TOWARDS AN EFFECTIVE INTEGRATION OF ICT IN AN EFL SETTING IN A VIETNAMESE HIGHER EDUCATION CONTEXT

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ABSTRACT

This thesis explores English as a Foreign Language (EFL) university teacher experiences and practices of integrating Information and Communication Technology (ICT) in their teaching in a public higher education institution in Vietnam. The ultimate goal is to identify what makes their ICT integration effective and flexible enough to meet the needs and expectations of students and teachers in this context. To this end, a theoretical framework and methodology based on a critical realist ontology and focussed ethnography were adopted. The critical realist theoretical framework combines Bhaskar's (1978) domains of reality (the real, the actual and the empirical) with Archer's (1995) social domains (structure, culture and agency) in order to identify the underlying mechanisms driving EFL teacher's experiences and practices in ICT integration as well as inhibiting and enabling factors influencing this integration. The focussed ethnography combines four methods of data collection (critical discourse analysis of policy texts, questionnaires, observations, and interviews) in order to obtain a complete picture of the phenomenon within its cultural context. Eleven policy texts were selected at international, national and institutional levels to examine what potentially, directly and indirectly shaped and influenced the teachers' ICT integration practices and experiences. One hundred and thirteen (*n=113*) teachers from a cohort consisting of five departments and centres within the institution answered the questionnaires which yielded teachers' self-reported ICT practices, and what encouraged and/or prevented them from integrating ICT into their teaching. Six EFL classroom teachers were observed to examine how they actually used or integrated ICT in their teaching and whether their concerns and the national and institutional concerns impacted on their actual practices. Thirty five teachers took part in one-on-one interviews (some before and some after the observations) providing further insights into inhibiting and enabling factors.

This study shows that the drivers for an effective and flexible integration of ICT in a Vietnamese EFL university setting depend on how responsive, adaptive and timely teachers are to meet student needs and expectations. The most influential factors enabling individual teacher's movement from potential effective and flexible integration of ICT to actual effective practices are their teaching passion, a thirst for further ICT training opportunities and networking opportunities. However, this study shows that it is not enough for leadership to provide a strong policy vision, it is also necessary to provide practical support for staff and tangible rewards to facilitate ICT integration. It is also necessary to communicate specific guidelines on how the vision and an appropriate pedagogy can be realised within the local constraints in order to ensure

effective and flexible integration in the Vietnamese higher education context. Like the staff, institutions need to be responsive, adaptive and timely to staff needs in order to ensure they can meet student and government demands and expectations.

This study makes two major contributions to the field of ICT in higher education and English Language Teaching (ELT). First, it opens up new approaches in the use of focussed ethnography in conducting an ICT-related research in the Vietnamese context. It also proposes the Responsive-Adaptive-Timely (RAT) model that can be used to facilitate an effective integration of ICT in ELT in this and similar contexts. The use of this model can potentially move educators, leaders and EFL teachers from a focus on merely using ICT and devices to being more aware of their own practices and the professional development required to unleash teachers' effective and flexible integration of ICT.

STATEMENT (THESIS DECLARATION)

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968. I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

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1. ICT and ELT terminologies used in higher education

CALL	Computer Assisted Language Learning
CU	Capital University
EFL	English as a Foreign Language
ELT	English Language Teaching
ET	English teacher
HEIs	Higher education institutions
ICT	Information and Communication Technology
IT	Information Technology
NFLP	National Foreign Language Project
R2D2	Reading, Reflecting, Displaying, Doing
SAMR	Substitution, Augmentation, Modification, Redefinition
TESOL	Teaching English to Speakers of Other Languages
TPACK	Technological Pedagogical Content Knowledge

2. Policy texts

MOET Directive	MOET Directive on Enhancing the Teaching, Training and Application of Information Technology in Education Sector between 2008 and 2012 (MOET, 2008) (PT1)
TESOL Framework	Teaching English to Speakers of other Languages (TESOL) Technology Standards Framework (Healey, Ioannou-Georgiou, Kessler, & Ware, 2009) (PT2)
MOET Guideline 201	Guideline on IT Task Implementation for the Academic Year 2009-2010 (MOET, 2009) (PT3)
MOET Guideline HE 2010	Guideline on IT Task Implementation for the Academic Year 2009-2010 for Universities and Colleges (MOET, 2010)
Draft Report	Self-Evaluation Report of Capital University 2010 – 2011 (Provided by CU staff) (PT5)
TESOL Vietnam	Project on Building the ICT Application Competence Standards for Vietnamese Teachers of English (provided by CU staff) (PT6)
MOET Guideline 2014	Guideline on IT Task Implementation between 2013 and 2014 (MOET, 2013) (PT7)
MOET Guideline 2015	MOET Guideline on IT Task Implementation for the academic year 2014-2015 (MOET, 2014) (PT8)
Horizon Report 2014	The NMC Horizon Report: 2014 Higher Education Edition (Johnson, Becker, Estrada, & Freeman, 2014) (PT9)
Horizon Report 2015	The NMC Horizon Report: 2015 Higher Education Edition (Johnson, Becker, Estrada, & Freeman, 2015) (PT10)
ICT Training VN	Training for Teachers on ICT-Supported Pedagogy 2015 (provided by CU staff) (PT11)

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CHAPTER 1
INTRODUCTION

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1.1   Introductory background

The integration of technology in the Vietnamese higher education sector in general, and in English teaching in particular, is driven by a range of economic and social developments. This chapter briefly introduces the economic and social context of Vietnam and its effects on English teaching and technology integration, and how technology-related events and policies have impacted on government, institutional and student demands and expectations of university teachers. Also, the main points of each chapter of this thesis are summarised and the rationale for each thesis component is presented.

1.1.1   An economy in transition

The Vietnamese economy has experienced a comprehensive reform called the *Doi Moi* (or Renewal Period) since 1986, marking a shift from a centrally planned economy to a socialist-oriented market economy (Dang & Foster, 2015; London, 2006). Although the *Doi Moi* chiefly focussed on the economy, education was also important in the reform process. The Vietnamese Government has since called for active participation of the (higher) education sector to facilitate the country's economic and educational transformation (Dang & Foster, 2015). As part of the *Doi Moi*'s change, the Government of Vietnam wanted to establish wider and deeper contact with other economies worldwide, especially those from the Western world. The Vietnamese leadership viewed educational development as a way to enhance this 'global integration' (Hang, 2009, p. 174). English is perceived as the universal language of business, diplomacy and education, and recognised as 'the key to [access to] science, technology and commerce' (Denham, 1992, p. 64). Therefore, the Ministry of Education and Training of Vietnam (MOET), the highest organ in the political system in charge of the education sector, officially introduced English as a Foreign Language (EFL) to the national education system at both school and higher education levels in the early 1990s (Denham, 1992, pp. 64-66). When Vietnam obtained full membership of the World Trade Organisation (WTO) in 2007, the need to penetrate into other world economies became increasingly urgent as Vietnam wished to 'engage deeply' with the outside world (Thanh & Duong, 2009, p. 116). As an active member of the Association of Southeast Asian Nations (ASEAN), Vietnam, like nine of the 10 other ASEAN countries, has

come to view English as a force for 'globalisation and modernisation' (Kirkpatrick, 2014, p. 25).

As English is regarded as the key to help Vietnam engage with the outside world, the teaching of English has become increasingly important in Vietnam. The English language has been a compulsory school subject since the early 1990s (Denham, 1992), and was formalised as one of the five compulsory subjects for the national final exams in 2007 (Hoa & Tuan, 2007). In the higher education sector, although most subjects are taught in Vietnamese and the mainly non-English medium higher education institutions (HEIs) in Vietnam do not have English as a recognised medium of instruction (Im & Kim, 2015), there has been a trend in using English as a medium of instruction in courses such as tourism, business administration, and international studies, where students interact with people from other countries on completion of their degrees, particularly in the leading public universities (Im & Kim, 2015; Le Ha, 2013; Marsh, 2006).

1.1.2   Demand for English instruction and teachers

The enhanced status of English in Vietnam (Duong & Chua, 2016) has necessitated a growing number of Vietnamese teachers of English who are expected to have a high level of 'language proficiency' (Dang, Nguyen, & Le, 2013, p. 53). It was proposed that at least 80,000 new English language teachers were required in Vietnam's state schools as of 2010 (Parks, 2011). As of 2014, this figure jumped to 100,000 English teachers (Vietnamnet, 2014). This increasing demand suggests that even more qualified English teachers will be required in the future in Vietnam. English teachers from school to university level are expected to enable students to use English 'confidently in their daily communication, their study and work in an integrated, multi-cultural and multi-lingual environment… by 2020' as set out in the Prime Minister's Decision 1400/QĐ-TTg dated 30 September, 2008. In a developing country such as Vietnam where English is a foreign language, not a second language (Kirkpatrick, 2014), ensuring students are proficient in English in a 'non-English speaking' environment (Madrunio, Martin, & Plata, 2016) is a Herculean challenge for the Vietnamese teachers of English who are usually EFL speakers themselves. The 'Teaching and Learning Foreign Languages in the National Education System, Period 2008-2020' project stipulates that all Vietnamese teachers of English are required to be confident users of English. To be recognised as qualified teachers of English, they are required to obtain at least a B2 level for primary and secondary English teachers and C2 level for university teachers (Van Huy & Hamid, 2015). These levels of proficiency are based on the Common European Framework of Reference for Languages assessment system which is widely known as the CEFR framework (MOET, 2014). A B2 level is described as an upper-intermediate level of English, while a C2 level is described as a proficient user with a

mastery of the language understanding 'virtually anything heard or read' and 'able to express himself/herself fluently and precisely' in complex situations (Europe, 2014, p. 24).

A shortage of English teachers at both school and university levels coupled with serious teacher training challenges have made the task of ensuring student proficiency difficult to achieve (Denham, 1992, p. 65; Van Huy & Hamid, 2015). Teacher training remains challenging because historically, before the *Doi Moi* process, most foreign language teachers in Vietnam were teachers of Russian and French. To cope with the increased demand for English, these teachers undertook an English teaching training programme or language transfer programme offered by their institution. In addition, the latest application of the CEFR framework has forced EFL teachers to adapt and become adept at 'intercultural communication' themselves and in teaching 'intercultural competence' to their students (Nguyen, 2014, pp. 171-172).

1.1.3 Expectations of EFL teachers

In order to ensure effective student proficiency in English and meet the expectations of a globalised learning environment, further demands are made of the already pressured English teaching workforce. Along with increasing the English teacher's own English language proficiency, there has also been a push towards reforming pedagogy, as briefly mentioned above. In a study conducted on EFL teaching pedagogy in Vietnam two decades ago, Kramsch and Sullivan (1996, p. 200) argue that EFL Vietnamese teachers were required to obtain an appropriate pedagogy that meets 'global and local needs of learners of English'. In addition, in 2006, the MOET called for a move away from grammar-based and teacher-centered pedagogy in English teaching towards a 'more practical orientation' so that EFL classroom teaching is designed to provide authentic experiences for students (Dang et al., 2013, p. 53). Thus, teacher training colleges and universities are encouraged to enhance English language teaching (ELT) pedagogy in a way that is 'less academic' and more pragmatic, bringing students closer to the 'real life contexts' (Dang et al., 2013, p. 53).

One element in this new pedagogical focus is the expectation to integrate technology into teaching with an appropriate pedagogy (Kumar, 2015; Lin, Wang, & Lin, 2012). In this thesis, technology refers to 'digital applications, all electronic devices and network in all of their forms' (Healey et al., 2009, p. 3). It is believed that technology integration enables learners to experience learning with real world contexts that nowadays include a variety of (digital) technologies (Valtonen et al., 2015). Technology integration in EFL is supposed to play a role in enhancing the interaction between teachers and learners. It is viewed as a transformational

element assisting in the transition of EFL teachers' role from a knowledge provider to a 'learning counsellor' (Tudor, 1993, p. 24).

The importance of technology integration into English language pedagogy in Vietnam is further indicated by the adaptation of the Teaching English to Speakers of Other Languages (TESOL) Technology Standards Framework (Healey et al., 2009) for the Vietnamese context and broad promulgation across the ELT in the higher education sector. As a result, the competence standard of ICT application for Vietnamese teachers of English has been designed and put into practice since 2013 (see the ICT section 2.4.3 in the context chapter and policy text PT6 of section 5.2 in policy analysis chapter for an in-depth analysis). Vietnam is not unique in this regard. Technological competency has become a common expectation across the developed and developing world where teachers are expected to use technology as an integral part of their daily teaching (Kazemi & Narafshan, 2014; Klimova & Semradova, 2012; Reilly, 2012; Warschauer, 2000). As suggested by local Vietnamese studies and the proceedings of national language teaching workshops, Vietnamese teachers of English are expected by the MOET, students and their peers to know how to employ ICT tools to improve students' language learning experience (Bui, 2015; Dang, Pham, Ngo, & Ngo, 2012; Hue & Ab Jalil, 2013; Nguyen, 2013).

Vietnamese teachers of English are experiencing pressure to increase ICT integration from two primary sources. The first source of pressure is the Vietnamese Government as reflected in a series of resolutions calling for fundamental reforms which have a direct impact on university teachers (Harman, Hayden, & Nghi, 2010; Van Chuong, 2014). In Vietnam, resolutions are the basis for providing guidelines which all ministries, departments and branches are obliged to follow and resolutions dictate all other policies and administrative documents issued by MOET and institutions under its control. In the Vietnamese documentation and consequently in this thesis, although acknowledging the general definition of technology provided above, I focus on information and communication technology (ICT), sometimes called digital technologies in the documentation. Under Vietnamese law (Justice, 2006, p. 134), directives explain the details of resolutions as taken up by various government departments, and ICT integration is reflected at both resolution and directive level.

One example of a resolution is Resolution No.29 NQ-TW, dated 14 November 2013, which focussed on 'basic and comprehensive education and training reform' with technology integration as an essential priority. In the details of the Resolution No.29, it is noted that teachers at all levels in the education system are expected to effectively employ digital technology tools.

An example of a typical directive is MOET's Directive 55 on promoting teaching, training and applying ICT in education. In this document, MOET selected the academic year 2008-2009 as the year of ICT application in education. This document further indicates that educators, including EFL teachers, are expected to integrate ICT into their daily teaching (Hue & Ab Jalil, 2013). Focussing particularly on EFL teachers, the MOET launched the National Foreign Language Project under Decision No. 1400/QĐ-TT of the Prime Minister, dated 30 September 2008, aiming to provide English training and ICT enhancement for EFL teachers nationwide for the period between 2008 and 2020 (Government, 2008). EFL teachers are required to provide evidence that they meet a series of technology standards required for effective teaching. These government policies directly impact on institutional policies communicated to teachers, as all educational institutions are regulated and monitored by MOET. Students are also indirectly made aware of the policies through the Student Evaluation of Teacher (SET) assessment form, mandated for all courses since the early 2000s, that includes questions on whether a teacher effectively integrates technology in their classroom teaching (Harman & Bich, 2010; Nguyen & Mcinnis, 2002). Because of this strong impact of the MOET, despite the *Doi Moi* process, the central government retains a direct impact on higher education in Vietnam. The policy texts arising from Resolution No.29 and Decision No. 1400/QĐ-TT are explored in the policy analysis chapter (p. 86).

The second source of pressure on teachers to embrace the use of technology in the classroom arises from students themselves. The international literature suggests that many of today's learners use ICT ubiquitously in their daily life and expect more than the use of ICT in the classroom by teachers; they also expect a personalised learning experience that is 'just enough, just in time' (Rosenberg, 2001, p. 30 & 105) and 'just for me' (Peters, 2007, p. 15). In order to take control of their learning processes using ICT, EFL students expect their teachers to provide them with technological support and guidance on how to use technology (Tri & Nguyen, 2014) in order to enhance their technology-supported 'social learning' (Dogoriti, 2015, p. 402). The New Media Consortium (NMC) (discussed in more detail in the policy data (p. 95) Horizon Report 2014 calls for 'flexibility' in ICT integration so as to 'match student needs with instructional strategies' (Johnson, Becker, Estrada, & Freeman, 2014, p. 19). These new expectations focussing on individual student needs are also common in terms of 'mode, pace, place and time' (Sarkar, 2012, p. 37). In order to meet such an individualised and mobile learning approach, today's EFL teachers, internationally and nationwide, aim to effectively and flexibly integrate technology into their language teaching (Car, Vukovic, Vucak, Pibernik, & Dolic, 2011; Dang & Foster, 2015; Huang, Yang, Chiang, & Su, 2016). This is also the case in

Vietnam as Vietnamese students demand individualised, flexible and more authentic learning experiences (Hong & Songan, 2011). Consequently, student demands and expectations have pushed English teachers to the forefront of technological change and adoption, even though numerous teachers may struggle to use those technologies themselves (Albion, Tondeur, Forkosh-Baruch, & Peeraer, 2015; Chapelle, 2005; Peeraer & Van Petegem, 2015).

There is a wide range of international studies which address ICT integration in higher education and ICT integration in EFL settings. Most higher education ICT integration literature focuses on models of effective integration (Bonk & Zhang, 2008; Puentedura, 2008; Roblyer & Doering, 2010; Venkatesh, Morris, Gordon, & Davis, 2003). Increasingly, the literature on effective ICT integration in EFL settings is focussing on mobile learning (Ishikawa et al., 2014; Wagner, Castillo, Murphy, Crofton, & Zahra, 2014) where students are positioned as participants in ICT learning experiences rather than recipients of information (Chung, Chen, & Kuo, 2015). The literature also shows that technology integration better facilitates EFL learning and teaching communities of practice, thus nurturing better 'student engagement' (Dogoriti, 2015, p. 401; Kharade & Thakkar, 2012, p. 629). There has also been research on the implementation and effectiveness of technology standards derived from the TESOL Technology Framework in enhancing EFL teaching practice (e.g., Healey et al., 2009).

1.2   Research focus

As described above, institutional and student demands have placed dual pressures on English teachers in Vietnam. Thus, their command of English is increasingly expected to approximate native-speaker proficiency (Seidlhofer, 1999); and they are expected to be effective integrators capable of flexible delivery of learning experiences through technology, and effective provision of technology use support (Dudeney & Hockly, 2012). This is potentially particularly problematic in Vietnam, a developing economy with unequal distribution of digital resources.

In Vietnam, a number of studies have been conducted on the impact of ICT use on learner autonomy (e.g., Dang, 2010; Nguyen, 2008) and the uptake of ICT by university lecturers and factors influencing their use of ICTs (e.g., Dang, Nicholas, & Lewis, 2012). However, few studies have focussed on what the impact of ICT policies and demands for 'flexibility' are on pedagogy and teacher identity. Ha (2007), in particular, explores university teacher identity in detail in relation to other aspects of university teaching in Vietnam. Also, although there have been a number of studies on ICT policy in Vietnam (Peeraer, Tran, & Tran, 2009; Peeraer & Van Petegem, 2012), these have focussed on the historical development of policy and/or compared elements of Vietnamese policy to other contexts. No study to date has explored the

discourses represented in Vietnamese ICT policies nor explored teacher perceptions of, and interaction with, policy. Therefore, this thesis explores the integration of ICT and technology-related issues affecting EFL teachers' pedagogy and student learning experience in Vietnamese higher education.

1.3   Research Questions

In order to explore the issues described above, this study aims to answer the following research questions:

1. What are the practices of Vietnamese EFL university teachers and higher education institutions in response to ICT policy and student demands?
2. What are the experiences of Vietnamese EFL teachers when integrating ICT into the higher education classroom?

1.4   Overview of thesis chapters

This chapter outlines the background, research focus and theoretical underpinnings of the study. It provides the major rationale for conducting this study and shows the organisation and structure of the separate chapters.

Chapter 2 describes the intersecting contexts of higher education, ELT in Vietnamese higher education and ICT integration. Chapter 2 also provides a detailed description of the research setting and concludes with the interaction of the three major described contexts and identification of knowledge gaps addressed in this research.

Chapter 3 focusses on studies published in academic journals and international reports on global ICT policy, trends and practices in ELT and Vietnamese literature on ICT integration in the higher education sector and in ELT in particular. This chapter shows that the move towards e-learning, blended learning and distance education is increasing and inevitable. It also shows the need for a pedagogy of flexible integration of ICT and some of the challenges of integrating ICT in a developing country context, such as Vietnam.

Chapter 4 outlines the principles of critical realism and its value as an ontological and theoretical framework for the issue of ICT integration in Vietnam. Archer's (1995) social dimensions of structure, culture and agency which enable an analysis of complex social issues within Bhaskar's (1978) layered ontology layered ontology are particularly emphasised. Chapter 4 also explores the methodology of this study, which is the focussed ethnography. Specific data

collection and analysis methods are also described briefly, along with how they fit into the broad research design, critical realist paradigm and (critical) discourse ethnographic methodology.

In Chapter 5, policy documents concerning ICT guidelines are analysed using a critical discourse analysis (CDA) approach with the aim of examining how ICT guidelines are presented at ministry level, how these guidelines fit with world trends and are interpreted and enacted at the institutional level. Through an analysis of thematic structure, lexicalization and modality, the data in Chapter 5 reveal a complex genealogy of policies with themes and content reproduced, elaborated and transformed.

