimate VOA learning English on YouTube: http://www.youtube.com/user/VOALearningEnglish (video with captions) VOA learning English: http://learningenglish.voanews.com/
Speaking	World Talk (http://eurotalk.com/en/teachers/products/worldtalk/cd) learning speaking through interactive games Skype: text and voice chat tools for speaking http://www.skype.com/en/ Google + / Hangouts: video meetings and chatting http://www.google.com/+/learnmore/hangouts/ VoiceThread: digital storytelling platform, conversations on the cloud: http://voicethread.com/ Online debate: http://www.debate.org/ Viewpoint: online audio/video recording for educational purposes http://clear.msu.edu/viewpoint/ PodOmatic: free voice recording and podcast http://www.podomatic.com/login Seeing questions: http://www.incredibleart.org/files/crit.htm with prompted questions for using images to prompt speaking/debates Pictures of the week: using images to prompt speaking http://lightbox.time.com/category/closeup/ http://www.time.com/time/picturesoftheweek/0,29409,1734854,00.html
Reading	Active Reading (http://www.clarityenglish.com/program/activereading.php) from elementary to advanced level Reading materials for developing readings skills http://www.myenglishpages.com/site_php_files/reading.php

	Reading activities http://www.englishraven.com/Activities_for_reading.html ESL reading: http://iteslj.org/links/ESL/Reading/ Reading strategies http://www.uic.edu/depts/tie/coolsites.htm#reading
Writing	Academic writing guides, ANU: https://academicskills.anu.edu.au/taxonomy/term/99 Academic writing essentials, La Trobe University: http://www.latrobe.edu.au/students/learning/study-skills/writing Academic writing for undergraduate students, Monash University: http://www.monash.edu.au/lls/llonline/writing/general/academic/index.xml Essay writing tools: http://www.squidoo.com/essaywritingtools OneNote: free form information gathering and note taking http://www.onenote.com/ondc Word processing: useful functions, i.e. spelling and grammar, research, thesaurus, word count, translate, track changes, look up, synonyms, document templates, EndNote: useful for referencing http://endnote.com/ Google Docs: collaborative writing https://docs.google.com Online dictionaries: Oxford Dictionaries, Cambridge Dictionaries Online, Merriam-Webster Online Essay map: http://www.readwritethink.org/files/resources/interactives/essaymap/ Read Write Think: http://www.readwritethink.org/
Interpreting	Interpreters training resources http://interpreters.free.fr/ EU speech repository: speeches for interpreting practice http://www.multilingualspeeches.tv/scic/portal/speech_repository?about_project=true Links for recorded resources for interpreting practice http://interpreting.info/questions/507/ Speech Pool: speeches for interpreting practice http://speechpool.net/en/ Resources for interpreting students: http://ec.europa.eu/dgs/scic/become-an-interpreter/recources-for-interpreting-students/index_en.htm EMCI: information about conference interpreting training http://www.emcinterpreting.org/?q=projects

Translation	EU translating and drafting resources: http://ec.europa.eu/translation/index_en.htm Translation fundamentals: http://resources.gengo.com/ Internet resources for translators: http://www.translation.net/translation_resources.html Translator resources: http://www.translationzone.com/en/community/resources.asp Online dictionaries: Oxford Dictionaries, Cambridge Dictionaries Online, Merriam-Webster Online Google Translate https://translate.google.com.au/
Grammar	Grammarly: instant grammar checker http://www.grammarly.com/ Ginger Software: grammar checker http://www.gingersoftware.com/grammarcheck BBC learning English - Grammar http://www.bbc.co.uk/worldservice/learningenglish/language/ Hot Potato: designing grammar exercises http://hotpot.uvic.ca/
Vocabulary	Wordle: word cloud generator http://www.wordle.net/ Quizlet: a quick way to learn vocabulary http://quizlet.com/ BBC learning English - Vocabulary http://www.bbc.co.uk/worldservice/learningenglish/language/ Hot Potato: designing vocabulary exercises http://hotpot.uvic.ca/ Textivate: creating blank filling exercises http://www.textivate.com/
Pronunciation	How you say: free talking English pronunciation dictionary http://www.howjsay.com/ Accent Master: This software uses animated graphics and video to demonstrate how to pronounce discrete sounds. Learners record and compare their waveforms to a model in words and phrases. http://www.accentmaster.com/ Clear pronunciation (sounds & speech) http://www.clarityenglish.com/program/clearpronunciation.php iSpeech: text to speech http://www.ispeech.org/ BBC learning English - Pronunciation http://www.bbc.co.uk/worldservice/learningenglish/language/

Lesson preparation	**Screen capture** ScreenR**:** 5-minute limit; http://www.screenr.com/ Jing**:** Skype for listening; http://www.techsmith.com/jing.html **Audio recording** Audacity: recording and editing audio in mp3 format http://audacity.sourceforge.net/ JetAudio: recording audio in mp3 format http://www.jetaudio.com/download/ **Presentations** Prezi: creating zoom-in, zoom-out presentations http://prezi.com/explore/ Keynote: making a moving presentation http://www.apple.com/au/apps/iwork/keynote/ Present.me: recording and sharing video presentations https://present.me/ Intervue.me: instantly capturing video interviews http://intervue.me/ Slideshare: sharing presentations online http://www.slideshare.net/ Animoto: creation of slideshows, videos https://animoto.com/sign_up MovieMaker: creation of videos, slideshows Accompanying Microsoft Office http://windows.microsoft.com/en-au/windows-live/movie-maker#t1=overview **Social bookmarking** Diigo: collecting and sharing bookmarks https://www.diigo.com/ Delicious: collecting and sharing bookmarks https://delicious.com/ Evernote: note-taking tool http://evernote.com/ Google Keep: note-taking tool https://drive.google.com/keep Symbaloo: visual bookmarking dashboard http://www.symbaloo.com/ **Blogging** WordPress: free webblog publishing tool http://wordpress.com/ Blogger: free webblog publishing tool www.blogger.com/start?hl=en Weebly: free webblog publishing tool www.weebly.com