Chapter 6, the survey data chapter, reports on the self-reported practices of university teachers and their experiences of ICT use through quantitative data and focuses on reporting key issues and conflicting perspectives regarding ICT use in a public university in Vietnam. The quantitative results were obtained using descriptive statistics. The quantitative outcomes identify EFL teachers' demographic and teaching experience implications. The outcomes show that limited institutional impact on integration of technology was made as most teachers sought support from colleagues. The data further show that most participants rated their use of ICT highly, but felt that effective integration of ICTs was inspired by their individual enthusiasm rather than because of institutional support. The survey data also assisted in the identification of key informants reflecting both regular and reluctant users of ICT in their teaching.

Chapter 7 describes the observational data of six participants' EFL classes. The data were analysed using Archer's (2007, p. 42) trajectory of 'Concerns, Projects and Practices'. The observation data were captured in three EFL teaching settings: technology rich, technology poor and during a technical breakdown. The data indicate that although all participants attempted to integrate ICT into their teaching, and in several cases took extreme measures to do so, this integration did not always result in fully flexible and effective ICT-supported pedagogy. In some cases, the integration of ICT met the needs of students for individualised learning opportunities; but in other cases the integration of technology just revolved around 'coping tactics'.

Chapter 8 discusses the one-to-one interview data and highlights the concerns of the participants and the challenges confronting and/or preventing them from moving their 'concerns and projects' into 'established practices' Archer (2007, p. 42). Although all the participants expressed a desire to use ICT and recognized the importance of doing so, they felt constrained by lack of infrastructure and funding; they were also concerned that technology abuse could occur if there is too much emphasis on ICT. On the other hand, they felt enabled by their own enthusiasm and willingness to obtain and use technology even without institutional support.

They were also enabled by a desire to motivate and interact closely with students, and to network with colleagues around the world. These two factors also reflected their concerns to meet the challenges of flexible and effective integration of ICT.

In Chapter 9, the concluding chapter, the main findings are synthesised and discussed. This thesis shows that the Vietnamese EFL university teachers in the study were strongly motivated by individual agency, and the structure and culture of their departments, centres, and institutions as revealed in local and national policies. However, they felt constrained by a lack of practical assistance, resources and funding at a local level, especially for pedagogical development that would assist flexible integration of ICT. In order to facilitate teachers' integration of ICT in an EFL university setting in Vietnam and other developing countries in terms of pedagogy rather than just coping tactics, this thesis therefore proposes a tentative model for flexible and effective integration of ICT. The model operates at institutional, departmental and individual levels and addresses both what the EFL teachers need to do to meet the expectations and needs of their students and what the departments/centres/institutions need to do to meet the needs of their teachers. This model is based on the flexibility dimensions suggested by Collis, Moonen, and Vingerhoets (1997) and Collis and Moonen (2002). The model also includes aspects from the ICT integration models of Bonk and Zhang (2006), Puentedura (2008), and Koehler and Mishra (2009) as well as the staff development model of Tondeur et al. (2012). Finally, implications for future research are provided and the contributions of this thesis to the field of ICT in higher education and ELT are highlighted.

CHAPTER 2
INTERSECTING CONTEXTS
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2.1   Introduction

An understanding of context is particularly important to this study of technology integration at a Vietnamese public university, as the overarching research methodology is ethnography (including discourse ethnography), which requires 'a deep understanding of the people, the organisation and the context' (Myers, 1999, p. 2) and its 'history and circumstances' (Geisler, 2013, p. 237). An in-depth description of context(s) is also important in terms of the research paradigm of this study as, following Bhaskar's (1978) critical realist philosophy, I view reality as consisting of multiple domains covering multiple perspectives. My aim as a researcher is to unveil the 'real mechanisms' underlying these perspectives (Bhaskar, 2008, p. 136). Along with multiple perspectives, the issue of Information and Communication Technology (ICT) integration by English as a foreign language (EFL) teachers involves the following three intersecting contexts: higher education, English Language Teaching (ELT) and ICT integration. In this chapter, each intersecting context is described first from a global perspective and then from a Vietnamese-specific perspective. Finally, how these three contexts intersect is discussed in detail.

2.2   Higher education in Vietnam

2.2.1   High value placed on education

Education in Vietnam has been a 'national priority, national strategy and national policy' (London, 2011, p. 2) since its reunification in 1975 to become the Socialist Republic of Vietnam. This is illustrated by statements of Ho Chi Minh (the country's late President):

> Whether the Vietnamese mountains and rivers will attain glory and whether the Vietnamese land will gloriously stand on an equal footing with the powers in the five continents, this depends to a great extent on your studies. *Special letter written to Vietnamese pupils by President Ho Chi Minh on September 3, 1945, the day after the declaration of Independent Democratic Republic of Vietnam.* (Tich, 2000, p. 41)

> We should grow trees for ten years' interests, and grow man for one hundred years' interests. (Chu, 2015, p. 250)

The quotations presented above, from President Ho Chi Minh, refer to the importance of education in Vietnam, which he notes will help the country keep pace with the world powers. Ho Chi Minh particularly placed emphasis on fostering the country's human capital for long-term development.

In more recent years, supporting education has been an important focus of international aid in an effort to address poverty and illiteracy rates in Vietnam (Fan, Huong, & Long, 2004). It is asserted that investment in education leads to the reduction of poverty by enhancing livelihoods of the people (Fan et al., 2004). International aid efforts in conjunction with government programmes have helped Vietnam obtain a very high literacy rate of 97.3%, as of 2010 (Mai & Yang, 2013, p. 169), which is on a par with developed countries (UNESCO, 2015).

The emphasis on education in Vietnam is similar to other Asian countries, such as Japan, Taiwan, South Korea, China, Thailand and Malaysia. In the early stages of economic development these countries focussed on primary and secondary education to promote a literate workforce for industry (Altbach & Umakoshi, 2004, pp. 19-20). Vietnam, in contrast, has had an unusually long history of emphasising higher education, as noted by Altbach and Umakoshi (2004, p. 19), who state that 'nowhere [else] in Asia have the early stages of contemporary development been dependent on higher education'. The vital status of higher education to the national economy has been consolidated throughout the different stages of comprehensive reform in Vietnam. As mentioned in the introduction chapter (Chapter 1), Vietnam has engaged deeply in the globalisation process and found it necessary to press for 'fundamental and comprehensive' reform of the higher education system (Nghi, 2010a, p. 51) in an effort to ensure the education sector is not lagging behind other countries in the region and the world.

2.2.2 Higher education reforms and governance

Vietnam has a long history of focussing on higher education with its first university, called 'the Royal College [known as Văn Miếu Quốc Tử Giám in Vietnamese]' established in 1076 (Huong & Fry, 2002, p. 128). This oldest tertiary institution has become a symbol for the long standing tradition of learning in Vietnam and the special respect given to university teachers, educators, scholars and students. This emphasis on higher education remains important in Vietnam today.

The most recent set of higher education reforms in Vietnam commenced in 2005 under Resolution (14/2005/NQ-CP) of the Prime Minister of Vietnam dated 2 November 2005 (Law, 2005). The Resolution calls for the implementation of critical reform of higher education in Vietnam. The reform has been sparked by debates regarding the diversification of education in Vietnam, the Higher Education Reform Agenda (HERA) launched by the Ministry of Education

and Training (MOET) in 2005 (Hayden & Thiep, 2007) and in response to global higher education trends. To address the fact that higher education is identified as the 'weakest sector' in the national education system (Tran et al., 2014, p. 25), HERA includes an 'ambitious' plan that aims to have at least one higher education institution listed in the top 200 world universities and 20,000 PhD holders by 2020 (McCornac, 2012, p. 264).

Despite its weaknesses, the higher education sector in Vietnam is viewed as of national importance and is depicted as part of the 'Vietnamese character' (London, 2011, p. 2). Debates centre around three major issues: the relationship of education and livelihoods, the need to reform education policies, and calls to enhance the quality of education (London, 2011, p. 3).

2.2.3 Impacts of world trends on Vietnamese higher education

In line with world trends, higher education in Vietnam has undergone drastic changes over the past 20 years (Joseph & Matthews, 2014; Mai & Yang, 2013), including the following three processes in higher education that are common to Southeast Asian countries: massification, diversification and marketisation (Hong & Songan, 2011, pp. 1277 - 1280).

Massification

Massification in higher education is defined as a trend initiated to 'increase access for university-age students' (Hong & Songan, 2011, p. 1277). Although national universities have expanded dramatically in both size, number and scale in Vietnam and enrolments in higher education have ballooned from 162,000 students in 1992-1993 (Hayden & Thiep, 2007, p. 74) to one million in 1995-1996 (Huong & Fry, 2002, p. 210) and well over 1.3 million in 2005-2006 (Hayden & Thiep, 2007, p. 74), the national universities cannot meet industry demand for highly-skilled workers (Huong & Fry, 2002, p. 130) and consequent student demand for more university places. As of 2013, Vietnam had 204 universities and 215 colleges with a total of 2.26 million students (Dao, 2015, p. 746). Tran et al. (2014, p. 47) even state that there is 'at least a university' in all 68 provinces and cities in Vietnam. University enrolment is forecast to reach 4.5 million students by 2020 (Dao, 2015, p. 746) and the fast pace of development of higher education has paved the way for the privatisation of higher education in Vietnam. There is also a large number of private HEIs and/or people-funded universities entering the higher education sector in Vietnam accounting for 15% of all enrolments (Hayden & Thiep, 2007, p. 76). For instance, as of 2010, there were 80 private HEIs (Tran et al., 2014, p. 50).

Private universities have encountered a range of challenges, including criticism of their input quality, graduate outcomes and pedagogical issues. This is partly because the term 'mass' has a

negative connotation in Vietnam, implying low quality and lower credibility. Although numerous private HEIs have been established, they are not favoured by the public and remain just a 'second choice' for university education (Tran et al., 2014, p. 51) for their failure to meet quality expectations. The latest studies on Vietnamese HEIs (Ashwill, 2015; Dao, 2015; Joseph & Matthews, 2014; Tran et al., 2014) show that the low quality education delivered by these institutions is due to a lack of qualified teachers and academics. Therefore, the challenge in Vietnam, as elsewhere, is to continue to increase student numbers while improving the quality of higher education. It is not possible for the Vietnamese government to carry the entire costs of higher education with increasing massification. Thus, quality assurance mechanisms for private higher education remain a problem because these mechanisms determine whether an HEI is up to standard or just 'sub-standard' (Joseph & Matthews, 2014, p. 26).

A response to massification has been to afford national universities and private institutions more 'institutional autonomy'. This is one of the key elements of reforms in the HERA (Hayden & Thiep, 2007, p. 78). Universities now have more power in determining curriculum, content, selection of staff and students, finance and student performance (Hayden & Thiep, 2007, p. 80) as well as the ability to 'decide and be responsible for [their] resource management and budget planning' (Hayden & Thiep, 2007, p. 79). Financial autonomy is central to the higher education reform debate as it is expected to encourage HEIs to be more independent from government support and more efficient with resources, and also to enhance quality through provision of financial initiatives to teachers and staff.

Although the expenses of higher education are still 'covered partly by state budget, partly by tuition fees paid by students, and partly by production, research, and service contracts between the universities and colleges and their partners' (Can, 1991, p. 172) as they were several decades ago, HEIs now have more rights to realise their own vision (Nghi, 2010b, p. 51) and to negotiate with the MOET regarding the allocation of resources despite continued state intervention. However, simply providing institutional autonomy in terms of finance and self-governance will not necessarily result in effective provision for larger numbers of students at public universities. If inappropriately exercised, such autonomy could result in internal corruption and illicit profit-making (Mai & Yang, 2013, p. 171). Of equal importance is awareness of the complexity of developing an effective autonomous financial system. This takes time and the mechanisms are still under development as part of the HERA process in Vietnam (George, 2010, p. 33) .

The university examined in this study (given the pseudonym Capital University), similar to other universities in Vietnam, has chosen to exercise its financial autonomy in line with the new

regulations. Thus, the interplay between autonomy and government regulation during this reform period is of interest within this context.

Diversification

Diversification refers to different types of education offered either by the public sector or private sector (Hong & Songan, 2011). Diversification in higher education can be seen in the diverse courses and programmes offered by HEIs (Hayden & Thiep, 2007). Diversification in the Vietnamese higher education sector is indicated by different types of HEIs and funding resources for these institutions (Oliver, Thanh, Elsner, & Phuong, 2009, p. 201). Diversification can also be seen in the increasing range of categories of HEIs and types of students, both of which are now core components of Vietnamese higher education. For example, HEIs in Vietnam are categorised as 'junior colleges, universities and academies; and research institutes' (Tran et al., 2014, p. 47). Along with the state-owned (known as public) higher education universities, people-funded (or people-founded) or private universities (known as non-public) have also been established. The public HEIs are entirely financed by the (Vietnamese) state, while the non-public ones are self-funded and operate for profit (Hayden & Van Khanh, 2010). In between public HEIs and non-public higher education sector are semi-public universities and colleges which are founded by the state, yet operate financially by themselves.

Under the impact of massification, evidenced by massive enrolment of students, the diversification of Vietnamese HEIs can be seen in its diversified 'enrolment mechanisms' (Huong & Fry, 2002, p. 130), so that mode of delivery becomes more flexible, thus creating greater access to the higher education sector. Therefore, prospective students may enrol through formal channels such as by participation in the national university entrance exam, or through informal modes such as distance education programmes, or via blended learning opportunities. It is argued that this diversification creates greater flexibility for the higher education sector in terms of different types of delivery offered ranging from 'vocational' to 'universities and research' (Tran et al., 2014, p. 19).

An interpretation of diversified funding involves 'income diversification' and/or 'diversifying financial resources' with which HEIs are particularly concerned (Pham, 2012, pp. 295-296). In an attempt to increase funding resources, financial autonomy has been provided to HEIs, as mentioned earlier. Funds can be maximised by offering different types of training delivery, such as joint cooperation between Vietnamese HEIs and their foreign counterparts. These joint cooperation programmes 'add' income for the Vietnamese HEIs and higher education teachers in Vietnam (George, 2014, p. 109).

One important aspect of diversification in Vietnamese HEIs (through the use of English) is the 'internationalisation' (Duong & Chua, 2016, p. 2) or 'globalisation' of HEIs (Hong & Songan, 2011, p. 1279). This includes encouraging foreign universities to open exchange programmes, encouraging participation in overseas accredited online learning and/or including international online content in a blended learning environment alongside local content, and continuing to invite foreign (educational) providers (e.g., the Royal Melbourne Institute of Technology (RMIT) in Vietnam) (Bjarnason et al., 2009; Fielden & Gillard, 2011). It is proposed that diversification is needed to help produce a workforce who can not only work locally, but also globally with an appropriate level of skills (Tran, 2013, 2015; Trung & Swierczek, 2009). In addition, Vietnam has continued to send its students to study abroad under scholarship programmes launched by the Vietnamese Government or its counterpart organisations.

Marketisation

In concert with massification and diversification, there has been increasing marketisation of Vietnamese higher education. This trend has its roots in the *Doi Moi* comprehensive economic reform which began in 1986, and included the higher education sector (Can, 1991; Duggan, 2001; Hamano, 2008; Tran, 2014). One of the core changes of the *Doi Moi* was restructuring of the economy from a centrally-planned economy to a (socialist-oriented) market economy. Since shifting to a market economy, and to meet the demanding requirements of a new market, higher education has received tremendous attention and is expected to produce highly skilled and qualified employees to meet market demands. HEIs are even entitled to 'take in fee-paying students' to enrol in both formal and informal learning programmes (George, 2014, p. 107). As a result, higher education has sustained a fast pace of development, as seen through the recent increased rate of enrolment described above. As a full member of the World Trade Organisation (WTO) and signatory to the General Agreement on Trade in Services (GATS), Vietnam has to recognise education as part of the 'trade service sector' (Mai & Yang, 2013, p. 169) and to accept open market features such as 'competition, cooperation, win and loss' (Mai & Yang, 2013, pp. 168-169) in an area which was previously completely controlled by the state. All of these economic impacts have resulted in major university reforms (Postiglione, 2011, p. 794).

2.3   English Language Teaching in Vietnam

Despite the local and global factors described above, and East Asian Confucian values (George, 2014; Joseph & Matthews, 2014) which call for an 'investment in education' at any cost (Marginson, 2011, p. 587), it has been argued that further and faster reforms are needed in the 'slow moving' Vietnamese higher education context, in order to enable work-ready students,

quality inputs and outcomes and policies in line with global best practice (Dao, 2015, p. 745). Some critical reforms required relate to the enhancement of English language teaching for students and their teachers (Chong, Loh, & Babu, 2015; Doyle, 2008) as marketisation, massification and diversification are all facilitated through access to information and global interaction (Bui & Nguyen, 2016; Lê Hùng, 2012). English is regarded as an indispensable tool to aid the internationalisation process, with priority given to the higher education sector (Duong & Chua, 2016; Le Ha, 2013). Consequently, most universities in Vietnam, of which a majority are non-English medium HEIs, still strive to deliver programmes 'taught in English' (Harman & Bich, 2010, p. 82). At the same time, as mentioned in the introduction chapter (Chapter 1), the leading universities include a large number of English-medium programmes. The second key area for reform is in ensuring that students and teachers have access to information, and communication with others, through technology. These two elements provide 'access to power' (Daly, 2010, p. 134). In the following sections, English Language Teaching (ELT) in Vietnam and the role of ICT are explored.

As this study examines university Vietnamese teachers of English (hereafter referred to as English teachers) and their departments and centres, the ELT context remains critical in obtaining a holistic understanding of English language teaching and learning in the Vietnamese higher education sector. Universities such as Capital University (CU) currently offer a wide range of disciplines and courses in English, thus issues related to the English-as-a-medium-of-instruction higher education context are explored in this section. The following sections deal with the global spread of English and its influence on (Vietnamese) higher education.

2.3.1 Impacts of the global spread of English

The development and rise of technology leads to increased communication. The global spread of English that facilitates such communication (see Ferguson, 2007; Kuppens, 2013; Nunan, 2003; Seidlhofer & Seidlhofer, 2004) has led to an increasing number of English users worldwide. In 2000, there were approximately 1.5 billion English users for whom English is 'a first, second or foreign language' (Crystal, 2000, p. 3). Its global spread is synonymous with globalisation, with some viewing the 'words globalisation and Englishisation [as] inseparable' (Marsh, 2006, p. 30). Vietnamese users in general, and Vietnamese HEIs in particular, are directly influenced by this trend as Vietnam aims to prepare students for many fields ranging from 'business, technology to entertainment' (Nunan, 2003, p. 590).

The power of English is particularly pertinent in academia with an increased volume of research publications written and communicated in English (Le Ha & Barnawi, 2015; Smith, 2015;

Wachter, 2015). Almost two decades ago, Swales (1987, p. 42) commented that more than '50% of the millions of academic papers' published annually are written in English. This is still the case as evidenced in the birth of the term 'English for Research Publication Purposes' (ERPP) (Flowerdew, 2013, p. 250), signalling English domination of international research culture. The ubiquity and usefulness of English is enhanced because speakers from different countries 'use English together' (Flowerdew, 2013, p. 4) in academic contexts.

The dominant use of English in non-English HEIs is promoted worldwide (Im & Kim, 2015; Murray, 2013). For instance, as noted above, millions of academic papers are published in English each year. As a result, academics having a good command of English can benefit from increased use of English in the education sector. In addition, the replacement of other languages (particularly the language user's native language or their mother tongue) with English as a medium of instruction, has resulted in a need for innovation in teaching methodologies. For example, traditional teaching methods including the translation grammar approach have been challenged by the communicative language teaching (CLT) approach (Bui & Nguyen, 2016; Lewis & McCook, 2002; Ngoc & Iwashita, 2012). In Vietnam, as the rise of English is perceived as creating a bridge for Vietnamese HEIs to keep abreast of international education trends (Duong & Chua, 2016), ELT in Vietnam is seen as being diversified and is provided in many different settings.

2.3.2   ELT in Vietnam

In Vietnam, English is used in formal and informal settings. In formal settings, English is a compulsory discipline or subject taught in schools and universities. In informal settings, English is used 'between Vietnamese and Vietnamese; between Vietnamese and English-speaking foreigners and between foreigners and foreigners' (Denham, 1992). Richards (2015, p. 7) describes this fact in the following quote:

> One often meets young people in [Asian] countries where English [as a foreign language] has relatively restricted usage but who have achieved an advanced level of ability in spoken English despite the fact that they have never lived outside of their country or had prolonged opportunities for face-to face contact with native-speakers of English or advanced users of English'.

Due to the need to learn English for various communication modes, numerous English centres and teaching and testing syndicates have been established in Vietnam. The shift in second language education from Russian, French and Chinese to English has affirmed the status of English in the national education system. For many years, Russian was a compulsory subject in

the secondary school system and a highly appreciated language in Vietnamese education. However, the complete replacement of Russian with English is predicted because in Vietnam, since 1992, English has enjoyed the status of a working language in many fields of society including science, technology, commerce and education (Denham, 1992). In addition, the shift to English aims to boost 'cooperation in higher education' between Vietnam and the rest of the world (Tran et al., 2014, p. 54). Consequently, international pressures have ensured that the influence of English on the educational system of Vietnam keeps growing. English learning is compulsory for students aged 11 to 12 upward. The development of private or people-funded schools has lowered the compulsory age for learning English and many private schools teach English 'to children as young as five or six' (Nunan, 2003, p. 604). As argued earlier, the higher education sector is a central focus of educational reform in Vietnam and the focus of this study. Therefore, the next section specifically examines ELT in the Vietnamese higher education sector.

2.3.3   ELT in Vietnamese higher education

In the Vietnamese higher education system English is delivered both as a 'discipline and a subject' (Van Van, 2010, p. 9). As a discipline, students in Vietnam can obtain a degree in English, through a Bachelor, Masters or doctorate programme. As a subject, English is integrated into and can be compulsory for all degree programmes. Van Van notes that motivation to learn English in Vietnam differs from one student to another, yet all students look forward to acquiring a good command of English in order for 'international exchange and better paid employment' (Van Van, 2011, p. 13).

ELT teacher education and training is an issue of great concern to many stakeholders in Vietnam including academics, political leaders, students and people. In the higher education system, Vietnamese teachers of English include teachers who are locally trained by Vietnamese HEIs specialising foreign language training, and some overseas trained teachers. Many hold Bachelor or Masters degrees in English and a few have a PhD in English.

In Vietnamese universities, English is mainly taught by Vietnamese lecturers who are regarded as non-native English speakers. Many have a Teaching English to Speakers of Other Languages (TESOL) degree or a Masters in English from a native English-speaking country such as Australia, England, New Zealand or the United States. Although there is a number of different forms of English as a global language, teachers of English in Vietnam generally hold firm to the standards of British or American English (Jenkins, 2006, 2015; Varghese, Morgan, Johnston, & Johnson, 2005). This is probably due to the fact that language learners in Asia, including

Vietnamese students, believe that native English speakers 'are necessarily better English teachers' than the non-native English teachers (Lin, Wang, Akamatsu, & Riazi, 2002, p. 311).

Vietnamese learners and teachers of English have been criticised for this reification of the native speakers as well as their own weaknesses. Language learners in Asia, in general, are considered 'passive' (Lewis & McCook, 2002) and Vietnamese learners, in particular, are described as lacking the learning autonomy needed to effectively learn English (Dang, 2010), having low qualifications for teaching English, lacking knowledge of ELT pedagogy and lacking ICT knowledge and skills (Le Ha, 2007).

In response to this issue, the Ministry of Education and Training launched the National Foreign Language Project for delivery during the period from 2008 to 2020 with a vision of enhancing the qualification of thousands of English teachers across all levels of the education system (Hung, 2012). In the higher education sector, there has been also a push towards learning English to prepare for advanced higher education study overseas, such as pursuit of Masters and PhD degrees, and for internationalisation purposes (see Le Ha, 2013, pp. 162-163). This push has resulted in a tectonic shift in the country's national language policy with English taught in parallel with the 'national language' [the Vietnamese language in this study] (Altbach, 2015, p. 7). In contrast to the ideal 'qualified teachers', unqualified EFL teachers are criticised for having an 'uninteresting teaching style', lacking 'communicative activities', having 'limited ability in classroom organisation' and lacking well-prepared lesson planning (Nguyen, Warren, & Fehring, 2014, p. 94).

Although the global spread of English is recognised, teachers in Vietnam as elsewhere are still challenged as to the best way of accessing effective resources for teaching English. It has been suggested that one particularly useful way of delivering authentic resources in EFL contexts is through access to and effective use of online teaching and learning materials (Archer et al., 2014; Golonka, Bowles, Frank, Richardson, & Freynik, 2014). The remaining challenge lies in EFL university teachers having 'limited use of teaching aids and technology' (Nguyen et al., 2014, p. 94), thus influencing the quality of ELT at the tertiary level. The following section examines the role of Information and Communication Technology (ICT) in providing a critical context for ELT globally, and in Vietnam in particular.

2.4 Information and Communication Technology in Vietnam

2.4.1 Clarification of term 'ICT'

For this study, Information and Communication Technology (ICT) refers to the 'technologies that provide access to information through communication mediums' (Sonawane, 2003, p. 2). Such communication tools include 'radio, T.V., computer, laptop, tablets and many other hardware and software applications' (Dhanwani, 2014, p. 281), plus internet, wireless networks and mobile devices. In Vietnam, the preferred term for these technologies is Information Technology (IT). This term was first used for programming, database design and expert systems, but now is widely accepted among Vietnamese academics, government, business and industry to refer to all ICTs. Therefore, while in this thesis the term ICT is used, some quotations from Vietnamese policy makers or scholars refer to the same technologies as IT and/or digital technologies.

The general purpose of ICT integration in education is 'to communicate, and to create, disseminate, store, and manage information' (Tinio, 2003, p. 4). In a growing digital learning environment, knowing how to use information for the betterment of teaching and learning can determine the success of instructors and learners (Bhuasiri, Xaymoungkhoun, Zo, Rho, & Ciganek, 2012) as ICT creates better access to learning spaces and opportunities for both (Hennessy & Haßler, 2015). This study particularly examines technological applications in the EFL classroom for varied purposes, that is, of 'instructional preparation, instructional delivery and as a learning tool' (Inan & Lowther, 2010, p. 138).

2.4.2 ICT world trends in higher education

The pervasive use of ICT in higher education signals three major trends: open education resources (Dhanarajan & Porter, 2013; White, 2008), mobile learning (James, 2012; Naismith, Sharples, Vavoula, & Lonsdale, 2004; White, 2008) and professional development (Ngo & Picard, 2012 cited in James, 2012). Open education resources refer to educational content exchanged free of charge at a global level (Tinio, 2003; White, 2008) such as the Open Course Ware programmes provided by the Massachusetts Institute of Technology. Open educational resources offer improved access to education for students in Asia (Pawlowski, Pirkkalainen, Gervacio, Nordin, & Embi, 2014). More recently, the emergence of Massive Open Online Courses (MOOCs) has been predicted to create significant changes in the higher education sector (Barber, Donnelly, Rizvi, & Summers, 2013). As a result, the internationalisation of higher education is boosted by ICT use (Van der Wende, 2001) in line with the trend of mobile learning integration and teacher professional development. The mobile learning trend refers to

a shift from 'traditional learning to ICT-based learning' (Aktaruzzaman, Shamim, Huq, & Clement, 2011) and a role shift for teachers from being 'a transmitter of knowledge to a guider of knowledge' (Naismith et al., 2004). These trends have been reflected in recent reports including the NMC Horizon Report 2013 and 2014 (Johnson et al., 2013; Johnson, Becker, Estrada, & Freeman, 2014), which are analysed in depth in the critical discourse analysis of ICT policy texts in Chapter 5. The main argument in these reports is that for educational institutions to stay competitive and effective in the digital world, university teachers are expected to be at least ICT literate, if not 'tech-savvy' (Blackburn, 2015; James, 2012).

2.4.3   ICT integration policy timeline in Vietnam education

In Vietnam, although ICT in education remains a focus in Vietnam's national educational policy (Peeraer & Van Petegem, 2015; Pelgrum, 2001) and its development is regarded as being in the 'early stage' (Dang, 2011, p. 11), ICT has witnessed increased popularity for 'more than two decades' (Dang, 2011, p. 11). The Government of Vietnam, past and present, has attached special importance to the integration of technology in education. For example, Vo Van Kiet, the late Vietnamese Prime Minister, signed Resolution 49/CP entitled 'Resolution of the Government on the Development of IT in the Country during the 1990s' in August 1993 (cited in Do, Dieu & Goodman, 1996, p. 90). As the Government of Vietnam 'recognises the significance of technology, particularly the integration of ICTs in all sectors', senior politicians have voiced the need for 'leveraging ICTs for development' (Kalathil & Boas, 2010, p. 10). The use of ICTs in development is specifically pertinent in education. ICT in the Vietnamese context is not just an add-on or 'burden' (Chandra, 2013, p. 129), but serves as a driver for development.

In order to formally promulgate the importance of integrating technology in higher education the Ministry of Education and Training (MOET) issued Directive No. 55/2008/CT-BGDDT dated 30 September 2008 regarding strengthening ICT use in teaching and training in the educational system for the period 2008-2012 (MOET, 2008b). Shortly after, on 20 October 2008, the MOET released the Guideline No. 9772/BGDĐT-CNTT on the Implementation of IT Tasks for the academic year 2008-2009 comprising 16 major tasks, summarised in Table 2.1 below. This Guideline has had a direct influence on ICT policy in higher education as discussed in the policy analysis data.

Table 2.1 Major Tasks of ICT Integration in Vietnam

Major tasks	Description
1	2008 -2009 was The Year of ICT (The year of promoting the use ICT in education)
2	Build ICT task force in education
3	Build broad-band internet connection
4	Build e-mail system with domain name @moet.edu.vn
5	Explore and provide educational websites
6	Organise meetings, conferences, training, and teaching via educational network
7	Explore and teach through the use of open source code
8	Strengthen the integration of IT in renewing teaching and learning methods at different levels
9	Continue teaching of informatics in secondary school
10	Develop educational and e-learning programmes
11	Integrate ICT into building 'Friendly school, Active learners'
12	Integrate ICT into educational management and administration
13	Provide ICT training to teachers and educational leaders
14	Invest in ICT infrastructure in schools and education departments
15	Promote international cooperation regarding ICT integration in education
16	Conduct assessment of the actual situation of ICT use in educational institutions

Note. Adapted and synthesised from MOET (2008)

All of the above focussed tasks centre around the integration of ICT in teaching and learning for educators and learners (at an individual level), education departments nationwide (at a group level) and educational institutions (at an institutional level).

Within the decade from 2000-2010, ICT in Vietnam has been influenced by a wide range of activities and policies. Table 2.2 below summarises these ICT-related plans as a timeline. Vietnam has followed a staged process in the past decade with significant milestones concerning ICT policy: the 'Master Plan for ICT in education for the period 2001 to 2005' (Peeraer & Van Petegem, 2011, p. 974) and the 'Year of ICT' from 2008 to 2009' (Peeraer, Tran, & Tran, 2009, p. 1). A year later, in 2010, the National Steering Committee on ICT and Ministry of Information and Communications of Vietnam launched the ICT White Book in order to solve 'significant problems of training and educating IT professionals and users' (Winley & Lau, 2012, p. 13).

Table 2.2 ICT Integration Timeline in Vietnam

A decade of ICT policy guidelines in Vietnam	
Master Plan For Information Technology In Education for the period 2001-2005	2000
Directive 58 on enhancing the application and development of IT for the industrialization and modernization	2001
Decision of PM on approval of Implementation of Directive 58	2002
Directive 29 on Enhancing Teaching, Training and Integrating ICT in Education for the period	2003
Decision of PM on approval of the developing IT human resources programme to 2010	2004
Decision of PM on Approval of the Strategies of Developing ICT in Vietnam until 2010, Benchmarks for 2020	2005
Decree on Information Technology Application in State Agencies' Operations	2006
Guidelines MOET to DOETs for enhancing the implementation of some activities on ICT	2007
Directive 40 on the movement "Friendly School, Active Students" at secondary schools in the period 2008 - 2013	2008
Directive 55 on Promoting Teaching, Training and Applying ICT in Education - Period 2008-2012	2009
Guidelines MOET to DOETs for IT tasks in school year 2008-2009	2010

Note. Adapted from Peeraer et al. (2009, p. 6)

The integration of ICT in Vietnamese higher education is following an 'inevitable' trend (James & Hopkinson, 2009, p. 22) due to the global impetus towards increased technology and learning in the digital environment. Therefore, if Vietnamese HEIs are to remain strong and competitive, they need to follow this trend. However, as noted above, the Vietnamese higher education sector has not just followed the inevitable trend, but also attempted to be proactive.

Although the policies discussed above may be seen as 'visionary' and are expected to be 'a strong agent for change' in 'educational practices' (Sarkar, 2012, p. 30), policy does not necessarily translate into practice and 'the reality [in the Vietnamese context] is different from the rhetoric' (Watson, 2006, p. 204). One of the biggest challenges that impacts the use of ICT in Vietnamese education, and higher education, is access to technology. Flor (2001, p. 4) notes:

> Nowhere else in the world is the Digital Divide considered more of an enigma than in Southeast Asia. This region boasts of countries that are in the forefront of digital technology. Singapore, Taiwan, Malaysia and Thailand are producers and exporters of such technology. Also in this region are countries, which may be considered as the most deprived in ICT - Laos, Cambodia, Myanmar and Vietnam.

The issues of unequal access and the general challenges of ICT integration in developing countries are described in greater detail in the literature review (Chapter 3).

2.4.4   ICT integration in Vietnamese higher education

As far as Vietnamese higher education is concerned, educational and political leaders seek to reform higher education via ICT integration by 'upgrading training methodologies by introducing a diversity of learning styles, interactive teaching modes and application of ICT to learning and teaching' (Harman & Bich, 2010, p. 67). However, higher education reform through ICT has numerous challenges. In the case of Vietnam, the first challenge is associated with how to obtain a good command of English, which is essential to ICT integration at a global level. Most ICT tools are in English rather than Vietnamese. For Vietnam, this has limited the ability of lecturers and students to take full advantage of the ICT tools available and to employ the most up-to-date technologies (Steinmueller, 2001, p. 199). As discussed above, higher education in connection with the use of ICT has been classified into three categories: e-learning, blended learning, and distance learning (Kumar, 2008, p. 556). The following sections examine these categories in the Vietnamese higher education context.

E-learning

There have been concerted efforts at a national level to facilitate e-learning in Vietnam, particularly since Vietnam's e-readiness was rated as 112th out of 199 countries by UNESCO in 2005; Vietnam also obtained a low e-readiness score of 3.12 out of a possible 10 in 2006 (UNESCO, 2006, p. 5). Although great progress has been made in terms of the number of people having access to the Internet in Vietnam, in 2015, Vietnam was still ranked by the World Economic Forum as 85th out of 143 ranked countries in terms of networked readiness (World Economic Forum, 2015). This was behind Mongolia, China and Thailand. The networked readiness index refers to a framework consisting of the following 10 pillars: 'political and regulatory environment, business and innovation environment, infrastructure, affordability, skills, individual usage, business usage, government usage, economic impacts and social impacts' (World Economic Forum, 2015, p. 257). Vietnam received uneven scores according to this framework. On the one hand, the infrastructure score was extremely low (2.1 out of a possible 7), and the 'political and regulatory environment', and 'business and innovation

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environment' were ranked at 3.6 and 3.8 out of a possible 7, respectively. On the other hand, affordability of Internet and mobile technologies were ranked extremely highly (6.8 out of a possible 7). Even within the pillars, the scores for the sub-indicators varied. For example, although overall the impact of the Internet in Vietnam was ranked low (3.6 out of 7), its social impacts were ranked more highly (4.3 out of 7). In addition, although the overall quality of education was ranked at 3.3 out of a possible 7, Vietnam had an overall high skills score due to its secondary education rate of 75% and extremely high adult literacy rate of 94.5% (World Economic Forum, 2015, p. 257).

Over the period of 2003 to 2016, a number of initiatives have been taken at both national (government) level and institutional level. Since 2003, a number of key universities in Vietnam have launched e-learning including the 'Vietnam National University, Hanoi (VNU Hanoi), the Hanoi University of Technology (HUT), Vietnam National University, Ho Chi Minh City (VNU Ho Chi Minh) and Can Tho University' (Do, 2014, p. 160) and e-learning solutions have been introduced in numerous areas such as medical education (Churton, 2011), teacher education (Nguyễn, 2012), and biomedical education (Huy, Thuan, & Hai, 2010). An official MOET e-learning platform was officially adopted in 2007 as an 'Online learning and online testing application for the enhancement of training quality' (Nguyễn, 2012, p. 8). This learning platform was developed as part of a national competition entitled '*Vietnamese Talented People*' organised by the MOET in conjunction with the Ministry of Science and Technology, and the Ministry of Communication and Information. This competition aimed to honour individuals, groups of individuals and/or organisations whose ICT products could be applied in all fields of life, particularly in the education sector. The official MOET position is that e-learning has the potential to greatly enhance the classroom environment and consequently the aim is to provide Vietnamese learners with state-of-the-art technological tools to facilitate their learning (KoreaNet, 2015). However, an effective adoption of e-learning depends on a variety of factors such as equal access to technology, the technological competency of both teachers and students and the use of appropriate pedagogy (Dang & Foster, 2015).

In line with international trends, a number of ICT-supported projects have been launched in higher education. For example, an e-learning platform was launched between Vietnam and the Coca-Cola Company under *The Coca-Cola Company's ICT in Education* programme with the 'establishment of the first Coca-Cola Learning Centre in Ho Chi Minh City' in 1997. The project involved cooperation between Coca-Cola, the Ministry of Education and Training (MOET) and the National Youth Union Coca-Cola with a total funding of USD 375,000. The main aim of this project was to offer wider e-learning opportunities to young learners on a large scale through

the establishment of 40 Learning Centres in 33 cities and provinces (Tinio, 2003, p. 27). This project also provided Internet access, educational software and textbooks to students and teachers. However, many remained doubtful regarding the quality of such online programmes and/or projects with industry collaborators (Dang & Foster, 2015; Hayden & Thiep, 2015). Other factors influencing the successful implementation of e-learning in Vietnam relate to a lack of 'management commitment, bureaucratic [leadership] and technological availability' (Dang & Foster, 2015, p. 1).

Blended learning

Blended learning, though interpreted differently by different scholars, is often perceived as a hybrid learning consisting of face-to-face and online learning approach (see Gecer & Dag, 2012; Osguthorpe & Graham, 2003; Singh, 2003). Blended learning is not a new concept in contemporary higher education (Dziuban, Moskal, & Hartman, 2005; Johnson et al., 2013). Blended learning is adopted and adapted in different contexts so as to achieve six major aims in terms of enriching and facilitating learning experience (Gil & García, 2012). The six aims are briefly described as follows (Gil & García, 2012, pp. 59-60):

- Creation of new learning environment: as long as the students are provided with computer-assisted learning environment, they can learn everywhere and anytime at their own pace. The learning environment is, therefore, not restricted only to the physical setting of classroom; it remains open and informal environment for students to operate within.

- Generation of diverse opportunities for learning: students can access to learning platform anytime suitable to their schedule.

- Reduction of dependence on teachers: students could enhance their learning autonomy.

- Diversification of relations: students have the opportunity to build their teamwork and do networking.

- Students take responsibility over their own assessment: co-check, co-assessment and self-checked activities are carried out to make students more responsible for their academic work.

- Recognition of students' efforts: what students do and accomplish during the learning process is acknowledged properly.

Emerging from the trend to integrate ICT into teaching and learning in higher education, several blended learning projects are under way between the Vietnamese government and its partners. For example, blended learning projects launched by Australia in cooperation with the World Bank offered USD 30,000 worth of grants to 18 recipient organisations to support the learning process of 1,278 people (WorldBank, 2013).

Distance learning

Distance learning refers to learning opportunities that can be 'accessible at a time, place, location and pace that is convenient to the user' (Mangan, 2001) and are mainly achieved via online platforms (Moore, 2013). In the higher education sector, the emergence of distance learning helps remove geographical barriers so that students can get better access to learning opportunities offered by HEIs with their individual choices. Over time, higher education in Vietnam has been transformed by following the global trend of distance learning in providing learners greater access to (higher) education. To this end, distance learning is designed to ensure access to higher education opportunities is open to more students, formal and informal, and promotes life-long learning and reduces financial burden on learners (Peters, 2002). Vietnamese HEIs offer distance learning in different ways. Some HEIs offer distance learning purely through an e-learning platform, and some in a blended-learning format which includes some face to face contact with lecturers. CU, the institution in this study, falls into the latter category. In keeping up with developed countries, Vietnamese HEIs are aware that, regardless of whatever forms of distance learning might be employed in higher education, the main purpose is to meet educational requirements to enhance learning outcomes (Hayden & Thiep, 2015; Pham, Thalathoti, & Dakich, 2014).

Aside from learning opportunities achieved through ICT, user acceptance of ICT pedagogies is also an issue, as reported by Dang (2010). Dang (2010) notes that ICT use results in changes to the traditional ways of teaching, learning and conducting research. Concerning teaching style, the most obvious change brought about by ICT is the replacement of 'chalk and talk' setting into an ICT-supported environment, such as the use of PowerPoint presentations, online resources and other digital tools (Annapurna, 2012, p. 26). Use of other ICT materials such as these has become common practice in tertiary institutions in Vietnam. Higher education in Vietnam is expected to address the issues of '*what* is learned, *when* and *where* learning will take place and *how* the learning will occur' (Oliver, 2002, p. 2). This matter is more deeply explored in the literature review chapter, section 3.5.2 (p. 38) and in the interview chapter, section 8.2.8 (p. 204) in the higher education sector.

Although ICT has been perceived as a change agent with striking impacts on Vietnamese HEIs, there is concern regarding how ICT is integrated in education as 'the reality is different from the rhetoric' (Watson, 2006, p. 204). Obstacles to ICT integration in higher education may come from policies related to staff employment in this sector. While EFL teachers in particular are required to have more proficient skills in, and an appropriate attitude towards, ICT integration for betterment of their teaching (Rastogi & Malhotra, 2013), EFL academics in particular are often recruited to work for several HEIs, which may lead to a lack of 'full commitment' (Altbach, 2013, p. 38) and a lack of time to keep updated with ICT innovations. Another challenge to ICT integration in Vietnamese HEIs is a lack of infrastructure and training programmes with only a few universities having 'significant ICT infrastructure' (Smith, Toulmin, & Qiang, 2003, p. 36).