	Blogspot: free webblog publishing tool www.blogspot.com YouTube: video sharing, great source of video files www.youtube.com Vimeo: video sharing https://vimeo.com/ Google Docs/Drive: web-based word processing for collaboration https://docs.google.com; https://drive.google.com Search engines: Google: www.google.com Google Scholar: https://scholar.google.com Chrome: www.google.com/chrome/ Bing: www.bing.com Alltheweb: www.alltheweb.com/search Deeperweb: http://deeperweb.com/
Classroom teaching	Edmodo: platform for educational learning network https://www.edmodo.com/ Elluminate: web conferencing tool http://www.elluminate.com/Services/Training/Elluminate_Live!/?id=418 WebEx: web conferencing tool http://www.webex.com.au/
Online storage	Drobox: free online storage and sharing (start with 2GB) www.dropbox.com Google Drive: free online storage and collaboration (5 GB) https://drive.google.com Box.net: online storage and collaboration (5 GB) www.box.net Microsoft SkyDrive: free online storage (7 GB) https://skydrive.live.com Adrive: free online cloud storage (50 GB) www.adrive.com MEGA: free online storage (50 GB) https://mega.co.nz
Collaboration Social network community	Facebook: social networking, sharing ideas and materials www.facebook.com LinkedIn: professional social network http://au.linkedin.com/ Wikispaces: community wiki spaces and discussion area www.wikispaces.com Ning: create your own community and share a social network www.ning.com Mindjet: virtual whiteboard for collaboration management www.mindjet.com.au

	Edublogs: education blogs for teachers, students and schools http://edublogs.org/ Twitter: connecting to what is important to you, following others https://twitter.com/
Content sharing	Scoop.it: curating web content of your interest www.scoop.it Paper.li: publishing web content of your interest http://paper.li/ Livebinders: content sharing on the web www.livebinders.com Pinterest: content sharing via online pinboard https://pinterest.com Learni.st: sharing what you know http://learni.st/category/featured MentorMob: great minds share alike www.mentormob.com Scribd: sharing digital documents www.cribd.com Flickr: online photo sharing www.flickr.com
Learning management	Moodle: course management system http://moodle.com/ Udutu: course creation tool, learning management www.udutu.com
E-portfolio	Mahara: eportfolio and collaboration https://mahara.org/

Appendix 9: Useful ICT applications suggested by survey participants

Subjects/skills	Good software programs or websites used or heard about
Listening	Randall's ESL cyber listening lab: http://www.esl-lab.com/ BBC Learning English: http://www.bbc.co.uk/worldservice/learningenglish/ http://www.youtube.com/user/bbclearningenglish VOA Special English: http://learningenglish.voanews.com/ http://www.youtube.com/user/VOALearningEnglish; http://www.manythings.org/voa/scripts/ Englishpod: http://englishpod.com/ English Discoveries Online: http://edo.vn/hanu/Runtime/LoginNew.asp?73736861_4fd067_ YouTube: www.youtube.com Behind The News: http://www.abc.net.au/btn/ Teacher Network (Lesson plans): http://teachers.net/ English Club: http://www.englishclub.com/ Interlink Language Center: http://eslus.com/LESSONS/LISTEN/listen3.htm English dictation tests: http://www.learnenglish.de/dictationpage.html English listening lesson library online: http://www.elllo.org/english/home.htm Euro News: http://www.euronews.com/ Learn German: http://www.dw.de/learn-german/s-2469 German: http://www.nachrichten.de/ Portugal online: http://www.sapo.pt/ French: http://www.edufle.net/ French, TV5Monde: http://www.tv5.org/ French, Radio France Internationale: http://www.rfi.fr/ French interactive: http://www.laits.utexas.edu/fi/ Italian: http://www.ansa.it/ Italian: http://www.adnkronos.com/IGN/News/ Italian, Correre magazine: http://www.correre.it/ Italian, Area News: http://www.audionews.it/Home.aspx dwelle.de nachrichten.de www.hueber.de todoele.net asisehace.net Vietnam Television Voice of Vietnam Radio Vietnam television Corporation VTC www.onestopenglish.com; www.eslgold.com www.englishtips.org; downloading listening materials from rapidshare Sound Forge software to prepare listening tests www.world-English.org; CNN, IELTS listening Audacity Hot Potatoes www.totoele.net/canciones/Cancion_list.asp clip.vn; hoctiengviet.com using news from VietnamNet
Speaking	VOA Special English: http://learningenglish.voanews.com/ BBC Learning English: http://www.bbc.co.uk/worldservice/learningenglish/ http://www.onestopenglish.com/ Using Google to search for relevant websites about presentation skills esldiscussions.com;

	iteslj.org/questions; using PowerPoint slides for lessons + video files to introduce presentation skills todoele.net; cervantes.es www.eslgold.com BBC / pronunciation Using Google to search resources according to teaching topics www.youtube.com newedo.com PowerPoint I show students funny video clips or clips having certain messages to ignite discussions. Sound editing software Using JetAudio to record students' voice Wavosaur free audio editor: http://www.wavosaur.com/ Sound Forge: http://www.sonycreativesoftware.com/soundforgepro Audio recording programs such as JetAudio, hi-q recorder, Windows Media Player Sound recording software "Cool Edit Pro 2.0"
Reading	Search information or questions relating to the topics of lessons so that students can access to relevant background knowledge and new vocabulary Teaching EDO, HANU: newedo.vn, ello.org www.todoele.net; http://cvc.certantes.es/aula/didactired/; www.elmundo.es https://minanokyozai.jp/kyozai/login/ja/renderdo vnexpress.net; www.dantri.com.vn nhandan.org.vn; google.com.vn www.baidu.com; www.google.com onestopenglish.com http://vietnamews.vnagency.com.vn; http://newyorktimes.com www.instituto_camoes.pt sapo.pt; ptwikipedia.org; sapo.pt www.bbc.co.uk; www.cvc.pt news, cultural, social, economic, and political issues from vnexpress.vn or vietnamnet e-newspapers about different areas in which students are interested www.onestopenglish.com; www.eslgold.com
Writing	http://writefix.com/ downloading sample essays fom the internet so that students can learn by comparing with their own essays using many websites supporting teaching and learning, e.g. www.teachers.net, www.englishclup.com, www.google.com http://infomine.ucr.edu; www.britannica.com; www.digital-librarian.com
Pronunciation	Pronunciation power 1, 2; British Council Teaching English,

	ESL Aloud; New English File using language lab using BBC World Service, BBC TV, CNN, ABC, Australian Network (TV); JetAudio using software Elice www.esl-lounge.com/pronunciation.shtml; www.eslflow.com/pronunciationlessonplans.html; http://international.ouc.bc.ca/pronunciation phonetiquedefle.net
Vocabulary	Downloading many word games www.academicvocabularyexercises.com www.vuw.ac.nz/lals/staff/paul-nation/vocrefs/testa.aspx; http://puzzlemaker.discoveryeducation.com; http://www.merriam-webster.com eslprintable.com lepointduffe.net; bonjourdefrance.fr; francaisfacile.com; lexiquedefle.net; PowerPoint using images to teach vocabulary and pronunciation esl-galaxy.com, manythings.org www.englishclub.com The academic word list: http://www.victoria.ac.nz/lals/resources/academicwordlist/ nonstopenglish.com http://vocabulary.com; http://lexicology.com; http://esl.language.com www.ac-nancy-metz wordmagic.com Use Google to search resources according to topics
Grammar	http://a4lsl.org/t.html; www.aif.ru; www.izvestia.ru; http://www.zlat.spb.ru Downloading games/activities for illustration of a particular teaching point zonaele.com
Literature	cliffnotes.com; sparknotes.com Using Google to search for relevant materials www.aozara.gr.jp; https://uraaozara.jpn.org
Interpreting	tienphongonline, dantri online and some other electronic newspapers & some TV programs GoldWave, Sound Forge, DVD Director, Power DVD, Media Player Classic, Total Video Player

	www.europa.eu.it, ww.bbc.co.uk/learningenglish www.cnn.com, www.abc.com.au Audacity, RealPlayer software, and other video editing software Quick Time, Window Media Player using audio files from NHK google.vn; baidu.cn; usee.cn www.xinhua.com.cn BBC learning English Audio software: anysoundrecorder, Sound Forge, GoldWave, Wavepad, Audacity JetAudio, VLC, Flashget Total Video Converter 3.5; www.kouyi.org; www.chinabroadcast.cn; www.cri.cn; www.media.cnr.cn; www.cctv.com;
Translation	Wikipedia, google.de, spiegel.de vnn.vn project documents and online newspapers websites: CNN, BBC, VOA, Washington Post, Google, Bangkok Post, Herald Tribune, Vietnam News www.europa.eu.it, ww.bbc.co.uk/learningenglish www.cnn.com, www.abc.com.au websites about news of Vietnam; Using MS Word ('Track Changes' function) www.naver.com; google.vn; baidu.cn; usee.cn
Phonetics	using BBC World Service, BBC TV, CNN, ABC, Australian Network (TV); using Google to search relevant resources on the internet using websites for illustrations, e.g. Praat
Lexicology	www.manythings.org/vocabulary; www.manythings.org/slang; www.gaseta.ru; www.lenta.ru google.de, wikipedia(de) tienganh123.com, vietcourse
Culture and civilisation	www.parliament.uk; www.america.gov; www.dfat.gov.au/aib/index.html introducing students to maps and locations downloaded from different websites. using data projectors to show illustrations, i.e. images and sound, for students Internet Explorer, PowerPoint, Using Google to search relevant resources on the internet tv5.org (French) wikipedia.com; encarta.com video, flashget

Others	EDO, newedo.hanu.vn manythings.org, RSS - listening & doing 'shadowing' exercise, esl-lab.com using PowerPoint, Windows Media Player

Appendix 10: Demographics

Table 1: Age groups of survey participants

Age group	Survey	Interviews
	(N) Valid Per cent	(N) Valid Per cent
23-25	(39) 20.7	0
26-30	(60) 32.0	(7)16.2
31-40	(59) 31.3	(20) 46.5
41-60	(30) 16.0	(16) 37.3
No response	(34) N/A	0
Total	(222) 100	(43) 100

Table 2: Gender of participants

Gender	Survey	Interviews
	(N) Valid present	(N) Valid present
Male	(43) 19.6	(20) 46.5
Female	(176) 80.4	(23) 53.5
No response	(3) N/A	(0) 0
Total	(222) 100	(43) 100

Table 3: Place of work of survey participants

#	Language group	Place of work	N	Valid %
1	**English**	English Department, Department of Foundation Studies, In-Service Department, International Education Centre, Distance Education Centre	**116**	**52**
2	European languages	French Department, German Department, Italian Department, Russian Department, Spanish Department, Portuguese Division	47	21.5
3	Asian languages	Japanese Department, Chinese Department, Korean Department, Department of Vietnamese Studies, Vietnamese Language Centre	59	26.5