2.4.5   ICT integration in ELT

In Vietnam, several studies have been conducted on the relationship between ICT integration and ELT covering a wide range of EFL-related topics. Pham (2014), Nguyen (2013) and Dang and Robertson (2010) examined the effects of using Web 2.0 to examine how EFL learners and teachers experienced this digital learning environment and the extent to which student engagement was enhanced. Pham (2014) presents findings related to how the Web 2.0 learning environment can influence or shape EFL teacher's teaching practices innovation and their identities. Pham's (2014) study also shows that innovation in teaching methods leads to better student engagement. Findings from Nguyen's (2013) study shows that the use of free Web 2.0 tools (e.g., Skype, Dropbox or YouTube) not only enhanced the student's involvement in learning process, but also improved their language skills. Findings from Dang and's (2010) study mainly focussed on pedagogical issues in relation to the online engagement patterns of Web 2.0. Three mains patterns found in their study are called 'task-oriented, content-oriented, and community-oriented' (Dang & Robertson, 2010, p. 5).

Specific learning management systems, such as Moodle (Dang & Robertson, 2011) and Edmodo (Giang & Van Minh, 2014) have also been examined. Three factors influencing the use of a web-based learning management were 'personal, institutional, and social' (Dang & Robertson, 2011, p. 1). These factors were associated with the online interaction patterns mentioned above. Likewise, findings from Giang and Van Minh's (2014) study indicates that Edmodo could be used as an effective solution for ensuring good management of a large-sized class with a variety of learning functions from this web-based learning environment (e.g., discussion, forum and quiz). Another study looked specifically at the use of English Discovery Online (EDO), a web-based learning management system for distance learning (Pham, Thalathoti, Dakich, & Dang,

2012). Findings from Pham et al.'s (2012) study show that learners are mostly concerned with the content provided in an online course.

To date, some studies on ICT in ELT have been conducted in Vietnam. For example, Dinh (2015) examined the Technological Pedagogical Content Knowledge (TPACK) model developed by Koehler and Mishra (2009) to explore different aspects of ICT-related knowledge employed by English teachers at a public university in Vietnam. She found that ICT used by EFL teachers was mainly for teaching and communication purposes. Another important finding in her study was that ICT is mainly teacher-centred rather than student-centred. Another model called the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh, Morris, Gordon, and Davis (2003) was used by Dang (2013) to examine inhibiting and enabling factors influencing the integration of ICT by foreign language teachers in a higher education public university in Vietnam. Dang's (2013) study partly explored barriers and enablers of ICT integration in ELT. Seven barriers were identified: '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 four enablers were identified: 'positive beliefs, attitudes and experience, ease of ICT use, teacher perception of ICT benefits and perceived ICT benefits for students' (Dang, 2013, p. viii). In summary, most of these studies explored aspects of knowledge integration, as in the case of TPACK research, or what hampered or enabled integration of ICT into the EFL setting.

2.5 The research setting, ICT integration and EFL teaching

The research setting in this study is a public university in Vietnam, allocated the pseudonym Capital University (CU) in this study. On its official website, CU states in its mission that, as a leading higher education institution in Vietnam, it aims to use technology to meet all the demands and requirements of the higher education human resource market in the context of international integration. In that mission statement, CU also emphasises its strength as a leading higher education institution capable of providing foreign language training; it also uses English as the major medium of instruction for programmes in economics, technology, business administration, tourism and culture. CU's educational programmes have been changed from providing only foreign language education to a multi-discipline service. The programmes fall into four categories:

- Foreign language training
- Economics and business administration
- Social sciences

- Information technology

In terms of foreign language education, CU offers teaching in 19 languages regarded as foreign languages: English, Chinese, Japanese, Korean, Thai, French, Russian, German, Spanish, Italian, Portuguese, Hungarian, Rumanian, Bulgarian, Polish, Czech, Slovak, and Arabic. The other three categories of programmes described above use English as the medium of instruction.

The number of PhD level staff at CU is modest. In recent years, CU has encouraged staff to undertake a PhD overseas. Those who have finished their PhD abroad have returned to work for CU, including four English lecturers who completed their PhD in the US and Australia. These four English lecturers with PhDs have an intensive English language teaching background. The participants who were recruited in this study come from the English Department (ED), the Foundation Studies Department (FSD), the In-Service Department (ISD), the Distance Education Centre (DEC) and the International Education Centre (IEC). These cohorts are described in detail in Table 4.4 of the theoretical framework and methodology chapter (Chapter 4).

The teachers in this study were all likely to experience the challenges described earlier in this chapter of the critical shift from the traditional teaching of English to an ICT-supported pedagogy in which they are required to use technology in an effective manner coupled with a learner-centred approach. ICT integration in EFL has become ubiquitous and the question is how to make ICT integration flexible enough to meet the needs of the students and institutions and yet at the same time to be effective. In an attempt to seek answers to this question in the context of a developing country, the relevant literature was explored. The next chapter provides a review of the relevant literature on ICT policies, trends and practices. This review also identifies the gaps in knowledge addressed in this study.

CHAPTER 3

LITERATURE REVIEW ON EFFECTIVE INTEGRATION OF ICT IN ELT IN A HIGHER EDUCATION SETTING IN A DEVELOPING CONTEXT

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3.1   Introduction

As identified in the introduction chapter (Chapter 1), there are a number of demands on Vietnamese teachers of English in relation to integration of ICT in a higher education setting. In particular, they are required to integrate ICT so as to meet university students' new expectations as detailed in the context chapter (Chapter 2), as well as meeting the demands of the institution. In this literature review chapter, I draw together the diverse strands of literature related to the notion of 'effective' integration of ICT in higher education so as to meet both institutional and student demands, focussing particularly on developing country contexts. In the following sections, I describe the process taken to develop the literature review, the findings of the review process and finally the gaps which are addressed in the subsequent chapters.

3.2   Literature review search process

3.2.1   Defining inclusion and exclusion criteria

Because of the diverse and extensive literature available on ICT integration, this literature review was limited to studies that explored the ICT practices and policies that related to effective integration of ICT in ELT in a higher education setting. Another major focus was ICT integration in developing countries and emerging technologies in these countries. The following databases were used since they are the primary interdisciplinary databases for higher education research: ERIC, Libris, ScienceDirect, EBSCO, SPRINGER, Wiley Online Library, and Academic OneFile. In order to obtain a more general cross-disciplinary picture, Google Scholar was also utilised. Publications from 2010 to 2016 of the following highly cited higher education/ICT/ELT related journals were also reviewed to assist in the development of keywords: Higher Education Research and Development (HERD), Australasian Journal of Educational Technology (AJET), British Journal of Educational Technology (BJET), and Teaching English to Speakers of Other Languages (TESOL) Quarterly. The literature review

was also first restricted to studies between 2000 and 2016 so as to exclude earlier studies on Computer Assisted Language Learning (CALL) which proliferate in the ELT literature.

The following inclusion criteria were therefore identified:

- They (the included studies) focused on ICT policy and practices in a higher education setting
- They focused on ICT integration in ELT in HE settings
- They focused on teaching in HE with ICT
- They focused on EFL teachers
- The studies were restricted to peer-reviewed published journal articles in reputable journals and reports from Non-Governmental Organisations (NGOs).
- They were published between 2000 and 2016
- They were in English

The following exclusion criteria were applied:

- They (the excluded studies) focused on ICT integration at secondary or high school level
- They focused on EFL learners rather than on EFL teachers
- They focused on testing and assessment
- They focused on technology use out of class
- They appeared in conference proceedings rather than peer-reviewed reputable journals

375 publications were selected using these selection criteria. Then after an initial reading of these studies, 75 publications which most closely met the inclusion criteria above were selected for in-depth review. After an in-depth review of the selected articles, some publications earlier than 2000 were revisited due to the fact that they provided seminal information on the criteria for effective ICT integration. Most notable of these was the study by Chickering and Ehrmann (1996) which introduced seven principles for effective integration of ICT in higher education that are repeatedly cited in the later studies, and the study by Collis, Moonen and Vingerhoets (1997) that introduced the concept of 'open and flexible learning' first in the vocational context (1997, p. 199) and then in higher education (2002, pp. 7 -12). Some of the initial 375 publications that were broader than the narrow search criteria were also revisited due to the key information they provided on effective ICT integration. These include the study by Selwyn, Gorard, Furlong, and Madden (2003) that focuses on adult learners and technology in general rather than specifically on ICTs and higher education, and another by Tondeur and colleagues

(2012) who focus on pre-service teachers rather than EFL teachers in a higher education setting (Tondeur et al., 2012).

Due to the limited number of publications on ICT integration in higher education in developing countries such as Vietnam, some publications in the pre-submission or in-press stage were sources from academic networks such as Researchgate and Academia.com. Other important sources for ICT integration in developing countries were the reports of Non-Governmental Organisations (NGOs) such as UNESCO, OECD and the World Bank (Leye, 2007; UNESCO, 2011) as they have produced bird's-eye view reports on technological impacts on society and education as a whole in these contexts.

3.3   ICT related terminology

The term 'technology' was used in the learning and teaching and ELT literature long before the term 'ICT' came into being. Various technologies have been used in the ELT classroom from phonographs and radio in the 1930s and television in the 1950s and 1960s through to VHS tapes in the 1970s and 1980s and DVDs in the 1980s and 1990s and finally computers and the internet in the late 1990s and 2000s (Bonk, 2015). However, in both the developed and developing worlds, the term 'technology' has a more nuanced definition than just the devices. It is typically viewed as covering the following aspects, as originally suggested by Lievrouw and Livingstone (2002, p. 23) and synthesised by Selwyn (2011, p. 8), as follows:

- *artefacts and devices*: that is, the technology itself and how it is designed and made;
- *activities and practices*: that is, what people do with technologies (including issues of human interaction, organising, identity, cultural practices);
- *context*: that is, social arrangements and organisational forms that surround the use of technologies (including institutions, social structures and cultures).

In higher education, the term technology covers a wide range of connotative meaning and is not simply understood as just the tools, 'computer or peripheral devices' (Lloyd, 2005, p. 3) available for the sake of learning and teaching. Lloyd (2005, p. 3) traced the history of how the term ICT was coined. She found that its 'antecedent' term was IT, which was more focused on technological use in government administration, education and such other areas as 'programming, database design and expert systems' (Lloyd, 2005, p. 3). In the field of ELT, Computer Assisted Language Learning (CALL) was also a commonly employed term before the use of ICT was used to refer to artefacts, practices and contexts related to computers and online learning. A number of studies were undertaken to explore the efficacy of CALL in ELT

(e.g., Kettemann, 1995; Timuçin, 2006; Widdowson, 1992). However, these mainly focused on static computers used in the actual classroom rather than all technology related to learning and teaching.

In this study, the term Information and Communication Technology is used both in its singular form meaning 'the process or outcome' and in its plural form (ICTs) meaning 'specific devices or processes' as suggested by Lievrouw and Livingstone (2002, p. 23). The terms technology, educational technology and IT are also used interchangeably with ICT to reflect the way they are used in the policy texts, questionnaire and interview data.

Due to the fast pace of developments in ICT, the meaning of this term is constantly evolving. For instance, Toomey (para. 3), in 2001, defined ICT as follows:

> Technologies that are used for accessing, gathering, manipulating and presenting or communicating information. ICT could include software, hardware, connectivity (e.g. access to the Internet, local networking infrastructure, and videoconferencing). What is most significant about ICT is the increasing convergence of computer-based, multimedia and communications technologies and the rapid rate of change that characterises both the technologies and their use.

Most recently, Onwuagboke, Singh, and Fook (2015, p. 52) extended the term ICT to cover a very broad spectrum of technology. They emphasised that ICT covers:

> all forms of technology to create, manipulate, store, communicate and disseminate information in its various forms through the network of computers and other emerging technological devices.

In the ELT classroom context, the term ICT can therefore be classified in terms of 'instructional preparation', 'instructional delivery' and 'learning tool' (Inan & Lowther, 2010, p. 138) and refers to all of the following:

- Hardware & software
- Computer Assisted Language Learning (CALL)
- Mobile Assisted Language Learning (MALL)
- Cloud computing
- Computer-based learning, technology-based teaching
- Open source technologies

The way in which ICT is used in the higher education ELT classroom has also evolved and continues to evolve. Early use of ICT is defined in the literature as Education 1.0 since it mainly

focused on using ICT to learn languages and other skills (Harkins, 2008, p. 1). This was swiftly replaced by Education 2.0 or 'Internet-enabled learning' (Harkins, 2008, p. 1), where the teacher remained central, but performed as a mentor and guide assisting students to use web resources such as social media and to interact with each other within the class and/or institution. More recently, however, there has been a movement towards Education 3.0 which, according to Keats and Schmidt (2007), 'is characterized by rich, cross-institutional, cross-cultural educational opportunities within which the learners themselves play a key role as creators of knowledge artifacts that are shared, and where social networking and social benefits outside the immediate scope of activity play a strong role'. In this environment learning outside the classroom becomes as important as inside and a wide range of resources including Massive Open Online Courses (MOOCs) are utilised. As noted by Bonk (2015, para. 8), students have more choice and are not 'confined to one place, one path, one way,' but instead have a choice in the learning process and learning can take place 'everywhere' and is 'thoroughly infused into society' (Harkins 2008, p. 2). The role of the university teacher also transforms into that of a 'curator' or 'learning ambassador', 'who finds and collects ideas, connections and resources to share with students, guiding them along the path of their own development' in a way that is 'personally meaningful to them'. In Education 3.0, learning is also viewed as enabling students' (co)construction of new knowledge (Bonk & Zhang, 2008). Some have even started referring to Education 4.0, implying that students move from (co)constructors of knowledge to producers of 'innovation' and that schools and universities are now located in 'the globally networked human body, a continuously evolving instrument' (Harkins, 2008, p. 2; Marginson, 2016).

This evolving use of ICT for learning and teaching places additional pressures on teachers. They are not only expected to increasingly integrate ICTs, including digital devices and mobile technologies, into their teaching within the classroom and communicate online with students outside of the classroom, but also to radically reform the way they interact into an entirely student-centred pedagogy that promotes autonomous learning and even innovation (Hu & McGrath, 2011). The following two sections therefore explore research on the principles that university teachers can follow to demonstrate that they meet these challenges.

3.4   ICT 'use' versus ICT 'integration'

In order to provide guidance on effective use of ICT, several authors have distinguished between the terms 'ICT use' and 'ICT integration'. For example, while admitting that the terms ICT use and ICT integration are sometimes used interchangeably, Lloyd (2005, pp. 4-5) explains that ICT integration 'is generally taken… to reflect a change in pedagogical approach to make ICT

less peripheral' to education and 'more central to student learning'. Thus the term 'ICT integration' can be viewed as transformational to pedagogy (Lloyd, 2005). The characteristics of ICT use versus integration are detailed in Table 3.1 adapted from Rao (2013). Rao (2013) indicates that if the usage of ICT is not well-planned, does not take place in a sustained manner, is just as an add-on, is used mainly for content delivery and lacks student engagement, it should simply be called ICT use. On the other hand, ICT integration refers to the usage of ICT as an integral part of well-planned pedagogy, the daily teaching routine, student-centredness and for the facilitation of student motivation and engagement.

Table 3.1 ICT Use versus ICT Integration

ICT use	ICT integration
Technology usage is random, arbitrary & often an afterthought	Technology usage is planned & purposeful
Technology is rare or sporadically used in the classroom	Technology is a routine part of the classroom environment
Technology is used to instruct students on content	Technology is used to engage students with content
Focus on simply using technologies	Focus on using technologies to create and develop new thinking processes
More instructional time is spent learning how to use the technology	More instructional time is spent learning how to use the technology to learn
Technology is used to complete lower –order thinking task	Technology is used to complete higher –order thinking task
Technology is used solely by individuals working alone	Technology is used to facilitate collaboration in & out of the classroom
Technology is used to facilitate activities that are feasible or easier without technology	Technology is used to facilitate activities that would otherwise be difficult or impossible
Technology is used to deliver information	Technology is used to construct & build knowledge
Technology is peripheral to learning activity	Technology is essential to the learning activity

Note. Adapted from Rao (2013)

3.5   ICT Practices in EFL: enablers versus barriers

3.5.1.   General principles for effective integration of ICT in higher education

ICT integration as defined above is viewed as a change agent enabling a more effective pedagogy in higher education, where ICT is not just an add-on, but an integral part of good pedagogy. The focus on integration has led to a series of studies with an emphasis on 'pedagogy-before-technology' that have drawn on principles for effective ICT integration (e.g., Chuang, Weng, & Huang, 2015; Jung, 2005; Keengwe & Onchwari, 2012; Putnam, 2013; Rastogi & Malhotra, 2013; Yang & Walker, 2015) in developing contexts.

Some of these principles target the university teachers, most notably Chickering & Ehrmann (1996, pp. 3-6) who identified the following 'good practice principles' for ICT integration:

1. Good practice encourages contacts between students and faculty (in and outside of class)
2. Good practice develops reciprocity and cooperation among students (in and outside of class)
3. Good practice uses active learning techniques
4. Good practice gives prompt feedback
5. Good practice emphasizes time on task
6. Good practice communicates high expectations
7. Good practice respects diverse talents and ways of learning

Besides the many studies that explore principles that the university teacher can follow, a few studies, most notably Tondeur and colleagues' meta-analysis on effective ICT integration (Tondeur et al., 2012) have explored the role of the institution in ensuring effective ICT integration by teachers. In their work on ICT integration by pre-service teachers, Tondeur et al. (2012) developed a model of four concentric circles with the pre-service teacher in the centre. In order to ensure that the pre-service teacher learns to effectively integrate ICT, they argue that he/she first needs to have 'authentic experiences' of integrating ICT, receive 'feedback' on their integration of ICT, have 'role models' who effectively integrate ICT', learn to reflect on their use of ICT, learn about effective 'instructional design' and learn to collaborate around the integration of ICT (Tondeur, Forkosh-Baruch, Prestridge, Albion, & Edirisinghe, 2016, p. 8). The development of these effective individual practices can, however, only occur within an environment of institutional support. Consequently, Tondeur et al.'s third concentric circle highlights the importance of 'access to resources', 'technology planning and leadership' by the institution, 'cooperation within and between institutions' and formal 'training [of] staff' (Tondeur et al. 2012, p. 8). Finally, institutions are only able to work within an educational/political system that supports effective integration where there are 'systematic and systemic change efforts' and where 'theory and practice' are aligned as shown in the outer circle (Tondeur et al., 2012, p. 8). Professional development for university teachers is particularly important since teachers are required not only to be able to integrate ICT into their own teaching practices, but also to teach their students to effectively integrate ICT into their own learning practices. As Hubbard (2004, p. 51) warns:

We should not release our students into powerful learning environments unprepared: It is our responsibility ... to see that they are able to make informed decisions about how to use computer resources effectively to meet their learning objectives.

3.5.2 Principles for effective integration of ICT in higher education in developing countries

Many studies have shown that, as in more developed countries, in developing countries it is no longer a question of 'if to use' or 'when to use' but 'how' to make the best use of ICT in the higher education system (Addo, 2001; Cook, 2003; Cummings et al., 2014). Equally, even when teachers have a 'high level of ICT competence', they do not necessarily have the capacity to effectively integrate ICT in their teaching (Murphy, 2000, p. 5).

Empirical evidence gathered from 46 developing countries, including Vietnam, shows that ICT integration and diffusion has transformed the way in which society operates, in relation to enhancing the 'effectiveness of the [higher] educational system' (Lechman, 2014, p. 23). Ensuring the quality of ICT tools and pedagogy in an environment where there is a lack of infrastructure and difficulties covering the cost of ICT which needs constant updating is challenging in a developing context, leading to fears that ICT integration could potentially be unsustainable (Kozma & Vota; 2014, p. 889). However, despite these challenges, developing countries, especially those in Southeast Asia, including Vietnam, have embarked on HE transformation by promoting the use of ICT in teaching, learning and administration (Annapurna, 2012; Price & Kirkwood, 2014). Also, as highlighted in Chapter 2, despite still lagging behind the developed world, the landscape of ICT integration in Vietnam, like other developing countries, keeps changing and transforming (Hong & Songan, 2011). Consequently, principles for effective integration of ICT, such as those by Chickering and Ehrmann (1996), and principles for the enhancement of professional development, such as Tondeur's circles, become even more important within these more challenging contexts.

3.6 Models of effective integration of ICT

To understand how effective ICT integration can be achieved, numerous models have been developed over the past few decades. In this thesis, I focus on those that are most relevant to the higher education and ELT contexts. The models reviewed are the Unified Theory of Acceptance and Use of Technology (UTAUT) model, the Substitution, Augmentation, Modification and Redefinition (SAMR) model, the Read, Reflect, Display and Do (R2D2) model, and the Technological Pedagogical Content Knowledge (TPACK) model.