Table 4: Place of work of interview participants

#	Group	Place of work	N	Valid %
1	Leadership	Top leadership of university, English Department, Department of Foundation Studies, In-Service Department, International Education Centre, Distance Education Centre, German Department, Italian, Vietnamese, Portuguese Division, Spanish Department, Vietnamese Language Centre, ICT	18	41
2	Teaching staff	English Department, Department of Foundation Studies, French Department, German Department, Russian Department, Department of Vietnamese Studies, Vietnamese Language Centre	**23**	**53**
3	ICT staff	ICT Centre, Equipment Department	2	6

Table 5: Position of survey participants

Position	Survey	Interviews
	(N) Valid present	(N) Valid present
University President	0	(1) 2.3
Vice President	0	(2) 4.6
Head of Department	(4) 1.8	(7) 16.2
Deputy Head of Department	(5) 2.3	(4) 9.4
Head of Section	(14) 6.3	(4) 9.4
Deputy Head of Section	(3) 1.4	(0)
Director of Centre	0	(1) 2.3
Deputy Director of Centre	(2) 0.9	(4) 9.4
Senior Lecturer	(10) 4.5	(0)
Lecturer	(179) 80.6	(18) 41.8
Tutor	(5) 2.3	(0)
ICT support staff	(0)	(2) 4.6
Total:	(222) 100	(43) 100

Table 6: Status of current employment

Employment status	Survey		Interviews	
	N	Valid %	N	Valid %
Tenured	150	68.2	43	100
Contracted	70	31.8	0	0
No response	2	N/A	0	0
Total:	222	100	43	100

Table 7: Teaching experience of survey participants

Teaching experience	Survey		Interviews	
	Frequency	Valid %	Frequency	Valid %
<5 years	89	40.1	2	4.6
5 years – 10 years	76	34.2	5	11.7
>10 years – 15 years	26	11.7	17	39.6
>15 years – 20 years	10	4.5	7	16.2
>20 years	21	9.5	7	16.2
N/A (ICT staff)	0	0	5	11.7
Total:	222	100	43	100

Table 8: Number of teaching hours/week

Number of teaching hours/week	N	Valid %
3-10	33	15.5
11-20	149	70.3
21-30	27	62.8
31-40	3	1.4
Total:	212	100

Table 9: Teaching modes

	N	Mean	Std. Deviation	1		2		3		4		5	
				N	%	N	%	N	%	N	%	N	%
Q27.1 Face-to-face teaching	221	4.74	.733	3	1.4	3	1.4	11	5.0	14	6.3	190	86
Q27.2 Online teaching	205	1.44	.806	143	69.8	42	20.5	14	6.8	3	1.5	3	1.5

Note: 1=never; 2=rarely; 3=sometimes; 4=often; 5=always

Table 10: Willingness to take part in the interview

	N	Valid %
No	167	75.2
Yes	55	24.8

Appendix 11: Statistical tables relating to data analyses in Chapter 4

Table 1: Descriptive statistics of the 61 items relating to factors affecting ICT use

#	Items	Disagree %	Disagree a little %	Agree a little %	Agree %	Mean	SD
1	I use ICT in teaching because I am aware of the benefits of ICT.	0	0	7.4	92.6	3.93	0.262
2	I use ICT in teaching due to my personal preference.	8	4.7	20.3	67	3.46	0.910
3	I use ICT in teaching due to the pressure from students.	48.3	9	36.8	6	2.00	1.046
4	I use ICT in teaching due to the pressure from teachers.	52.8	12.7	30.5	4.1	1.86	0.990
5	I use ICT in teaching because of the directives from the superiors.	72.9	9	12.6	5.5	1.51	0.915
6	I believe that ICT is very useful for language teaching.	0	0.9	8.8	90.3	3.89	0.337
7	Using ICT would improve my teaching performance.	0.5	1.4	12.8	85.3	3.83	0.444
8	Using ICT increases my productivity.	0.5	2.8	13.6	83.1	3.79	0.500
9	Using ICT helps develop expertise in my subject areas.	1.4	3.7	20.1	74.8	3.68	0.614
10	Using ICT facilitates sharing of teaching experiences.	2.4	2.4	22.3	73	3.66	0.645
11	Using ICT enhances my lesson preparation.	0	2.8	13.1	84	3.81	0.458
12	ICT-enhanced lessons can be re-used.	0.9	3.8	12.2	83.1	3.77	0.554
13	ICT helps me access extensive teaching resources on the internet.	0	0.5	9.3	90.2	3.90	0.319
14	Email is a useful tool for me to communicate with colleagues and students.	0	0.9	10.2	88.9	3.88	0.354
15	Using ICT helps students gain better results in their studies.	2.8	5.2	41.3	50.7	3.40	0.717
16	Using ICT increases study motivations for students.	0	0	18.6	81.4	3.81	0.390
17	Using ICT helps students understand subjects more deeply.	1.4	6.1	46.5	46	3.37	0.665
18	Using ICT promotes autonomous learning.	2.4	4.8	30.5	62.4	3.53	0.700
19	Using ICT helps students practise language skills ubiquitously.	1.9	7.6	28.9	61.6	3.50	0.720
20	Using ICT enhances employability for students in the future.	1.9	2.4	27.8	67.9	3.62	0.633
21	I find it easy to use computer.	6.5	10.3	48.6	34.6	3.11	0.837
22	I find it easy to use the Internet.	3.8	9.4	41	45.8	3.29	0.789
23	I find it easy to use ICT in lesson preparation.	8.5	14.2	50	27.4	2.96	0.870
24	I find it easy to use ICT in language teaching in classroom.	8.1	15.2	53.3	23.3	2.92	0.840
25	I find it easy to use ICT to share teaching experiences with others.	3.8	8.1	50.2	37.8	3.22	0.753
26	I find it easy to train myself how to use ICT in language teaching.	14.3	19	48.6	18.1	2.70	0.927
27	I feel comfortable with the face-to-face teaching mode and do not want ICT in my teaching.	53.3	25.5	14.2	7.1	1.75	0.948