3.6.1 The Unified Theory of Acceptance and Use of Technology (UTAUT) model

In order to explore the enablers of an individual university teacher's effective integration of ICT, it is important to explore the factors influencing 'user acceptance and usage behavior' (Venkatesh, Morris, Gordon, & Davis, 2003, p. 447). In order to achieve this end in a systematic

way, Venkatesh et al. (2003) developed the UTAUT model. This model is the outcome of integrating several previous models such as the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behavior (TPB); Model combining the Technology Acceptance Model and Theory of Planned Behavior (C-TAM-TPB), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT) (Raman, Don, Khalid, & Rizuan, 2014, p. 187). The UTAUT is based on the concept that the 'individual reactions to using technology' will lead to the 'intentions to use information technology' and in turn, these intentions lead to the 'actual use of information technology' (Venkatesh et al., 2003, p. 427). In other words, the use of ICT is initiated due to an individual's response to ICT. Their response to ICT use shapes their intention to put technologies into use. Once the intention is established, actual use will take place. The figure below depicts the UTAUT model.
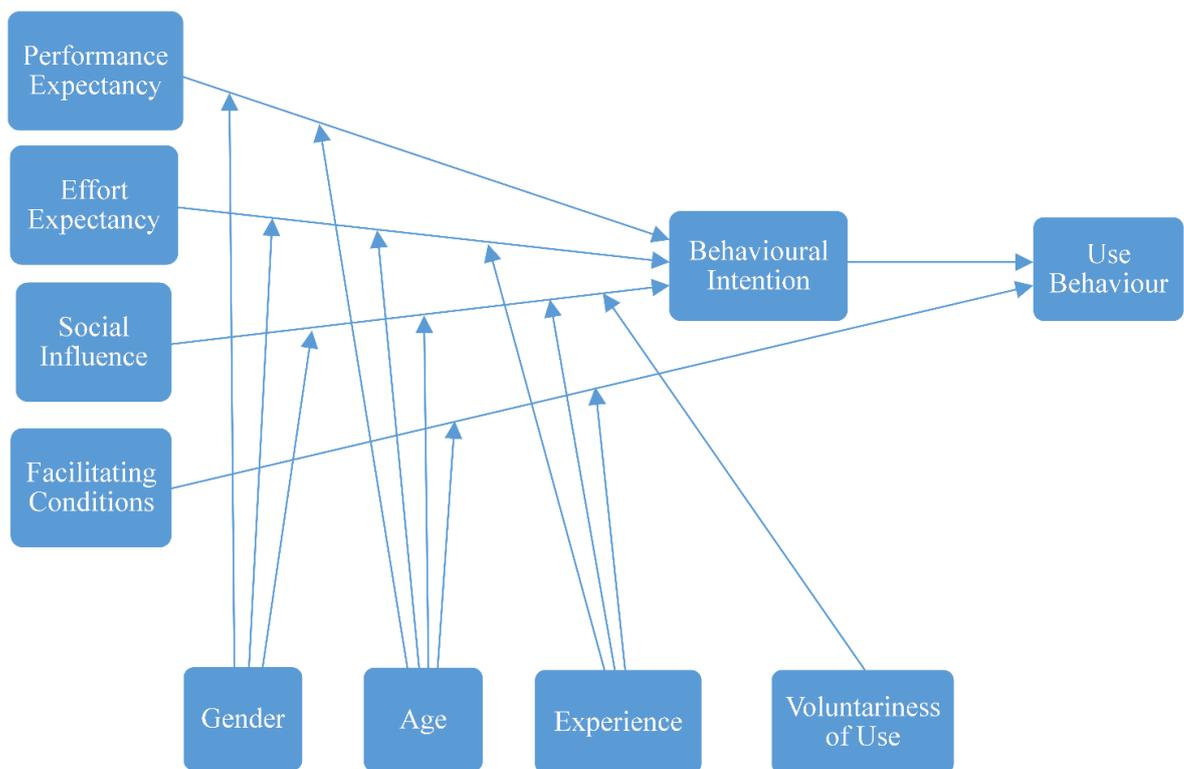
Figure 3.1 The UTAUT model adapted from Venkatesh et al (2003)

Venkatesh et al. (2003) identified the following 'direct determinants of user acceptance and usage behavior': 'performance expectancy, effort expectancy, social influence, and facilitating conditions' (2003, p. 446). However, these determinants need to be viewed in relation to 'the key moderators' of 'gender, age, voluntariness, and experience' (Venkatesh et al., 2003, p. 446). An example of how UTAUT works in practice was demonstrated by Selwyn et al. in 2003. They showed that, although older adults generally are less inclined to use ICT than younger adults,

this 'moderator' is only effective when there is low relevance and a lack of 'relative advantage' to the older adults' lives when they use ICT (Selwyn et al., 2003, p. 561). When there is a 'high performance expectancy' and 'effort expectancy' from their employers, 'social influence' and 'facilitating conditions', their 'behavioral intention' and 'use behavior' (Venkatesh et al., 2003, p. 446) can be as positive as that of younger adults (Selwyn et al., 2003, p. 562). Equally gender, marital status and educational background can be as important moderators as age (Selwyn et al., 2003, p. 563). Therefore, Selwyn et al. (2003) recommend that in order to ensure greater uptake of ICTs by older adults (including university teachers), attention should be refocused away from trying to 'change' older adults and towards involving older adults in changing ICT to meet their everyday and teaching needs. The UTAUT model is often used to identify enabling factors, attitude and use behavior of key informants (Dang, 2013). In the area of ELT, this model has seen an increased application over the past few years (e.g., Raman et al., 2014; Yih & Nah, 2009). In addition, in the Vietnamese context, as noted in Chapter 2, Dang (2013) uses this model to examine factors influencing the ICT uptake by foreign language teachers in a public university in Vietnam.

3.6.2   Substitution, Augmentation, Modification and Redefinition (SAMR) model

In order to ensure that ICT is fully integrated into pedagogy as defined by Rao (2013) and follows the 'good practice principles' as defined by Chickering and Ehrmann (1996), the aim is for ICT to become thoroughly embedded in pedagogy and for its integration to move from merely enhancing the learning environment to transforming it. In order to understand how this might take place, Puentendura (2006) developed the Substitution, Augmentation, Modification and Redefinition (SAMR) model as shown in the Figure 3.2. The Substitution component refers to the use of technology as just a direct tool for substitution and no change is created. For example, PowerPoint can be used as a presentation tool to deliver a lesson on word formation. Augmentation refers to some functional improvement, yet technology remains as a direct tool for substitution. PowerPoint will be used with interactive media, for instance embedding a video clip . At the Substitution and Augmentation levels, technology use is mainly for enhancement of learning. Modification takes place with task redesign enabled by technology use. At the Modification level, students are asked to produce a project on word formation learning strategies using both PowerPoint and related technology apps as available. At the Redefinition level, students are asked to connect with peers, either locally or globally, to work on a word formation topic. When Modification and Redefinition take place, the transformation of learning and teaching can also occur.

Redefinition
Tech allows for the creation of new tasks, previously inconceivable

Modification
Tech allows for significant task redesign

TRANSFORMATION

Augmentation
Tech acts as a direct tool substitute, with functional improvement

Substitution
Tech acts as a direct tool substitute, with no functional change

ENHANCEMENT
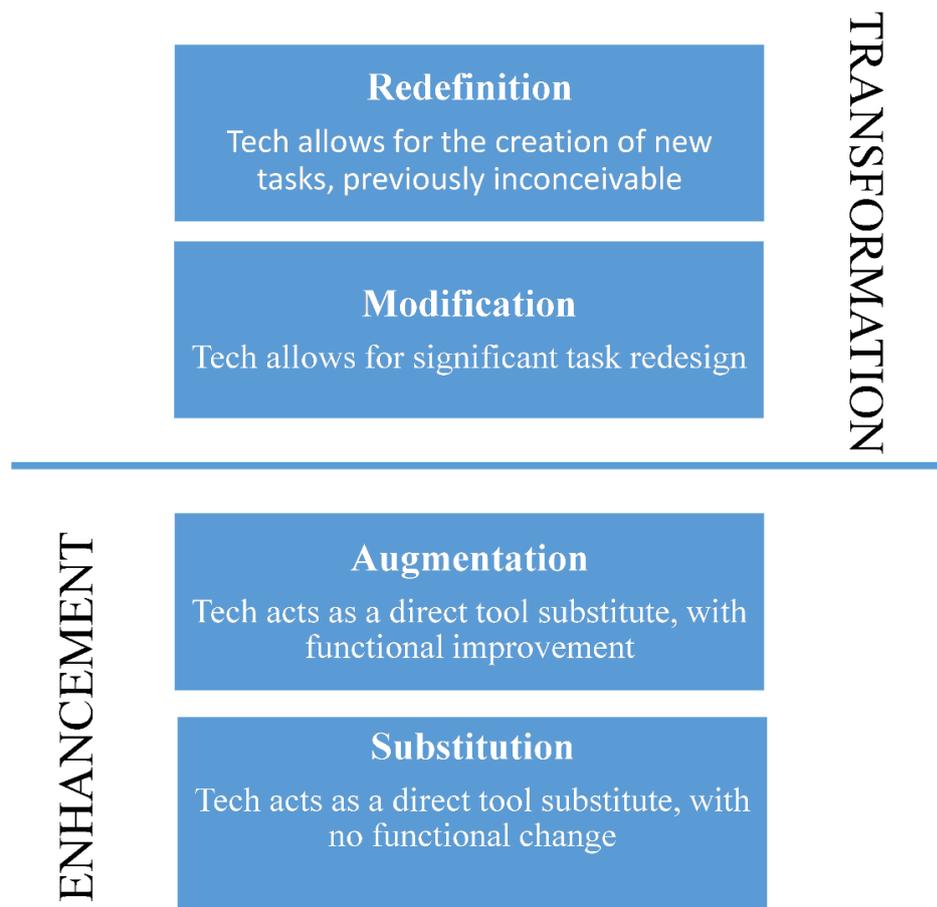
Figure 3.2 The SAMR model adapted from Puentedura (2006)

According to Puentedura (2006), university teachers can enhance their lessons by substituting or modifying more traditional resources and pedagogies with ICT-based resources and pedagogies. Thus, for example, an EFL teacher might substitute a diagram of the placement of English vowel sounds in the mouth drawn on a whiteboard by the same diagram from the web displayed on a projector with 'no functional change' (Puentedura, 2006, p. 2). The only enhancement is that it might be a clearer and better drawn diagram. The same exercise can move from Substitution to Augmentation when the way in which the resources are used and accessed is changed. For instance, students are provided with the application on pronunciation where, like in the previous exercise, they can see where the vowel sounds are placed; however, because of the interactive aspect of the resource, they can listen to the sound and see where it is placed and practice the sounds and placement at home using their own devices, recording and comparing their own pronunciation of a sound with that of the application (Puentedura, 2014, p. 8).

Although Substitution and Augmentation might enhance the learning experience for students, they do not transform the learning environment from the teacher-centered Education 1.0 or Education 2.0 to the Education 3.0 or 4.0 environment described by Harkins (2008) and others. In order for this full transformation to occur, Modification and Redefinition are required (Puentedura, 2006, p. 2). Using the example of pronunciation teaching above, the teacher could modify the task by requiring the students to find sound clips of people using various vowel sounds on YouTube and then match these with the mouth and lip positions and phonetic symbols provided. With the aid of ICT, previously inconceivable tasks can also be developed. For example, in the field of health sciences, students can now practice technical skills like injecting patients using virtual reality that includes smells and textures. For the pronunciation example above, the tracking of mouth movements when pronouncing sounds with real-time immediate feedback for individual students both inside and outside the classroom is not inconceivable.

3.6.3   Read, Reflect, Display and Do (R2D2) model

The SAMR model assists teachers to reflect on the nature of the tasks and resources they develop and how these affect their pedagogy. However, researchers like Bonk and Zhang, have gone even further in their transformation of pedagogy and have called for an ICT pedagogy that places the learner in the centre of the learning transaction (Bonk and Zhang, 2006). Hence, they developed the Read, Reflect, Display and Do (R2D2) model to 'address varied student learning preferences, diverse backgrounds and experiences, and generational differences' (Bonk & Zhang, 2008, p. 3).

Bonk and Zhang (2006) depict the four Rs mentioned above as four 'quadrants'. The first component, Reading, is to help learners 'acquire knowledge' through different methods based on their types of learning (p. 3). The second 'quadrant', Reflecting, refers to 'reflexive activities' needed to more fully engage the learners (p. 3). The third ingredient, Displaying, supports the learning process through different 'visualisation techniques' (p. 3). The fourth part, Doing, implies the actual practices of the learners through 'hands-on activities' (p. 3). This model builds on classic educational models for individualised learning such as Gardner's theory of multiple intelligences (Gardner, 1983, 1993, 2006) in that 'human cognitive competence' is viewed as 'a set of abilities, talents, or mental skills' or 'intelligences' which all normal individuals possess 'to some extent', but 'individuals differ in the degree of skill and the nature of their combination' (Gardner, 2006, p. 6). The role of the teacher for both Gardner (2006) and Bonk and Zhang (2006) is to respect and nourish all of these 'intelligences' and their various combinations in all students and to provide opportunities for their development in all students within either the traditional or online/blended learning environments. Cartner and Hallas (2009, p. 111) stress

that the core advantages of the R2D2 model lie in the shift from teacher-centred to student-centred approaches and from face-to-face to blended learning.

While making sure that all 'intelligences'/'quadrants' are catered for, research using the R2D2 model has shown that a generational shift has occurred with students now being more observational than auditory and more hands-on than visual. The role of the university teacher is therefore to cater to these needs, yet at the same time develop the other quadrants in order to ensure students develop the necessary academic skills. One way in which the R2D2 model has been shown to successfully achieve this end is through its intertwining of reflection and doing (Cartner & Hallas, 2009, p. 114). Reflection is highlighted as a crucial element in English language teaching (Deng, 2012; Krishnamurthy, 2007; Lee & Hardy, 2012; Young, 1998), particularly in developing contexts, yet it is often 'neglected' in a blended learning environment (Cartner & Hallas, 2009, p. 114). Therefore, the application of R2D2 in ELT pedagogy has been fruitful, with research indicating that its application can enhance learners' vocabulary acquisition and dictionary use (Zhang, 2008) as well as reading and academic note-taking skills in blended learning environments (Zorn and Parke, 2011). The R2D2 model is reproduced in Figure 3.3 below.
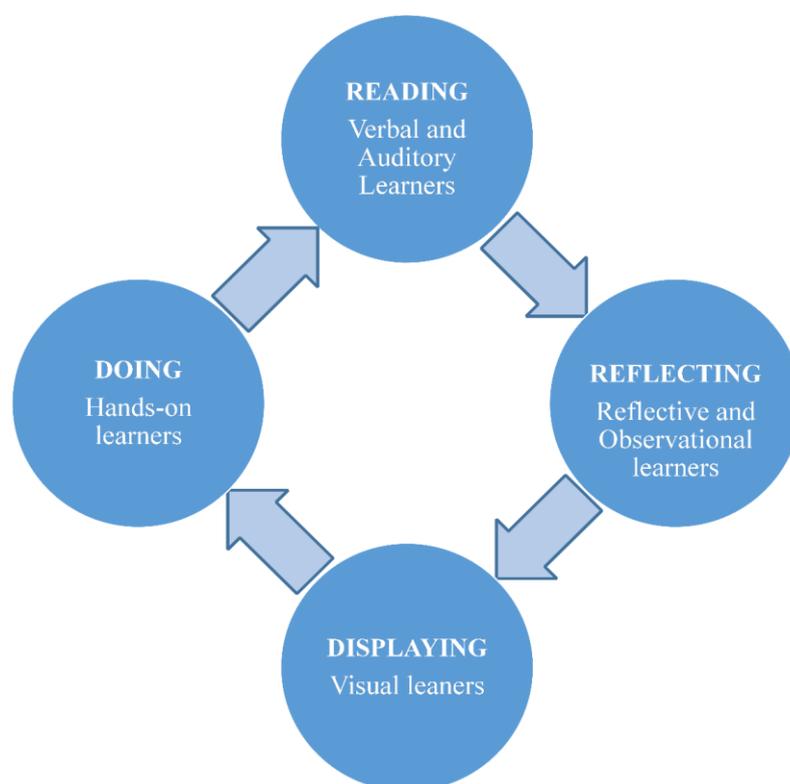
Figure 3.3 The R2D2 model adapted from Bonk & Zhang (2006)

3.6.4   Technological Pedagogical Content Knowledge (TPACK) model

While UTAUT deals with user acceptance, and SAMR and R2D2 deal with teachers' development of resources and pedagogy based on learners' needs and the developing affordances of ICT, it is also important to explore knowledge and content of pedagogy and ICT and how these elements can best be integrated in effective pedagogy. Based on Shulman's (1987) model of Pedagogical Content Knowledge (PCK), Roblyer and Doering (2010) developed the Technological Pedagogical Content Knowledge (TPACK) model in order to unpack the knowledge of content and ICT that a teacher needs to develop in order to successfully integrate ICT in learning and teaching. Roblyer and Doering (2010) posit that university teachers require knowledge of the content they are teaching, knowledge of how to use technology (ICT) and knowledge of pedagogy. Koehler and Mishra (2009) added and explicated the technological component in this model. In this regard, the role and potential exploitation of ICT is emphasised with a view to supporting and consolidating the pillars of content knowledge and pedagogical knowledge. However, the contexts in which the model can be applied are not specified and stratified. For example, in a developing context like Vietnam, the application of TPACK depends on many factors, ranging from guideline of the local authorities to the teachers' ICT knowledge. The balance of 'content', 'pedagogy' and 'technology' is also not deeply addressed. In order to successfully integrate ICT, all these elements need to converge in Technological Pedagogical Content Knowledge as illustrated in Figure 3.4 below.
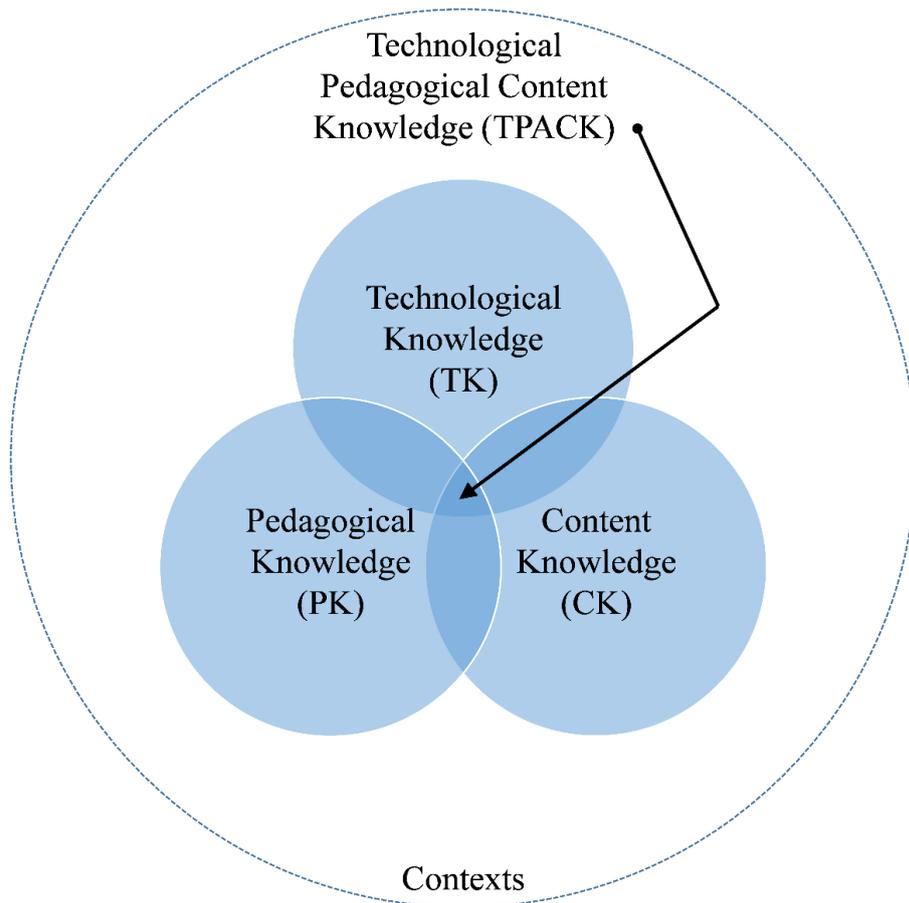
Figure 3.4 The TPACK model adapted from Roblyer and Doering (2010)

As described in the principles and models of ICT integration above, good practice in ICT integration requires that there are continued interactions of student to student and teacher to student both inside and outside of the classroom (Chickering & Ehrmann, 1996), full integration of content, pedagogy and ICT (Roblyer & Doering, 2010), active learning, and respect for diverse learning styles, resources and practices (Bonk & Zhang, 2006; Chickering & Ehrmann, 1996). The ICT integration of both teachers and students in higher education is influenced by the 'facilitating conditions' (Venkatesh et al., 2003, p. 466) within their institutions, and also, perhaps even more importantly, the 'massification', 'diversification' and 'marketisation' in society as a whole (Hong & Songan, 2011, pp. 1277-1280), as described in the context chapter. Increased access of larger numbers of students to higher education has resulted in more mature students, part-time students and/or students balancing work and study, more available study options including international face-to-face and online institutions, and even free open-access study options. All these factors have resulted in greater competition and greater expectations for a personalised learning experience that is 'just enough, just in time' (Rosenberg, 2001, p. 30 & 105) and 'just for me' (Peters, 2007, p. 15). The pedagogical and social forces described have

resulted in increasing calls for 'learning environments that are flexible and drive innovation' (Johnson, Becker, Estrada, & Freeman, 2015, p. 2), with university teachers and higher education institutions viewed as the change agents expected to drive this 'flexibility and innovation'.

3.7 Flexibility in higher education and ICT integration

3.7.1 The concept of flexibility in higher education and ICT integration

The concept of flexibility in education has a long history with teachers as early as Plato, Aristotle, Confucius and later Dewey and Vygotsky (Glassman, 2001) focussing on the individual needs of learners and adapting their teaching to the learning context. However, in the last 50 years, the key proponent of flexibility in education was Fleming (1978) who defined it in his work *A Concept of Flexibility* as 'an adaptability to change' (Fleming, 1978, p. 111). Over the past five decades researchers have focused on how higher education teachers and institutions can adapt to change in terms of professional development, administration and pedagogy (e.g., Fullan, 2007; Hunt, Bromage, & Tomkinson, 2006). Flexibility in education is also often coupled with the creation of greater autonomy and individualised learning for the learner (Rutherford & Kerr, 2014; Wim, Merrienboer, & Koper, 2004). ICT is increasingly viewed as a vehicle for driving greater flexibility in higher education (Burge, 2007; Collis & Moonen, 2010; Vibert & Place, 2006). On the one hand, university teachers and institutions are required to be at the forefront of integrating ICT to ensure greater flexibility in higher education; on the other hand, they are expected to flexibly integrate ICT in order to fully utilise the affordances of this technology (Burge, 2007). Wim et al. (2004, p. 1) argue that ICT can enhance flexibility 'by making education less dependent on time and place…and by making personalised learning routes available for individual students with resources and learning management systems that enable choice of time, place, sequence and even content'.

3.7.2 Dimensions of flexibility in ICT integration

In order to fully understand what ICT-enhanced flexibility signifies, Collis explores the concept of flexibility first in the training (Collis et al., 1997) and then in the higher education context (Collis & Wende, 2002). Across the two papers, she identified six key dimensions of ICT-enhanced flexibility: time, course content, entry requirements, instructional approaches and resources, course delivery and logistics, and implicit dimensions. These dimensions each have their own individual dimensions as illustrated in Table 3.2 below.

Table 3.2 Flexibility Dimensions in ICT Integration

Dimensions	Individual dimensions				
Time	time of starting and finishing a course/lesson, other than	time expectations within a course/lesson	tempo of studying	timing of assessments	
Course content	flexibility related to the topics covered	the sequence in which topics are covered	the amount and scope of the content,	the level: not fixed as basic, intermediate or advanced	the assessment criteria
Entry requirements	Conditions for participation				
	Pretest	Predetermined certificates	Usefulness of the course		
Instructional approach and resources	social or individual learning activities	language used by teacher/chosen by learners	study materials	pedagogic approach	
Course delivery and logistics	time and place where help can be obtained	way of obtaining help	types of help	locations for participating in the course	delivery channels including face-to-face and technology-mediated varieties
Implicit dimensions	underlying philosophy of the course (instructivist or participative)				
	the expected role of the instructor	the expected role of a student	the role of the course in a larger context (ie, part of a degree programme, required by employer, informal learning)		

Note. Adapted from Betty Collis, Moonen, and Vingerhoet (1997)

Collis and her colleagues (Collis & Moonen, 2010; Collis et al., 1997; Collis, Peters, & Pals, 2001; Collis & Wende, 2002), as well as subsequent researchers such as Schellekens, Paas, and van Merriënboer (2003) and Flannery and McGarr (2014), have used the dimensions to explore the level of flexibility in training in European higher education. They found that the level of change was 'low and not radical' (Collis & Wende, 2002, p. 7) and that in reality very little flexibility was actually available for students as learner flexibility was viewed as unmanageable, unacceptable, not affordable and not realistic. This was due to the high number of possible options and the time it would take for teachers to assist personalised learning, the fact that choices in timing and course content could be viewed as lowering standards, course design for ultimate flexibility would be beyond the abilities of teachers and that some combinations of options would not be compatible (i.e., individualised pace and sequence in combination with

real-time interactivity) (Collis et al., 1997, p. 15). Overall, teachers have some power over aspects of flexibility, such as expectations within a lesson and timing of assessments (within the time dimension group) and the role of the teacher and student (within the implicit dimension group), and almost complete power over their instructional approaches and resources. University teachers can therefore enhance the flexibility in their classes by offering their students a choice of social or individual learning activities or study materials, or vary their pedagogical approach flexibly to meet various student needs (Henderson, Selwyn, & Aston, 2015; Hunt et al., 2006; Smith, 2001). Some researchers have suggested that a core element to teacher flexibility is the ability to change their educational concepts and expectations of students within courses to more interactive modes of learning such as competence-based learning, action learning, collaborative learning, action learning or thematic approaches (Jacobs, 2015; Schellekens et al., 2003).

Despite the role that university teachers can play in enhancing flexibility through ICT integration, as noted by as Schellekens et al. (2003, p. 303), most flexibility is constrained by the willingness of institutions to make 'structural changes and innovations'. Therefore, as noted by Reeves and Reeves (1997) and Schierenbeck (2012), flexibility of administration is required. In the Vietnamese context, Tran and colleagues (2014, p. 5) in their book entitled *Higher education in Vietnam: Flexibility, mobility and practicality in the global knowledge economy* take the issue of structural change to facilitate flexibility even further, noting that to ensure competitiveness in the global 'knowledge economy' and the meeting of student needs, higher education in Vietnam needs 'flexibility' as one of its 'national core values' (Tran et al., 2014, p. 5). They explain that in the light of its historical, cultural and religious background, Vietnam is well placed to be flexible, since it responded to years of war and colonisation by adapting, has a culture which is generally adaptive to 'foreign values' (as claimed by Tran Dinh Huou (2009) cited in Tran et al., 2014, p. 7) and a predominant religion (Buddhism) which respects 'acting flexibly depending on particular situations without losing one's identity and core values' (Tran et al., 2014, p. 6).

The studies described above focussed on whether students are provided with flexibility in higher education that is facilitated through ICT. These studies have mainly relied on the self-report of university teachers and institutions and the perceptions of students as reported in questionnaires. However, despite the importance of capturing ICT practices in a 'natural context' (Arias Soto, Buitrago Escobar, & Pineda Báez, 2011), no observation studies have been conducted which have specifically addressed the issue of flexibility as part of ICT integration. Consequently, in this study, the flexibility dimensions of Collis and colleagues as summarized in Table 3.2 above

were used to assist the questionnaire development as well as the observation log (see Appendices E and H).

3.8   Effectiveness and flexibility in ICT integration in ELT

Due to the general lack of studies on flexibility in ICT integration, and in ELT in particular, the following section focuses on studies that address effectiveness of ICT integration in general and include some of the flexibility dimensions as identified by Collis and colleagues (1997; 2001; 2012).

The literature suggests that ICT is increasingly being viewed as an integral part of EFL university teaching (Birch & Maclean, 1998; Chauhan, Ying, & Zhenfang, 2013; Dang, Nguyen, & Le, 2013; Kernot, 2000). One of the main reasons is that an increasing number of HEIs in developing countries are providing online courses and programmes using English as a medium of instruction. Another reason is that these institutions are integrating online English teaching resources and MOOCs into their online or blended courses and programmes (Harman & Bich, 2010). In order to provide the online/blended option and access English materials, an effective flexible integration of the available resources is required which fully utliises their affordances.

Numerous studies have been conducted on the effectiveness of ICT integration in ELT in both developing and developed contexts (e.g., Alexandersson & Davidsson, 2014; Fitzpatrick, 2014; Garrett & Danziger, 2008; Gumbo & Mawire, 2013; Mwalongo, 2010; Stockwell, 2013; Yunus & Suliman, 2014). The general consensus is that effectiveness does not rely solely on the inclusion or use of technology. Instead, as noted by Salehi and Salehi (2012), integration of ICT is considered effective depending on 'how and why it is applied and integrated' (Salehi & Salehi, 2012, p. 215). Some scholars (e.g., Grgurović, Chapelle, & Shelley, 2013, p. 155) have even cast doubt on 'whether or not technology-supported pedagogies [actually] enhance language learning'.

In order to understand what effectiveness of ICT integration in an ELT context actually signifies, it is important to explore the available literature. A comprehensive review of the concept of effectiveness in in ICT integration is provided by Grgurović et al. (2013). In addition, in the area of foreign language learning and teaching, which is closely connected with this study, Golonka, Bowles, Frank, Richardson, & Freynik (2014) comprehensively reviewed the effectiveness of different types of approach. For example, they showed that the integration of the mobile phone/smartphone is effective in terms of vocabulary enhancement and exchange among learners (Golonka et al., 2014, pp. 87-88). Key points concerning the effective

integration of ICT derived from the included studies are provided below, along with some practical examples and the studies that address them.

Effective integration of ICT in ELT occurs when ICT:

- improves language skills in general, e.g., via the use of Wiki or blogs, to share experience and for better communication (Istifci, Lomidazde, & Demiray, 2011, pp. 3-4)
- enhances the learner's autonomy in terms of building choice of technology and learning motivation to use the ICT to learn the language skill (IlTer, 2009; Lai, Shum, & Tian, 2014)
- supports feedback delivery by teacher and response by students (AbuSeileek & Abualsha'r, 2014; Golonka et al., 2014; Hosseini & Hosseini, 2014)
- promotes pedagogical knowledge of ICT integration integration (Cárdenas-Claros & Oyanedel, 2015; Lai et al., 2014)

- provides learners with effective visual aids (Macwan, 2015; Mathew & Alidmat, 2013)
- supports a particular language skill, e.g., teaching speaking via mobile devices and chat functionality (Bahrani, 2011; Farangi, Nejadghanbar, Askary, & Ghorbani, 2015) or teaching literature (Quiroga, 2014)

- ensures extensive exploration of Internet rather than quick solutions (Warschauer, Shetzer, & Meloni, 2000)
- enables ICT coping tactics for students and teachers (Al-Munawwarah, 2015).

The items above relate to flexibility dimensions in terms of content and delivery, as well as flexible communication that includes outside of class interactions between peers and with their university lecturers. This flexibility relates both to ICT as 'a tool' for university teachers to teach their students both in and outside of the classroom and also as 'a tutor' in itself in that the ICT actually delivers and teaches the content (Murray & Pérez, 2014). Several of these studies shed light on the observation of effective ICT integration in EFL settings (e.g., Bahrani, 2011; Li & Walsh, 2011; Zhong & Shen, 2002). However, none of them address flexibility specifically either in terms of student or teacher responses or observed behaviour, both of which aspects are addressed in this study.

Mobile technologies enable flexibility due to their ready availability and ease of use. However, concerns have still been raised (e.g., Bosman & Strydom, 2016; Ng, 2012, 2013) that mobile

learning does not necessarily enable university students to achieve 'graduateness' (Bosman & Strydom, 2016, p 510); being a competent user of mobile technologies in everyday life does not necessarily mean that students are able to effectively integrate mobile devices into their learning. Ng (2012; 2013) identifies three 'domains' for the effective integration of mobile technologies to enable students to learn the skills that will allow them to succeed at university and demonstrate the graduate attributes they need in the 21st century work environment. These are the 'technical domain' (Ng, 2013, p. 10) which relates to students selecting technologies and resources in order to enhance their learning; the 'cognitive domain' which relates to the effective use of the Internet for information gathering and the development of learning skills (Ng, 2012, p. 11); and the 'socio-emotional domain' which relates to students demonstrating appropriate social and communication skills online and using information ethically (Ng, 2013, p. 13). Ng (2013) highlights that all three domains require critical literacy. A recent qualitative study by Bosman and Strydom (2016) explored the critical literacy of South African senior university students across these domains and found that, although they reported 'a foundational level of cognitive, social-emotional and technical m-Learning literacy [was] evident, the ability to be critical around these literacies is underdeveloped and needs to be addressed in order for graduates to function appropriately in an ever increasingly digitally enhanced workplace' (Bosman & Strydom, 2016, p. 517). The effectiveness and actual flexibility of mobile learning in ELT has not been addressed comprehensively to date and this is another issue that is underexplored in the Vietnamese higher education context in general.

3.9   Barriers and enablers of effectiveness and flexibility in ICT integration in ELT

As described above, there is relative consensus regarding what are effective ICT integration practices in ELT. As in higher education in general, effective ICT integration in ELT is affected by structural issues related to policies, resourcing and administration as well as by individual factors arising from the perceptions and experiences of the teacher. Hashemi (2013, p. 68) indicates three major factors influencing effective integration of ICT: personal, institutional and technological. In another study conducted by Mahdi (2013, p. 191), two other major factors are added: pedagogical and socio-cultural. In this section, the enablers and barriers of effective ICT integration in ELT are explored in relation to Archer's (1995) social dimensions of structure and agency, which relate to the material conditions impacting on phenomena, and the autonomy of individuals and groups (Archer, 1995), (see chapter 4). Because effective ICT integration is also affected by the interactions between people and the ideologies and ways of interacting across institutions and within departments, enablers and barriers in relation to the social

dimension of culture are also examined. The emphasis in this section is on the literature from developing contexts since this study is set in Vietnam which, like other developing countries, has particular constraints impacting on ICT integration.

3.9.1 Structural enablers and barriers of ICT integration in ELT

3.9.1.1 Structural enablers of ICT integration in ELT

When talking about the enablers and barriers of ICT in higher education in general, Collis and Wende (2002, pp. 7-8) noted that change to greater ICT integration was 'slow, and not radical'. They also suggested that institutions that had a clear 'view of their mission' and were structurally organised to cater for different target groups (i.e. 'life-long learning or international students') with ICT and had a clear understanding of 'their position within those markets' were more likely to demonstrate higher integration of ICT (Collis & Wende, 2002, pp. 7-8). They also suggested that ICT was generally integrated as part of 'a blend' and institutions that provided structural support to facilitate an effective blending of ICT and traditional teaching were more likely to have greater integration of ICT. In addition, they noted that university teachers were generally integrating ICT more into their teaching, but with little or no reward; consequently, academic staff were less enthusiastic about integrating ICT than administrative support and management staff. According to Collis and Wende (2002, pp. 7-8) these issues could all be overcome if institutions moved to a more 'strategic' implementation of ICT with a focus on different groups of students and their needs, and the development of 'explicit policies and institutional and government level' which focus on the 'actual richer (pedagogical) use of ICT'. An integral part of this 'strategic implementation' of ICT would be to understand the needs of students and pedagogical needs of teachers and 'consider the corresponding technological architecture, tools and functionalities' with a 'database driven system that allows easy tailoring and adapting of (portions of) courses to serve the needs of different groups of students' (Collis & van der Wende, 2002, p.8). All these structural issues in relation to policy, mission, market understanding, support and training for staff and infrastructure are also important in the ELT context. However, very few studies actually explore ICT in ELT at a structural level.

One of the few studies that explores ELT ICT integration at a structural level is that of Lloyd (2005) which identified the following enabling structural conditions: ICT is part of the pedagogical structure at an institution with specific purposes and is not just aimed at replicating 'existing teaching' (Price & Kirkwood, 2014, p. 13), innovations are introduced at all levels of the system ensuring the introduction of ICT is part of a general change of philosophy across the institution, and teachers see concrete impacts on their teaching and rewards for their

improvements. The need for a change in mission and philosophy is taken up by Sarkar (2012, p. 30) who reasons that ICT integration in higher education is enabled if the philosophy underpinning its integration is that it is not just as a 'technique' for educational purposes, but rather is also viewed as a vehicle for 'socio-economic development'.

Annapurna (2012) explores the pedagogical implications of a change in mission and a 'systems' approach to ICT integration in ELT. Pedagogically, institutions can utilise ICT to improve the 'quality [of] learning standards' and 'enrich learning experiences', provide greater access to 'sharable resources' and a variety of options for 'direct forms of communication' (Annapurna, 2012, pp. 25-28), and redefine the roles of both teachers and learners creating a university that is no longer restricted to face-to-face traditional classrooms, but rather has no 'boundaries' (Annapurna, 2012, p. 30) with unlimited educational offers. Another enabler of effective and flexible ICT integration is its inclusion as part of a general approach to enhanced university administration. The whole process of dealing with student enrolment to 'course schedules' and 'publication of results' can be quickly accessed through 'e-administration' in a timely and cost-effective manner (Annapurna, 2012, p. 28); if e-administration is constantly and flexibly updated in response to changing needs, this can also assist in the enhancement of teaching systems and pedagogy. On a more pragmatic level, Birch and Sankey (2008, p. 67) suggest that, along with 'organizational and administrative support', institutions need to provide practical assistance to teachers in the form of 'professional development and training, peer support, mentors and technology champions' and that these elements enable effective integration of ICT.

The 'systems' approach to ICT integration in ELT is taken even further by some researchers (e.g., Peeraer & Van Petegem, 2011; Tondeur, Devos, Van Houtte, van Braak, & Valcke, 2009) who note that proactive policies and communication from a Ministry level that encourages cross-institutional communication and then is channeled effectively to an institutional and departmental levels greatly enhances the uptake of ICT and effective integration of ICT, especially in developing contexts like Vietnam where there is a strong state influence on higher education and ELT teaching. Hong notes the positive example of the National Foreign Language Project (NFLP) for the period of 2008-2020 instituted by the MOET in Vietnam (Hong, 2014). In this project, broad policies and guidelines for universities have been followed up with numerous ICT 'train the trainers' workshops and MOET sponsored events at local levels with the aim of equipping EFL teachers with good knowledge of both ICT use and English language teaching skills. This example also aligns with Kozma & Vota's (2014, p. 889) suggestion that 'leveraging community inclusion' can 'expand [the] impact and sustainability' of ICT integration, since the Vietnamese MOET links schools, universities and community institutions

through competitions and community projects as described in the policy analysis chapter (Chapter 5). Such projects counteract individual concerns of language teachers who are 'not trained in technology' and feel that they fail to meet 'practical teaching' requirements of both English and technology (Hashemi, 2013, p. 60). Another enabler of effective ICT integration from a systems approach within developing contexts is when governments actually deploy infrastructure and maintain it at an institutional level (Kozma & Vota, 2014, p. 889). This active involvement of government and community with institutions helps to ameliorate some of the structural barriers in developing contexts, as described below. However, as noted by Malapile and Keengwe (2014), stakeholder participation at all levels is the key enabler of effective ICT integration.

The increased availability of mobile technologies in the developing world has resulted in increased possibilities for flexibility of place (learning across sites, inside and outside of the classroom) and time (whenever students want and as part of life-long learning). Consequently, m-Learning could potentially be a prime driver of flexible integration of ICT in developing countries (Jaffer, Ng'ambi & Czerniewicz, 2007). It is particularly useful since less physical infrastructure is required from institutions.

3.9.1.2 Structural barriers to ICT integration in ELT

Despite the enabling role that government and institutions can play at a structural level, very little research has been done on this in the ELT university context. In addition, some researchers even suggest that rather than enabling ICT integration in ELT, higher education institutions in developing countries have an 'ambivalence' regarding the implantation of ICT in general and in EFL in particular (Alresheed, Leask, & Raiker, 2015). This ambivalence results in a lack of vision or rationale for ICT integration as articulated in policy and mission statements; consequently, university teachers do not understand the relevance of ICT to the curriculum or their teaching. There is also a fear in developing contexts that students accessing ICT will result in plagiarism/copyright infringements and access to inappropriate materials not sanctioned by the state, posing another barrier to structural support for ICT integration both at national and institutional levels, as noted in a review by Su (2009). Therefore, the appropriate standards for ICT are a key issue to be addressed within policy and mission statements (Stansfield et al., 2008, p. 7). The lack of long-term vision and political factors at a broader government level (Khan, Hossain, Hasan, & Clement, 2012), as well as a low Internet penetration rate (Chinn & Fairlie, 2010), can also hamper ICT integration.

Besides these philosophical and subsequent policy barriers, there are also practical structural and resource related barriers to effective and flexible ICT integration in ELT which are particularly pertinent in developing contexts (Kiasari, 2012; Sharma, 2003). A number of studies in ELT in developing contexts note that the primary barrier to ICT integration is a lack of appropriate infrastructure, including physical facilities, web access, access to software and hardware, and technological/administrative support when needed (e.g., Cox, Cox, & Preston, 2000; X. T. Dang, Pham, Ngo, & Ngo, 2012; Felix, 2005; Fernández Carballo-Calero, 2001; Hjalmarsson, 2015; Mahmood, Halim, Rajindra, & Ghani; Pelgrum, 2001; Su, 2009; Stansfield et al., 2008; Thomas & Reinders, 2010). In many universities in developing countries, the available buildings and rooms are not appropriate to house the technology for security and safety reasons, and electricity and Wi-Fi access can be unreliable (Mbodila, Jones & Muhandji, 2013). Despite these challenges, university teachers are constantly admonished by their institutions and governments to change their teaching style and move towards technology-based instruction. Lack of support is primarily due to a lack of funding (Jhurree, 2005; Khan et al., 2012; Kiasari, 2012; Kozma, 2008; Lee, 2002; Marek, 2014; Mingaine, 2013; Mndzebele, 2013; Su & Bay, 2009).