28	I believe that teaching with ICT is more enjoyable than teaching without ICT.	1.9	5.7	24.2	68.2	3.59	0.687
29	Teaching languages totally online is suitable with the present situation of HANU.	54.2	26.9	12.7	6.1	1.71	0.913
30	Face-to-face teaching blended with online teaching is appropriate for HANU.	1.9	3.3	28.8	66	3.59	0.651
31	I have no time to learn how to use ICT.	41.3	32.2	19.7	6.7	1.92	0.937
32	It is very time consuming to use ICT in lesson preparation.	17.1	16.1	32.7	34.1	2.84	1.079
33	For me, it is expensive to use ICT in teaching.	19.4	28.9	35.1	16.6	2.49	0.987
34	I believe that ICT increases workloads for teachers.	17.5	19.8	25.9	36.8	2.82	1.113
35	I cannot control the contents of materials downloaded from the Internet.	25.5	21.2	34.9	18.4	2.46	1.064
36	I have difficulty in classroom management when using ICT.	28.1	23.3	35.7	12.9	2.33	1.023
37	I have had negative experiences with using ICT in classrooms before.	71	18.1	7.1	3.8	1.44	0.788
38	I have succeeded in using ICT in teaching and will continue using ICT.	4.4	10.3	50.7	34.5	3.15	0.778
39	Technical problems often happen and waste a lot of time in lessons.	6.3	13.1	56.3	24.3	2.99	0.793
40	The speed of Internet connection at HANU discourages teachers to use ICT.	2.9	12	38.5	46.6	3.29	0.788
41	Assessment & testing practices at HANU are still paper-based not ICT-based.	1.9	7.8	16	74.3	3.63	0.713
42	The internet easily distracts students from their studies.	7.3	15.6	56.6	20.5	2.90	0.805
43	ICT would facilitate students' violation of intellectual property rights.	8.1	10	50.7	31.3	3.05	0.858
44	ICT has been integrated into the current curriculum at the departmental level at HANU.	20	25.9	24.9	29.3	2.63	1.106
45	Teachers have limited access to HANU computers.	11.8	4.7	32.7	50.7	3.22	0.992
46	Teachers have to share HANU computers with others.	2.4	3.8	14.8	79	3.7	0.655
47	Only some classrooms at HANU are equipped with computers and internet connection.	1.4	1.9	8.6	88	3.83	0.515
48	HANU computers are concentrated in computer labs and in the library.	4.3	1.9	10.9	82.9	3.73	0.704
49	HANU computers rarely have technical problems.	51	33.3	8.8	6.9	1.72	0.892
50	Most of HANU computers have software for purposeful language teaching.	33.2	35.1	24.9	6.8	2.05	0.925
51	Computer software is updated by HANU on a regular basis.	48	30.9	17.6	2.9	1.80	1.066
52	ICT training is customised according to the actual level of ICT skills of HANU teachers.	54.8	18.6	11.1	15.6	1.87	1.128
53	The contents of ICT training courses at HANU meet my need.	51.6	25.5	14.6	8.3	1.80	0.979
54	The frequency of ICT training courses at HANU meets my need.	59.8	23.8	10.6	5.8	1.62	0.894
55	I cannot resolve technical problems when they occur.	10.5	16	40	33.5	2.97	0.958
56	At HANU, technical problems in using ICT in classroom are often solved fast.	23	23.5	46	7.5	2.38	0.922
57	I receive strong support for ICT use from HANU leaders.	15.8	43.4	27.6	13.3	2.38	0.907

58	I receive strong support for ICT use from the leaders of my Department/Centre.	12.2	36	31	20.8	2.6	0.951
59	HANU has an official document guiding the use of ICT in teaching and learning.	38.4	43.2	13	5.4	1.85	0.844
60	This official ICT guideline has been well disseminated to all staff in HANU.	42.3	40.2	13.2	4.2	1.79	0.828
61	At HANU there is culture of sharing experiences in ICT use in language teaching.	14.7	44	28.8	12.6	2.39	0.887

Note: 1 = Disagree; 2 = Disagree a little; 3 = Agree a little; 4 = Agree; SD = standard deviation

Table 2: Frequency of ICT use

Item	N	Never %	Rarely %	Sometimes %	Often %	Always %	Mean	Std. Deviation
Q2.1 Use a computer at home	219	0.9	0.9	11.4	39.7	47.0	4.31	.781
Q2.2 Use the internet at home	216	1.4	0.9	11.6	42.1	44.0	4.26	.807
Q2.3 Use a computer at HANU	199	4.0	15.6	46.2	22.6	11.6	3.22	.980
Q2.4 Use the internet at HANU	201	2.5	18.4	43.3	25.4	10.4	3.23	.953

Note: 1= Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always

Table 3: Quality of ICT facilities at home and at HANU

Item	N	1 %	2 %	**3 %**	4 %	5 %	6 %	Mean	Std. Deviation
Q3.1 Internet at home	218	1.4	0.5	**17.4**	74.8	4.1	1.8	3.85	.642
Q3.2 Computer at home	216	0.9	0.9	**8.8**	81.0	6.0	2.3	3.97	.602
Q3.3 Internet at HANU	206	1.9	15.0	**60.2**	20.9	1.9	0.0	3.06	.717
Q3.4 Computer at HANU	205	2.0	16.6	**56.1**	24.4	1.0	0.0	3.06	.725

Note: 1 = NA; 2 = much less than adequate; **3 = less than adequate**; 4 = adequate;
5 = better than adequate; 6 = much better than adequate

Table 4: ICT facilities available at HANU

Item	Mean	Std. Deviation	No		Yes	
			N	Valid %	N	Valid %
Q1.3 Internet connection	1.69	.464	69	31.1	153	68.9
Q1.2 Laptop computer	1.66	.474	75	33.8	147	66.2
Q1.4 Data projector	1.62	.487	85	38.3	137	61.7
Q1.1 Desktop computer	1.58	.494	93	41.9	129	58.1
Q1.6 Computer lab	1.56	.497	97	43.7	125	56.3
Q1.5 Interactive whiteboard	1.24	.427	169	76.1	53	23.9

Note: 1 = No; 2 = Yes;

Table 5: I'd be more likely to use ICT in my teaching if ...

Item	N	Mean	Std. Deviation	Disagree	Disagree a little	Agree a little	Agree
Q16.2 I had access to LCD projectors in my classes	210	3.82	.495	1.4	0.5	12.9	85.2
Q16.4 I had access to the Internet in my classrooms	211	3.73	.690	4.3	0.9	12.8	82.0
Q16.7 I received more professional development about how to use ICT in teaching	212	3.73	.680	3.3	3.3	10.4	83.0
Q16.6 I had up-to-date information about good practices for ICT use in my subject areas	210	3.72	.641	1.9	4.8	12.4	81.0
Q16.5 The speed of internet connection in my classrooms was faster	212	3.70	.724	4.7	1.4	13.2	80.7
Q16.8 I received more technical support	208	3.70	.700	3.8	2.4	13.5	80.3
Q16.3 I had access to interactive whiteboards in my classes	201	3.68	.677	3.5	1.5	18.4	76.6
Q16.16 I received more support from the leaders of my department/centre	206	3.67	.697	3.4	2.9	17.0	76.7
Q16.14 I had more time to learn how to make full use of ICT in teaching	207	3.65	.666	1.9	4.8	19.8	73.4
Q16.15 I received more support from the HANU leaders	207	3.64	.743	3.9	4.3	15.9	75.8
Q16.1 I had access to more computers in my classes	208	3.54	.827	4.8	7.2	17.3	70.7
Q16.10 I was given financial incentives	205	3.43	.892	7.3	5.4	24.4	62.9
Q16.12 I had more evidence for the usefulness of ICT in my teaching area	204	3.35	.998	9.8	8.8	18.1	63.2
Q16.13 My teaching workload involved a maximum of 3 days a week at HANU	207	3.31	1.005	10.1	9.2	20.3	60.4
Q16.9 I was publicly praised for using ICT in teaching	206	2.96	1.132	17.0	15.0	23.3	44.7
Q16.11 I had a chance to be promoted to a higher position because of my ICT use in teaching	205	2.37	1.200	33.7	22.4	17.6	26.3

Note: 1 = Disagree; 2 = Disagree a little; 3 = Agree a little; 4 = Agree;

Table 6: Perceived usefulness

Item	N	Mean	SD	Not useful		Useful		Very useful		Useful + Very useful
				N	Valid %	N	Valid %	N	Valid %	Valid %
Word processing	191	2.88	.326	0	0	23	12	168	88	100
Email	147	2.87	.337	0	0	19	12.9	128	87.1	100
Internet search	171	2.94	.246	0	0	11	6.4	160	93.6	100
Internet download	156	2.85	.356	0	0	23	14.7	133	85.3	100
PowerPoint	170	2.86	.360	1	0.6	21	12.4	148	87.1	99.5
Voice recording	97	2.76	.474	2	2.1	19	19.6	76	78.4	98
Mindmapping	47	2.66	.522	1	2.1	14	29.8	32	68.1	97.9
Audio editing	67	2.72	.517	2	3	15	22.4	50	74.6	97
Educational blogs	60	2.85	.444	2	3.3	5	8.3	53	88.4	96.7
Spreadsheet (Excel)	65	2.69	.557	3	4.6	14	21.5	48	73.8	95.3
Movie making	37	2.78	.584	3	8.1	2	5.4	32	86.5	91.9
Video editing	24	2.63	.647	2	8.3	5	20.8	17	70.8	91.6
E-lecture making	22	2.50	.673	2	9.1	7	31.8	13	59.1	90.9
Web browser	124	2.90	.308	13	10.5	0	0	111	89.5	89.5
Hot Potatoes	19	2.47	.697	2	10.5	6	31.6	11	57.9	89.5
Screencasting	18	2.50	.707	2	11.1	5	27.8	11	61.1	88.9
Voice chat	26	2.46	.706	3	11.5	8	30.8	15	57.7	88.5
Video conferencing	17	2.35	.702	2	11.8	7	41.2	8	47.1	88.3
Photo editing	22	2.45	.739	3	13.6	6	27.3	13	59.1	86.4
Podcast	10	2.30	.823	2	20	3	30	5	50	80
VoiceThread	5	1.80	.837	2	40	2	40	1	20	60

Note: 1 = Not useful; 2 = Useful; 3 = Very useful; SD = standard deviation
Other software/websites: optional