Lack of funding not only impacts on the tangible assets such as computers, wireless capability and online and software resources that the university has access to and the integration of ICT within the campus; it also impacts on the ability of university teachers and students to access resources outside of the classroom and their ability to participate in Education 3.0/4.0 transactions. This has become particularly pertinent with the movement towards mobile learning, particularly in developing countries (Hee-Jung, 2015). Often in developing countries there is a low Internet use rate due to 'disparities in income' (Chinn & Fairlie, 2006, p.157): the affluent have greater access to, and ownership of, technological devices and the ability to pay for data. In addition, connectivity is poor in some areas, particularly for those with low socio-economic status and in rural areas. As a result, ownership and access to technology may lead to a digital divide in these contexts (Hilbert, 2011; Tolani-Brown, McCormac, & Zimmermann, 2011). This is an important issue in Vietnam, as reported in Chapter 2.

In order to cope with these challenges, well-planned ICT integration with a clear roadmap is required (Malapile & Keengwe, 2014). Such a roadmap needs to address the 'equity issues' (Malapile & Keengwe, 2014, p. 698) described above. However, a major barrier to effective ICT integration in developing ELT contexts is a lack of capacity both at an institutional level and at an individual teacher level. The institutions lack expertise in planning, administration, communication with staff to disseminate policy, information on available resources, good

practice and innovation, knowledge of how ICT is best integrated into a curriculum, as well as the capacity to monitor quality and evaluate software/hardware (Malapile & Keengwe, 2014, pp. 698-699; Pelgrum, 2001). Consequently, institutions lack the capacity to respond to 'technological advances' and have difficulties in acquiring the most appropriate digital technologies (Selwyn, 2011) and taking 'full advantage of open education resources' (Dhanarajan & Porter, 2013, p. 3). Hence, they are rarely able to fully utilise the affordances of mobile technologies and achieve 'flexible partnership among educators and educational institutions' (Ngo & Picard, 2012, p. 3).

Institutions also fail to provide individual teachers with the necessary professional development to effectively and flexibly integrate ICT with their EFL teaching (Golonka et al., 2014; Su & Bay, 2009). ELT teachers in developing contexts report that they have a lack of time to learn, a lack of class time for use and a lack of training for ICT use, especially in relation to EFL content (Su & Bay, 2009, p. 81). Often this lack of training is part of an institutional, departmental/ culture that does not value ICT integration, as discussed below.

3.9.2   Cultural enablers and barriers of ICT integration in ELT

3.9.2.1   Cultural enablers of ICT integration in ELT

As shown above in the UTAUT model as well as in the work of Jung (2014) and others in ELT, 'social influence' (Venkatesh et al., 2003, p. 427) impacts strongly on an individual's intention to use and consequent integration of ICT. The social influence of the institutional culture as well as the group of teachers within departments and centres is needed to convey the message that ICT is both useful and easy to integrate into English language teaching and support for integration with specific content is needed (Selwyn, 2013; Shin, Arimoto, Cummings, & Teichler, 2014). 'Digital native learners' and peers who confidently and easily integrate ICT in their practice are also a strong influence (Ngo & Picard, 2012, pp. 2-3) along with the formal professional development.

Another cultural enabler of flexible ICT integration is that the institutional and group culture in relation to pedagogy has evolved from teachers being the centre of the learning process to serve as 'facilitators, coaches and mentors to support the learning environment for students' (Annapurna, 2012, p. 26). The culture of institutions and EFL teachers within those institutions needs to move beyond content knowledge to also include the learning skills and 'soft skills' (Livingstone, 2011, p. 16). In addition, as noted by Williams (2012, p. 296), both teachers and students need to become reflective learners selecting from the affordances of ICT through a 'reflexive process'. ICT is believed to hold the 'transformative and interventive' function in

higher education (Annapurna, 2012, p. 28) as well as being 'an essential life-survival skill' (Selwyn, 2013, p. 562). A culture where ICT integration attracts prestige (Cox et al., 2000) and one that encourages a 'learning-by-doing approach' (Foster & Rosenzweig, 1995; Freeman & Perez, 1988; Tsui, 2006) can be implemented in the form of having hands-on training workshops for teachers; Further, ICT support programmes designed to help students master the skills needed or individual support (Osterwalder, 2003) are also likely to facilitate effective integration.

3.9.2.2 Cultural Barriers to ICT integration in ELT

The culture of institutions, departments and centres can also serve as a barrier to effective and flexible integration of ICT. If this culture does not provide a rationale for ICT integration (Su & Bay, 2009) and commitment to integration, adaptation and innovation, individual teachers will not recognise the potential impact of ICT on their teaching (Onwuagboke et al., 2015). Equally, if ICT integration is incompatible with current institutional, department or centre cultures in terms of pedagogical and assessment practices, and is viewed as irrelevant to the curriculum, it is unlikely that effective ICT integration will occur at an individual teacher level. Cultural differences among countries can also be a barrier to integration of open-sources resources by developing countries. Differences in varieties of English, in students' English levels and even university teachers' own English limitations can impair access to information and resources on the Internet where two-thirds of the resources are in English (Mbodila et al., 2013).

3.9.3 Agential enablers and barriers to ICT integration in ELT

3.9.3.1 Agential enablers to ICT integration in ELT

As shown in the UTAUT model, an individual's willingness to integrate ICT in their teaching arises from their beliefs around ICT integration that lead to 'behavioural intention' and then certain 'use behaviour', which in turn can impact on behavioral intention and future use behaviours. In addition, individual factors such as gender, age and experience as well as 'voluntariness of use' also impact on effectiveness of ICT integration (Venkatesh et al., 2003, p. 427). All these aspects impacted by individual agency are found in the ELT ICT literature.

The literature in developing contexts suggests that positive attitudes and beliefs about ICT result in more and more effective integration (Bingimlas, 2009; Ertmer, 1999; Khan et al., 2012; Mndzebele, 2013). These beliefs are in turn affected by practices since teachers who see positive impacts on their teaching are more likely to be committed to ICT innovation (Onwuagboke et al., 2015).

Technological Pedagogical Content Knowledge (TPACK) also enhances teachers' confidence and consequent enhanced ICT integration (Roblyer & Doering, 2010) as shown in a number of studies in developing contexts (e.g., Bingimlas, 2009; Khan et al., 2012; Kumar, 2015; Mndzebele, 2013). If teachers have used technology in the past as an integral part of their teaching practices, they are also more likely to be willing to engage with new TPACK related to ICT. This is why a number of scholars in developing contexts have called for a 'pedagogy-before-technology transition' (Ascough, 2002; Ertmer & Ottenbreit-Leftwich, 2010; Leijen, Admiraal, Wildschut, & Simons, 2008; Watson, 2001). However, length of experience in general does not positively impact on ICT integration (Mahdi & Al-Dera, 2013). Comparatively younger teachers (below 45) are also more inclined to be willing to integrate ICT; however, this factor is moderated by ICT/technology-related ELT teaching experience, previous success in integrating ICT and attitude towards ICT (Mahdi & Al-Dera, 2013). Being male is also seen as an enabler of ICT integration in several studies (e.g., Bingimlas, 2009; Lee, 2001; Levin & Wadmany, 2006; Mahdi & Al-Dera, 2013). However, this is moderated by the fact that in ELT more than other higher education fields there are significantly more female teachers than male teachers (Mahdi & Al-Dera, 2013).

3.9.3.2 Agential barriers to ICT integration in ELT

In the same way as positive experiences integrating ICT enhance actual ICT integration, negative experiences result in less 'voluntariness of use' and 'performance expectancy' (Venkatesh et al., 2003, p. 427). In the event of ICT integration failures, whether technological or pedagogical, EFL teachers can experience acute anxiety and consequently feel less confident to handle future technological breakdowns and even avoid ICT integration in future (Cox et al., 2000; Jones, 2004; Rahimi & Yadollahi, 2011). This situation is made worse in developing contexts where technological breakdowns are more likely to occur due to internet connectivity issues and aging equipment. Personal beliefs and fears about ICT integration taking too much time and being too difficult, often arising out of actual experiences (Cox et al., 2000; Dang et al., 2012; Fernández Carballo-Calero, 2001; Kiasari & Ahmadigatab, 2012), are serious barriers to ICT integration.

Lack of knowledge of ICT and resistance to change are often interchangeable (Ertmer, 1999). If teachers feel that they are not 'tech-savvy' and lacking in TPACK, they tend to lack confidence and willingness to integrate ICT (Godwin-Jones, 2002, p. 10). Pedagogical beliefs that traditional methods are best are also barriers to ICT integration. Equally, individual beliefs that the Internet is a source of 'depravity' and 'immorality' are also common in developing contexts as well as concerns about 'ownership' of information (Kiasari, 2012, p. 182).

3.10   Gaps and areas for extension

A number of authors have suggested that ICT is an important driver for economic development in developing countries (Avgerou, 1998; Dimelis & Papaioannou, 2011; Venkatesh & Sykes, 2013) since the transformation from a post-industrial (Osterwalder, 2003) to the 'information society' (Kaplan, 2001) has resulted in ICT being viewed as the best medium for accessing this information and for 'capacity building' in many areas of society including education, health, business, governance, social services and the environment (Panchard & Osterwalder, 2005). Consequently, the integration of ICT in higher education and English language teaching is particularly important, since English is the major language of the Internet and the information society.

Although ICT has a fast rate of adoption in developing countries (Lechman, 2014) and the use of Internet and mobile devices has become a daily routine for many, access is still unequal, and there are still many infrastructure and capacity development challenges (Palvia, Baqir, & Nemati, 2015). The issue of ICT integration 'in the right way and for the right purposes' (Osterwalder, 2003, p. 2) has only been addressed in ELT in terms of isolated studies on individual ICT tools. Equally, although structural issues impacting governments and higher education institutions with regards to ICT integration in developing countries have drawn attention from several scholars (Albirini, 2006; Baliamoune-Lutz, 2003; Bhuasiri, Xaymoungkhoun, Zo, Rho, & Ciganek, 2012; Osterwalder, 2002), these issues have scarcely been touched upon in the context of ELT. This is a vital issue since, as noted by Spector et al. (2008, p. vii): that 'it is not about the technology after all—it is about what is done with technology to promote students' learning'. When a new technology emerges, what really counts is the educational potential or learning opportunities provided to students, which are often obscured by the novelty of an innovative device. Scholars and teachers have the responsibility to discover and then to reveal those learning opportunities along with the associated potential to 'transform educational practice' (Spector, Merrill, Elen, & Bishop, 2008, p. vii). In developing contexts, it is particularly important to 'transform educational practice' in order to ensure the transition from teaching-centred to 'student-centred models of education' Machado and Demiray (2012, p. 81) and obtain access to information and innovation (Bladergroen et al. (2012).

Flexibility in ICT integration to meet the needs of students and a changing society is an essential part of effective ICT integration. However, this issue has not been examined except for surveys of students, university teachers and institutions and there is a lack of observation or other in-depth qualitative studies on this issue. In addition, flexibility in ICT integration has been only

touched upon in the ELT literature and not addressed at all in ELT in developing contexts. Teachers play a key role in ensuring the effectiveness (including flexibility) of ICT integration (Baylor & Ritchie, 2002; Hong, 2014; Law, 2010; Mumtaz, 2000; Voogt, Knezek, Cox, Knezek, & Ten Brummelhuis, 2013). However, the conditions impacting this effectiveness are not fully explored. Hence, this thesis is the first comprehensive study of the enablers and barriers of flexible integration of ICT, and potentially contributes substantially to the field.

CHAPTER 4
THEORETICAL FRAMEWORK & METHODOLOGY

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4.1   Introduction

In order to unpack how EFL teachers experience ICT integration within their context and what shapes their practices, a theoretical framework that moves beyond the observable and self-reported events is necessary. I need to dig deeper to unearth what drives such an integration, in other words, to unveil 'what produces the events' (Danermark, Ekström, Jacobsen, & Karlsson, 2002, p. 5). To that end, I have used Bhaskar's (1978) critical realism to shape the theoretical framework at both an ontological and epistemological level and used this philosophy to guide my overarching methodology of focussed ethnography. I adopt a critical realist stance, since it enables the exploration of reasons and mechanisms that might or might not be hidden, observable and/or actualised.

4.2   Critical realism as an ontology

This study is theoretically framed by the critical realist philosophy as elucidated by Bhaskar (1978) and the subsequent critical realist school of researchers. Sellars (1916) was the first to coin the term Critical Realism in his book entitled *Critical realism: A study of the nature and conditions of knowledge.* In this book and later in his paper *Critical Realism and Substance,* Sellars (1929, p. 478), argued that 'knowledge is never the actual equivalent of the [research] object', rather knowledge can be perceived to 'reveal the object'. Thus it is necessary to make a clear distinction between what knowledge of a certain research object can tell us and what the substance of an object itself actually is. Because of this limitation to knowing or having direct access to phenomena, in order to bring 'depth [of understanding] to reality' (Collier, 1994, pp. 42-45) or 'ontological depth' (Bhaskar, 1979, p. 54), researchers in the critical realist school argue that it is necessary to look beyond the limits of positivism or naturalistic explanations which can only reflect observed and measurable objects or events, but cannot provide knowledge of the 'abstract structures and mechanisms that make these phenomena possible' (Danermark, Ekström, Jacobsen, et al., 2002, p. 84). Thus, Bhaskar (1978, p. 26) argues that there is a 'world [or reality] independent' of our representations of it. The challenge for researchers is to access this reality, which critical realists suggest is possible through 'analytic

dualism' (Archer, Bhaskar, Collier, & Lawson, 1998, p. 361) and a 'stratified ontology' (Archer et al., 1998, p. 22). Analytical dualism is a methodological 'trick' (Archer, 1998, p. 361) to better understand the complex elements of the social world, and involves the separation and 'teasing out' of structures, processes and agents which can be viewed as 'different', but not 'discrete' in order to explore the relationships between these elements (Fairclough, 2005; Sayer, 2000). Likewise, a layered ontology separates out the participants' and the researcher's experiences of phenomena ('the empirical'), events that occur related to the phenomena (including those experienced and those not experienced directly by participants) ('the actual') and the mechanisms producing the events ('the real') (Collier, 1994; Sayer, 2000).

Although there have been a number of studies on self-reported and observed ICT integration and the efficacy or otherwise of the use of specific ICT tools in higher education and EFL teaching contexts, none of these have addressed how ICT integration by EFL teachers was shaped and what qualities or properties must exist for an effective integration of ICT to come into being. As noted by Danermark et al. (2002), we cannot, on logical grounds, be certain that a description of observed occurrences (no matter how many they are) is true also of unobserved occurrences. Consequently, I do not assume that an observation of ICT integration that met the criteria for an effective integration of a particular model or a self-reported use of a certain technology in a questionnaire necessarily reflects continued effective ICT integration and/or pedagogy. Rather, I require a 'stratified ontology' (Archer et al., 1998, p. 22) that allows me to explore the relationship between 'layered structures' (Bhaskar, 1978, p. 187), processes and agents and the domains of the empirical, the actual and the real in order to access the mechanisms underpinning the EFL teachers' integration of technology.

4.2.1 Three levels of critical realist ontology

According to Bhaskar (1978), the three levels/domains through which reality can be explored are the real, the actual and the empirical. The level of 'the real' is not synonymous with the common concept of reality (Fleetwood & Ackroyd, 2004, pp. 26-27). Instead, from a critical realist perspective, 'something is real if it has an effect or makes a difference' (Fleetwood & Ackroyd, 2004, p. 27). In order to understand the real, two crucial things must be taken into consideration (Sayer, 2000, p. 11). First, the real involves 'whatever exists' regardless of whether it is 'natural or social' (Sayer, 2000, p. 11). Second, the real is understood within 'the realm of objects, their structures and powers' (Sayer, 2000, p. 11). For example, an EFL teacher's desire to use mobile devices to teach speaking skills after seeing a colleague do so, a desire which operates at the level of the social and individual, can be 'real', even if s/he does not act upon the desire or discuss it. Likewise a national/ institutional policy which encourages

staff to use more ICT is both a physical object (document) and a philosophical object (an abstract idea) with a specific structure and powers. Thus critical realists compensate for the major flaw of empirical realism that reduces reality to observed things by also exploring unobserved experiences and mechanisms underlying both these elements (Sayer, 2000, p. 11). In other words, critical realists believe that the word cannot and/or should not be defined based solely on 'experience' and what can be empirically observed (Archer et al., 1998, p. 21).

Bhaskar (1978, p. 13) nominates three domains of reality that cover 'mechanisms', 'events' and 'experiences' (see Table 4.1). A mechanism, or to be more precise a generative mechanism, is fundamentally interpreted as 'the way of acting or working of a structured thing (Lawson, 1997, p. 20). Events are 'the external and visible behaviours of people, systems and things as they occur, or as they have happened' (Easton, 2010, p. 120), while experiences are mainly based on 'sense-perception' Bhaskar (1978, p. 31). These three components of 'the real' are interconnected. A mechanism is what produces events. Events can occur 'unexperienced or inferred from their effects', and these events are caused by power and structure of things. The powers of things can be possessed with or without being 'exercised, unexercised and actualised' (Fleetwood & Ackroyd, 2004, p. 43). In this thesis, EFL university teachers may have the potential to integrate technology effectively as reflected in their expressed desires, planned projects and training events in which they participate. However, despite the fact that this potentiality can be detected in concerns and events, this potentiality can exist with or without being actualised.

The second layer of reality, according to Bhaskar (1978), is the level of the actual. The actual consists of both events and experiences and includes 'the series of events that occurs', including those that are not experienced (Collier, 1994, p. 44). In other words, the actual is interpreted as 'a subset of the real' with 'events generated both from exercised and unexercised mechanisms' (Zachariadis, Scott, & Barrett, 2013, p. 857). As the real implies structures and powers, the actual refers to 'what happens if and when those powers are activated, to what they do and what eventuates when they do' (Sayer, 2000, p. 12). When examining 'the actual', it is necessary to examine the 'causal criteria' (Collier, 1994, p. 44), namely the basis according to which we assume that an event has occurred. Collier further clarifies this argument by providing the example of 'a garden muddy in the morning' and the example of 'a murder-victim' (Collier, 1994, p. 44). He argues that the former event implies the assumption of 'a real storm' even though we might not experience it, while the latter implies a murderer who might not be ever identified performing the killing. Similarly, in my study, teachers might have received training in how to integrate a particular ICT tool effectively in their teaching and I might observe one

specific use of the tool in my classroom observations. From what I observed, I can assume that the teachers might have at least a basic training and knowledge of the particular ICT tool, although I have not observed the training event myself. In addition, the teachers might also be able to use the tool in other ways that I have not observed directly and which they may or may not disclose to me.

The 'empirical' domain of reality can be viewed as the shallowest layer since this domain is only comprised of experiences. Yet this is the domain that is focussed on in much of the ICT related literature. The empirical is based on 'sense-perception' (Bhaskar, 1978, p. 31). Although events can be generated by mechanisms, events are 'independent of experiences' Bhaskar (1978, p. 31). These experiences may or may not be observable (Sayer, 2000). For example, EFL teachers' use of online websites and mobile devices to teach speaking skills can be observable, but their perception of the websites may not be observable. The three levels of critical realism, also known as three domains of reality, are summarised in Table 4.1 below.

Table 4.1 Three Domains of Reality

	Domain of the real	Domain of the actual	Domain of the empirical	Examples
Mechanisms	√			A national/institutional policy; participant views colleague using mobile devices
Events	√	√		Teacher participates in professional development as observed or not by the researcher or is interested in ICT application
Experiences	√	√	√	Teachers are observed using ICT by the researcher or report doing so in a questionnaire

Note. Adapted from Bhaskar (1978, p. 13)

4.2.2 Major tenets of critical realism

The major tenets of critical realism are described in this section in relation to mechanisms, causation, stratification and emergence. Critical realism refers to generative mechanism(s) because it points out the core drawback of positivism in failing to explain 'why and under what conditions the experience is significant' Bhaskar (1978, p. 13). Exploring a generative

mechanism signals 'a switch from events to mechanisms' which is the core tenet of critical realism (Danermark et al., 2002, p. 5).

From a critical realist perspective a mechanism refers to almost any potential hidden power, for instance 'an animal instinct, an economic tendency or a syntactic structure' (Collier, 1994, p. 43). Bhaskar (1978, p. 221) stresses that such hidden powers are also 'enduring' in the sense that they are normally intangible and do not appear unless activated. This means even when they are not activated, they still have the potential to occur and this potentiality does not disappear over time. Therefore, in my study, although the questionnaire data (Chapter 6) may inform me of how teachers self-report their ICT practices and their integration of technology in EFL teaching, it may fail to tell me why and the conditions under which these teachers are willing or reluctant to integrate ICT into their teaching. That is the reason why 'critical realists also believe that the non-occurrence of an event, when one is expected, not only requires explanation but may also provide very useful insights' (Easton, 2010, p. 120). Sellars (1929, p. 473) also argues that it is (generative) mechanisms that differentiate critical realists from naïve realists, since the former pay attention to the 'mechanism that makes knowledge possible' while the latter only notice the 'results'. As I explore how teachers integrate technologies in their EFL teaching, it is essential to work out not only the technological devices they use, but also to explain why they use technology in a certain way. It is also crucial to determine what drives their integration of technology and the effects of using technologies in teaching a foreign language. As mechanisms refer to the 'causal powers of things' (Lawson, 1997, p. 20), an EFL teachers' power to take an action (e.g., cope with a technological breakdown) could only be observed or perceived when the action is activated (e.g., a technological flaw occurs). In terms of Bhaskar's domains of reality, a mechanism belongs to the domain of the real, although it affects the domains of the actual and the empirical. Therefore, it is necessary to explore the concept of causation since it offers insights into what makes the generative mechanisms exist.