Table 7: Perceived ease of ICT use

Item	N	Mean	SD	Hard		Average		Easy		Average + Easy
				N	Valid %	N	Valid %	N	Valid %	Valid %
Email	145	2.85	.379	1	0.7	20	13.8	124	85.5	99.3
Word processing	189	2.73	.480	3	1.6	45	23.8	141	74.6	98.4
Internet search engine	167	2.73	.484	3	1.8	39	23.4	125	74.9	98.3
Internet download	150	2.59	.532	3	2	55	36.7	92	61.3	98.0
PowerPoint	171	2.60	.549	5	2.9	59	34.5	107	62.6	97.1
Web browser	123	2.73	.513	4	3.3	25	20.3	94	76.4	96.7
Voice chat	24	2.54	.588	1	4.2	9	37.5	14	58.3	95.8
Educational blogs	60	2.65	.577	3	5	15	25	42	70	95.0
Voice recording	91	2.31	.609	7	7.7	49	53.8	35	38.5	92.3
Mindmapping	48	2.13	.640	7	14.6	28	58.3	13	27.1	85.4
Hot Potatoes	17	2.00	.707	4	23.5	9	52.9	4	23.5	76.4
Audio editing	63	1.92	.630	15	23.8	38	60.3	10	15.9	76.2
Video conferencing	17	2.00	.791	5	29.4	7	41.2	5	29.4	70.6
Screencasting	18	1.94	.802	6	33.3	7	38.9	5	27.8	66.7
VoiceThread	6	1.83	.753	2	33.3	3	50	1	16.7	66.7
E-lecture making	20	1.75	.639	7	35	11	55	2	10	65.0
Podcast	11	1.73	.647	4	36.4	6	54.5	1	9.1	63.6
Spreadsheet (Excel)	64	1.81	.753	25	39.1	26	40.6	13	20.3	60.9
Photo editing	22	1.82	.795	9	40.9	8	36.4	5	22.7	59.1
Video editing	23	1.70	.765	11	47.8	8	34.8	4	17.4	52.2
Movie making	38	1.53	.687	22	57.9	12	31.6	4	10.5	42.1

Note: 1 = Hard; 2 = Average; 3 = Easy; SD = standard deviation

Table 8: Frequency analysis of teachers' use of ICT according to language skills/subjects

Skill/subject-based ICT use	N	Valid %	Skill/subject-based ICT use	N	Valid %
Listening	94	55.8	Pronunciation	15	9.2
Speaking	59	36.5	Translation	14	8.8
Reading	27	16.4	Grammar	13	8.2
Interpreting	25	15.1	Literature	9	5.3
Vocabulary	21	12.7	Phonetics	6	3.7
Writing	17	10.5	Lexicology	6	3.7
Cultures & Civilisation	16	9.7			

Table 9: Duration of ICT training

Item	N	Mean	Std. Deviation	1		2		3		4		5	
				N	%	N	%	N	%	N	%	N	%
Total hours of ICT training from HANU over the last two academic years	78	1.99	1.284	37	47.4	20	25.6	14	17.9	3	3.8	4	5.1

Note: 1 = not sure; 2 = 1-5 hours; 3 = 6-10 hours; 4 = 11-15 hours; 5 = over 20 hours

Table 10: Competence and confidence in ICT use

COMPETENCE	N	Valid %
Not competent	**27**	**12.4**
A little competent	**136**	**62.7**
Competent	50	23.0
Very competent	4	1.8

CONFIDENCE	N	Valid %
Not confident	**24**	**11.0**
A little confident	**126**	**57.8**
Confident	61	28.0
Very confident	7	3.2

Table 11: Contents of ICT training courses organised by HANU

Item	N	Mean	SD	No		Yes	
				N	Valid %	N	Valid %
Internet search skills	82	1.40	.493	49	59.8	33	40.2
Word processing	82	1.37	.485	52	63.4	30	36.6
Use of PowerPoint	82	1.34	.477	54	65.9	28	34.1
E-lecture preparation	82	1.27	.446	60	73.2	22	26.8
Audio editing	82	1.27	.446	60	73.2	22	26.8
Use of Excel	82	1.15	.356	70	85.4	12	14.6
Video editing	82	1.11	.315	73	89.0	9	11.0

Note: 1 = No; 2 = Yes; SD = standard deviation

Table 12: Summary of main reasons for ICT non-use from an open question in the survey

Reasons for ICT non-use	**Key words Vietnamese**	**Key words English**
There is a lack of equipment.	Thiếu thiết bị	Lack of equipment
Computers and internet are not provided in classrooms.	Phòng học không có máy tính và internet	No computers and internet in classrooms
Classroom conditions do not allow ICT use.	Điều kiện lớp học không cho phép	No conditions for ICT use in the classroom
I have no equipment.	Không có thiết bị	No equipment
Quality of facilities is not good.	Thiết bị chất lượng không tốt	Not good quality of facilities
It is time-consuming to prepare lessons using ICT.	Tốn thời gian	Time consuming
Low remuneration, therefore no motivation	Thù lao thấp	Low remuneration
The subjects I teach do not require ICT use.	Môn học không yêu cầu dùng ICT	Subject non-requirement
Due to the lack of ICT competency	Thiếu năng lực ICT	Lack of ICT competency

Research question 2: Factors influencing ICT use

Table 13: KMO and Barlett's test of threee groups of items

		Group 1	Group 2	Group 3
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.834	.787	.739
Bartlett's Test of Sphericity	Approx. Chi-Square	1754.338	1967.576	1209.521
	df	190	276	136
	Sig.	.000	.000	.000

Table 14: Mean inter-item correlations of Factor 6 and Factor 7

Summary Item Statistics – FACTOR 6							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.144	2.980	3.307	.327	1.110	.053	2
Inter-Item Correlations	**.519**	.519	.519	.000	1.000	.000	2

Summary Item Statistics – FACTOR 7							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.410	3.149	3.602	.453	1.144	.051	4
Inter-Item Correlations	**.339**	.283	.420	.137	1.483	.002	4

Table 15: Inter-relations of 11 factors

		TPB	PBS	EOU	PBAE	TP	IT	LA	G	LS	PFO	DFT
TPB	Pearson Correlation	1	.660**	.418**	.368**	.016	.010	.066	.068	.141	.083	-.060
	Sig. (2-tailed)		.000	.000	.000	.828	.891	.353	.364	.054	.251	.400
	N	205	199	196	196	198	183	199	178	188	193	201
PBS	Pearson Correlation	.660**	1	.374**	.340**	.067	.023	.117	.083	.040	.181*	.037
	Sig. (2-tailed)	.000		.000	.000	.348	.760	.099	.269	.587	.012	.603
	N	199	204	197	195	198	183	199	180	189	190	203
EOU	Pearson Correlation	.418**	.374**	1	.492**	-.173*	.001	.045	.039	.278**	.034	-.177*
	Sig. (2-tailed)	.000	.000		.000	.014	.990	.533	.599	.000	.642	.012
	N	196	197	203	196	200	184	198	181	190	192	201
PBAE	Pearson Correlation	.368**	.340**	.492**	1	-.075	-.214**	.122	-.177*	.034	.184*	.047
	Sig. (2-tailed)	.000	.000	.000		.290	.003	.085	.017	.643	.011	.507
	N	196	195	196	201	200	185	199	181	190	190	200
TP	Pearson Correlation	.016	.067	-.173*	-.075	1	-.263**	.188**	-.037	-.260**	.183*	.397**
	Sig. (2-tailed)	.828	.348	.014	.290		.000	.008	.620	.000	.011	.000
	N	198	198	200	200	205	186	202	183	192	193	204
IT	Pearson Correlation	.010	.023	.001	-.214**	-.263**	1	-.405**	.369**	.377**	-.271**	-.374**
	Sig. (2-tailed)	.891	.760	.990	.003	.000		.000	.000	.000	.000	.000
	N	183	183	184	185	186	189	187	181	187	178	188
LA	Pearson Correlation	.066	.117	.045	.122	.188**	-.405**	1	-.216**	-.211**	.232**	.390**
	Sig. (2-tailed)	.353	.099	.533	.085	.008	.000		.003	.003	.001	.000
	N	199	199	198	199	202	187	206	183	193	192	204
G	Pearson Correlation	.068	.083	.039	-.177*	-.037	.369**	-.216**	1	.285**	.085	-.070
	Sig. (2-tailed)	.364	.269	.599	.017	.620	.000	.003		.000	.263	.345
	N	178	180	181	181	183	181	183	185	183	176	184
LS	Pearson Correlation	.141	.040	.278**	.034	-.260**	.377**	-.211**	.285**	1	-.307**	-.276**
	Sig. (2-tailed)	.054	.587	.000	.643	.000	.000	.003	.000		.000	.000
	N	188	189	190	190	192	187	193	183	195	184	194
PFO	Pearson Correlation	.083	.181*	.034	.184*	.183*	-.271**	.232**	.085	-.307**	1	.390**
	Sig. (2-tailed)	.251	.012	.642	.011	.011	.000	.001	.263	.000		.000
	N	193	190	192	190	193	178	192	176	184	197	193
DFT	Pearson Correlation	-.060	.037	-.177*	.047	.397**	-.374**	.390**	-.070	-.276**	.390**	1
	Sig. (2-tailed)	.400	.603	.012	.507	.000	.000	.000	.345	.000	.000	
	N	201	203	201	200	204	188	204	184	194	193	209

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Note: TPB: teacher perception of benefits
PBS: perceived benefits for students;
EOU: ease of use; LS: leadership support
PBAE: positive beliefs, attitudes and experience
TP: technical problems; G: guidelines;
IT: ICT training; LA: limited access;
PFO: pressure from others;
DFT: disadvantages for teachers

Table 16: Internal consistency of inhibiting and facilitating factors in the second order factor analysis

Component 1: Inhibiting factors Alpha = .72; 6 items; N = 101 = 45.5%	Factor loadings	Mean	Standard Deviation	Cronbach's Alpha if Item Deleted
DFT	.718	2.91	.78	.641
IT(recode)	.707	3.51	.81	.680
LS(recode)	.632	2.72	.79	.704
TP	.589	3.22	.62	.693
LA	.588	3.72	.56	.691
PFO	.528	2.14	.97	.672
Component 2: Facilitating factors Alpha = .73; 4 items; N = 188 = 84.7%	Factor loadings	Mean	Standard Deviation	Cronbach's Alpha if Item Deleted
TPB	.821	3.81	.32	.667
EOU	.766	3.01	.67	.674
PBS	.764	3.58	.42	.658
PBAE	.709	3.40	.56	.648

Note: TPB: teacher perception of benefits; TP: technical problems; G: guidelines;
PBS: perceived benefits for students; IT: ICT training; LA: limited access;
EOU: ease of use; LS: leadership support; PFO: pressure from others;
PBAE: positive beliefs, attitudes and experience; DFT: disadvantages for teachers

Summary of two new scales from the second order factor analysis

No	Scale	No. of items	Cronbach's alpha	Average Item Mean	Std Deviation	N
1	Component 1: **Inhibiting factors**	6	.72	3.04	.50	101
2	Component 2: **Facilitating factors**	4	.73	3.45	.34	188

Table 17: Independent regression analysis of inhibitors/facilitators and ICT use for classroom teaching

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.946	.088		10.724	.000					
	Inhibitors	.066	.029	**.225**	2.299	.024	.225	.225	.225	1.000	1.000
1	(Constant)	.594	.090		6.625	.000					
	Facilitators	.160	.026	**.414**	6.198	.000	.414	.414	.414	1.000	1.000

a. Dependent Variable: **ICT for classroom teaching**