'Causal powers', in Bhaskar's (1978, p. 186) terms, can only be 'known' and 'not shown to exist'. In other words, 'causal powers' are exercised or actualised depending on the conditions accompanying those powers (Sayer, 2000, p. 14) as briefly described in the examples above. The interactions of the various conditions related to ICT integration impact on the teachers while they engage in or respond to ICT-related events. For example, a teacher might want to use a laptop in his/her class, but that use of the laptop depends on other conditions such as the availability of a projector, electricity or software needed. Given that all the necessary conditions are met, the classroom teachers' potential power in using the laptop can be seen in the way the

laptop is exploited for teaching and learning. The causal powers can be detected through exploring the stratified layers of reality or of 'the world' Bhaskar (1978, p. 208).

For critical realists, the notion of stratification of reality helps the researcher explain how mechanisms are generated, and track the movement from events to experiences. The stratification is needed because it clearly distinguishes events from the 'hidden mechanism' or what produces the events; otherwise these two domains just collapse into one (Hjørland & Wikgren, 2005, p. 16). For example, the events in which EFL teachers integrate their ICT tools (e.g., using a laptop) are not identical with the mechanisms influencing them to do so. Teachers might have knowledge of, skills and access to a variety of ICT tools, but this does not guarantee that they are tech-savvy teachers. In addition, a stratified ontology helps researchers to avoid the 'epistemic fallacy' (Bhaskar, 1978, p. 16; Lawson, 1997, p. 32) of assuming that what they observe or what participants report is reality. For instance, several teachers might complain of a lack of ICT facilities provided by the institution and a researcher might assume that the institution does not support ICT integration or might not own state-of-the-art technologies; however, this might not be the case.

Closely associated with stratification is the concept of emergence. Emergence provides an explanation for the connection amongst different stratified layers of reality. To put it simply, emergence occurring at one level can give rise to the identification of an occurrence in the next level. In *Reclaiming Reality*, Bhaskar (2011, p. 20) discusses the 'multi-tiered stratification of reality' and notes that what we actually know about the world is framed by the emergence of events. This emergence can be tracked down through the human course of actions. For example, an individual teacher might want to use a student-centred pedagogy that necessitates students using mobile devices. The generative mechanisms that will enable or disable the teacher's initiative and result in the emergence of events such as lesson planning and delivery in relation to this pedagogy could be ICT policies or the infrastructure provided by the institution. Then the teacher could report on their experience of delivering this pedagogy in the classroom and this might be observed and reported on by the researcher. This series of emerging events can be tracked by exploring the changes or 'relational internalities' (Bhaskar, 1979, p.54) that occur across the three domains and under the impact of the causal powers. Figure 4.1 visually shows the relationship between causal powers, generative mechanisms, stratification and emergence in relation to Bhaskar's three domains of reality. In this example, an individual teacher might want to use a student-centred pedagogy that necessitates students using mobile devices. The generative mechanisms will enable or disable the teacher's initiative and result in the emergence of (other) events and experiences. Hierarchically, the three domains follow the one-way arrows

with a top-down direction starting from the real (generative mechanisms) towards the actual (events) and down to the (empirical) experiences. However, the emergence properties can be seen as a two-way connection among these levels. The emergence could be observed from the top down (continual line) or the bottom up (dotted line).
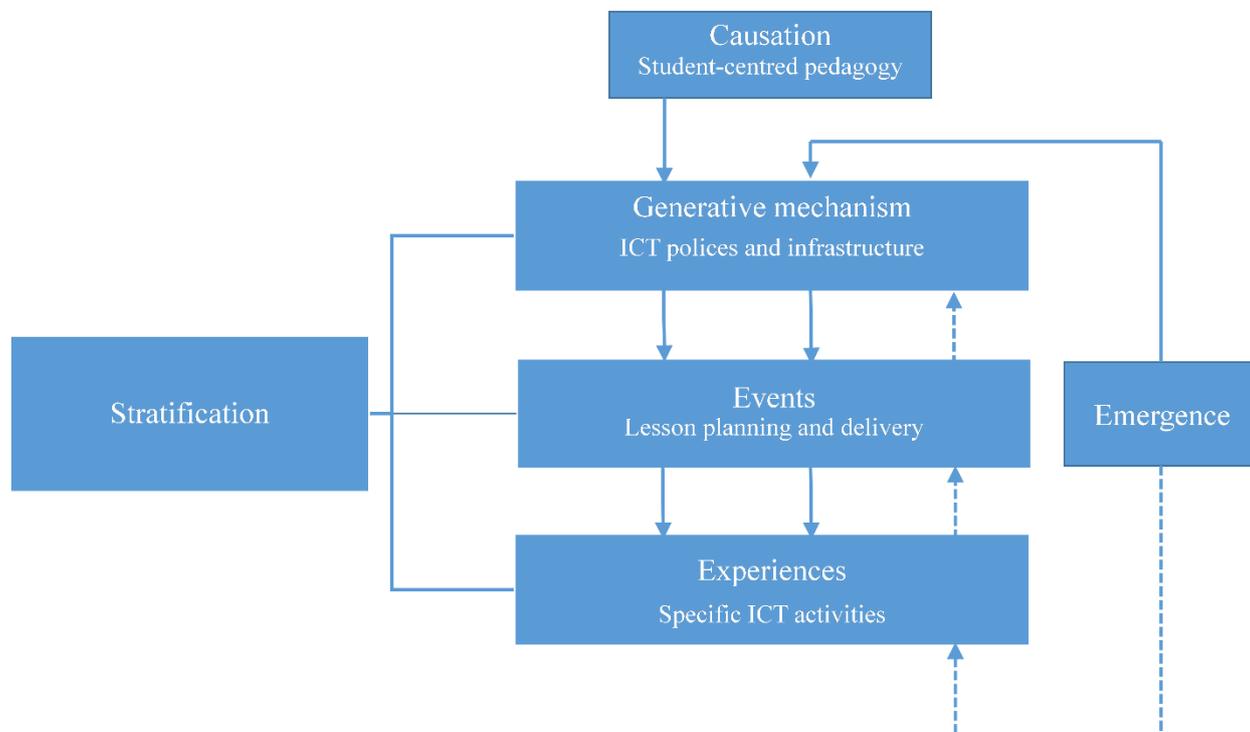
Figure 4.1 Relational internality of EFL teachers' integration of ICT

4.3   Social activity within critical realism

The use and/or integration of ICT is inherently a social activity and an ICT system is shaped within 'social practices' (Pratt, 2014, p. 1) which impact on individuals interacting with each other, interacting within a culture and influenced by relatively stable factors. These factors are labelled by Archer (1995) as the social domains of structure, culture and agency. The way individual EFL teachers use or integrate ICT in ELT might be influenced by their institution's structure and culture. In addition, the EFL teachers who constantly integrate ICT are participating in social practices that are formed by global, national, institutional and individual factors that might in turn be influenced by the group and/or individuals in their institution's departments and centres. Archer separates these interactions into structure, culture and agency because this 'analytical dualism' (see Archer, 1982; Archer, 1979, p. 33; Carter & Sealey, 2000, p. 5) enables a clearer understanding of the hidden and dormant mechanisms. In essence and in Archer's own terms, analytical realism can be used for 'analytical convenience' to move from abstract ontology to 'the domain of practical social theorizing' in that the researcher can separately explore the social practices in relation to structure, culture and agency before

analysing the interaction between these domains (Archer et al., 1998, p. 370). Similarly, Bhaskar's domains of reality are separated by researchers to enable 'careful, systematic excavation' of phenomena to identify the 'often counter-phenomenal, hidden or dormant' (Boughey & Niven, 2012, pp. 642-643). Likewise, Archer divides the interactions between individuals and groups within organisational and social structures into social domains in order to understand what is occurring in the complex social world of a university so that I can discover 'whose conceptual shifts are responsible for which structural changes, when, where and under what conditions' (Archer, 1998, p. 361).

Archer (1995) describes these social domains as structure (the material conditions impacting on phenomena), culture (registers, ways of interacting within social settings) and agency (the reflexivity and autonomy of individuals and groups) (Boughey & Niven, 2012). In this study, following Boughey and Niven (2012, p. 644), Bhaskar's domains of reality are mapped onto Archer's social domains as illustrated in Table 4.2 below. This Table shows how the combination of Bhaskar's domains of reality and Archer's social domains help explore the mechanisms leading to the teacher's integration of technology into the EFL setting. The second row of Table 4.2 shows how 'the real' spans across the three domains of society. In terms of structures, the real refers to material conditions that shape or are shaped by the institution such as the roles of teachers, institutions or policies. These conditions have direct or indirect influences on a teacher's integration of ICT and are known as Structural Emergent Properties (SEP) (Archer, 1995; Boughey & Niven, 2012). The real is also reflected through culture(s) represented by Cultural Emergent Properties (CEPs) such as cultural registers (e.g., the formal governmentality of a MOET policy document or the informal 'techno-speak' of tech-savvy teachers). CEPs have certain impacts on teachers' integration of technologies into their EFL teaching. Some of the CEPs might include ideas, theories and beliefs within the institution or networks of practice of the EFL teachers. For instance, the institution's belief in and policy about the changes that can be facilitated by the application of ICT could potentially create a culture in which teachers find it necessary to integrate technologies into their teaching or one in which some teachers resist using ICT. These cultures could only be unveiled by examining what mechanisms drive these behaviours. Another level covered by the real is the individual teacher's corporate (group) reflexivity and autonomy. At an individual level, the real could be reflected, for example, in a teacher's goals, concerns and/or interests.

Table 4.2 Bhaskar's Domains of Reality Mapped on to Archer's Social Domains

Bhaskar's reality domains	Archer's map of social reality		
	Structures (SEPs) Structural Emergent Properties	Cultures (CEPs) Cultural Emergent Properties	Agency (PEPs) Personal Emergent Properties
The real	Material conditions impacting the flexible integration of technologies (e.g. roles of teachers, institutions, hierarchies, policies, systems of funding, human resource allocations, curricula)	Cultural registers impacting the flexible integration of technology (e.g. ideas, ideologies, discourses, theories, values, beliefs within academic communities or networks)	The individual teacher's and corporate (group) reflexivity and autonomy (goals, intentions, concerns, interests, desires, decision-making) as reflected in perceptions, attitudes and actions
The actual	Technology related events (e.g. developing an online curriculum, using functionality, participating in the tech group et cetera)		
The empirical	Experiences and observations of university EFL teachers (e.g., A lesson on how to use Google search engine to support speaking skills; a teacher reporting using a specific ICT)		

Note. Adapted from Table 1 in Boughey and Niven (2012, p. 644).

4.4   Critical realism as epistemology

In order to be able to research emergence using analytical dualism as described in Archer's and Bhaskar's philosophy above, Archer herself suggested the morphogenetic approach as an appropriate epistemology for the study of structure, culture and agency within sociocultural events (Archer, 1995). A morphogenetic approach explores phenomena in relation to three phases: (i) structural or cultural conditioning, (ii) social or sociocultural interaction, and (iii) social or cultural elaboration (Archer, 1995, p. 323; Zeuner, 1999, p. 79). Archer's analytical dualism lays the grounds for distinguishing a 'cultural system from socio-cultural interaction' (Zeuner, 1999, p. 80). This interaction, in practice, operates in sequence. The sequential impact might lead to changes in terms of 'elaboration' (morphogenesis) and/or just 'maintenance' (morphostasis) (Zeuner, 1999, p. 80).

Figure 4.2 shows how a morphogenetic approach as adapted from Archer (1995, p. 157) can be used to unpack changes in terms of structure, culture and agency over time. For example, major structural change might be announced in a policy document (the beginning of a potential change cycle labelled T1). This sociocultural interaction (labelled T2-T3) occurring as a result of T1 could take different forms and could constrain or enable ICT integration. Finally, when actual practices are examined at the end of the morphogenetic cycle (T4), individual teachers could either sustain their current ICT integration practices or change them (termed structural reproduction or elaboration, respectively). In this thesis, T1 refers to the Ministry of Education

and Training's (MOET) Directive and Guideline policy texts (which later on coded as PT1 and PT3 in Chapter 5) on the implementation of information technology (IT) tasks for the academic year 2008-2009. These policy texts were selected as T1 because they contain certain 'emergent properties' (Dépelteau, 2008, p. 58) related to the actual implementation of ICT integration. Although these policies were developed from other policy texts, they are selected as T1 also because they contain the 'structural and cultural' components for potential (subsequent) interactions (Dépelteau, 2008, p. 58). For T2-T3, the data from policy texts, observation and interviews show interactions in response to T1. Figure 4.2 indicates T4 through ICT practices that can be 'sustained or altered by human actions' (Porpora, 2013, p. 28). T4 is also perceived as 'effects of social relations' from T2-T3 (Dépelteau, 2008, p. 71). Therefore, T4 can potentially constitute both 'morphostasis' or structural reproduction where no change occurs and 'morphogenesis' or structural elaboration (Dépelteau, 2008, p. 58) where changes are produced as a result of T2-T3. In this study, T4 is January 2015 (data collection occurred in two phases: July to November 2013 and again December 2014 to January 2015) since at six years after T1, it is expected that structural and cultural elaboration could potentially have occurred. While it is important to note that the emergence (of properties) regulates this morphogenetic cycle, it is also crucial to note that each point in time (T1 to T4) is determined by another (Zeuner, 1999).

T1

Structural conditioning

E.g., MOET Directive and Guidelines on ICT Task Implementation (2008-2009)

T2 - T3

Socio-cultural interaction

E.g., constraining and enabling factors influencing ICT integration

T4

Structural Reproduction/Elaboration

E.g., ICT practices being sustained or changed
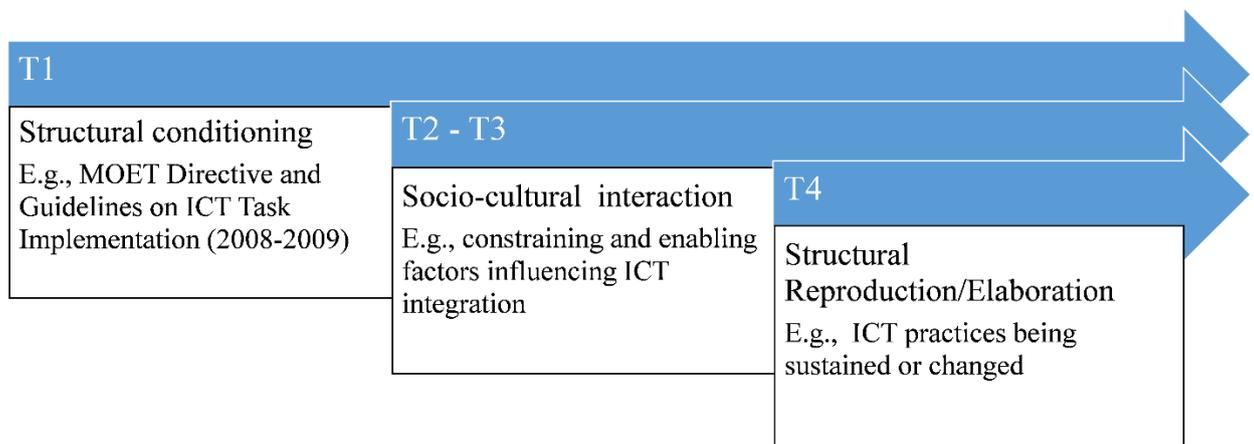
Figure 4.2 Use of a morphogenetic cycle

Note. This figure is adopted from Archer (1995, p. 157); in this study, T1 data are derived from policy documents and participants' report of previous practices in the questionnaire; T2-T3 and T4 data are derived from questionnaire, classroom observation and interview.

Archer divides agential decisions according to three components: 'Concerns, Projects and Practices' (Archer, 2007, p. 42) and she describes the movement between these components as the 'trajectory formula' (Archer, 2007, p. 42), hereafter referred to as 'trajectory'. Archer's trajectory can be used as a substantive theory as it enables data collection and data analysis. In this study, the 'trajectory' is used as follows: EFL teachers' 'Concerns' are identified from their self-reported 'Concerns' as individual teachers or as groups of teachers as reflected in the questionnaire or interview data. The 'Projects' component is explored by examining what EFL teachers say or plan to do either as an individual or groups as reflected in the questionnaire and interview data (for instance their description of lesson plans or intentions to participate in ICT training). 'Practices' (in ICT integration) are captured from their reported 'Practices' via the questionnaire and interview, but principally through the observation data. Archer (2007) argues that 'Concerns' drive the 'Projects' which give rise to the emergence of 'Practices'. Once the 'Projects' are enacted over time, 'Concerns' can then be translated in to 'a set established practices' (Archer, 2007, p. 42). Figure 4.2 summarises the trajectory in relation to a specific example in the data.
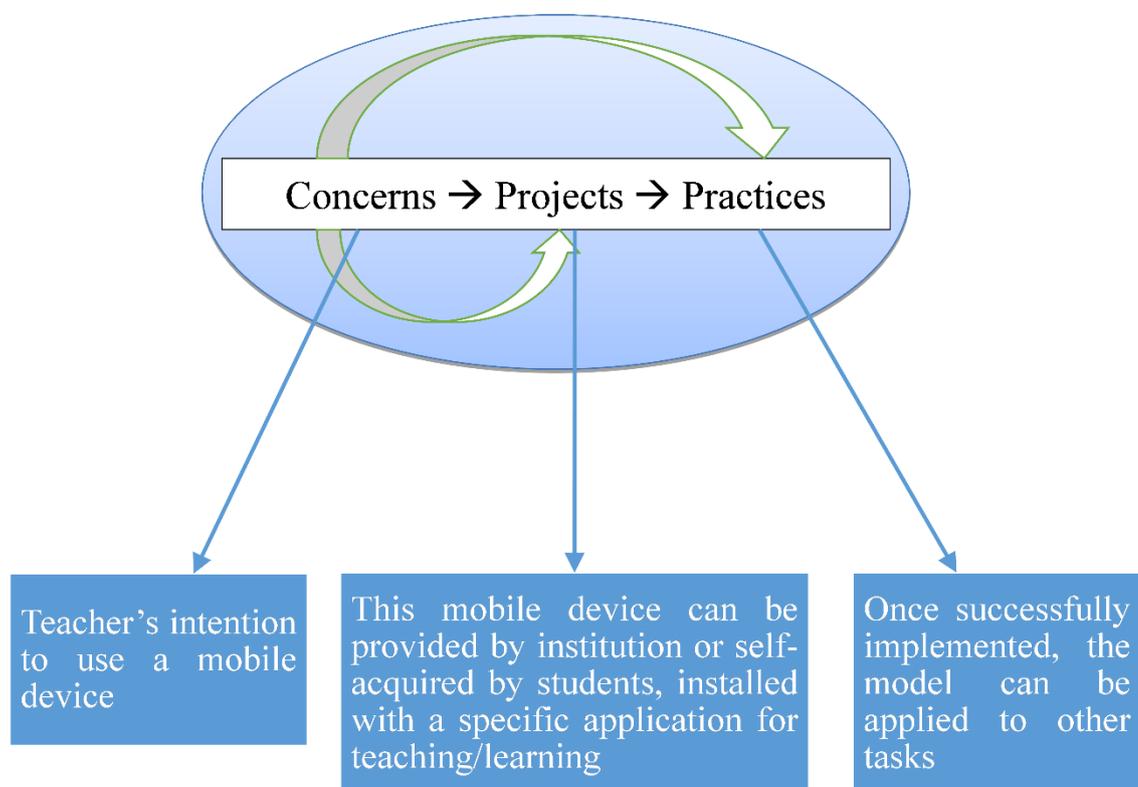
Figure 4.3 Use of Archer's trajectory of Concerns, Projects and Practices

4.5   Ethnography as a research methodology

In order to understand and separate out these complex and sometimes overlapping domains, I adopt ethnography as the overarching methodology for this study since it allows me to explore the research 'below its surface impressions' (Hammersley, 2002, p. 50) to offer a full account of the underlying mechanisms impacting on EFL teachers' effective integration of ICT. Lynch (1997, p. 1); (Lynch, 2001) defines ethnography as 'way(s) to investigate the genealogical relationship between social practices and accounts of those practices' with a focus on 'practical action and practical reasoning' (Lynch, 2001, p. 9).

As is typical in ethnography, this study involves fieldwork within a culture. Culture is 'a holistic flexible and non-constant system with continuities between its interrelated components including 'ideational systems, preferred behaviours and structural (social) relationships' (Whitehead, 2005, p. 5). In broader terms, culture is understood as 'everything having to do with human behaviour and belief' (LeCompte, Tesch, & Goetz, 1993, p. 5). In addition, the fieldwork is required in this study because I can gain a 'complete immersion' in the research site (Hammersley & Atkinson, 2007, p. 214) so as to capture, from an insider view, the shared and connected meanings (through participants) in that culture. Typically, this immersion involves identification of key informants, sustained observation by the researcher, and interactions/interviews with key informants about the relationships (genealogies and hierarchies) within the culture.

4.5.1   Focussed (discourse) ethnography

To obtain a comprehensive interpretation of the culture mentioned above, this study employed focussed ethnography as the main methodology (Cruz & Higginbottom, 2013; Knoblauch, 2005). Table 4.3 details the differences between traditional ethnography and focussed ethnography as well as the features of both of these approaches drawn upon in this study. The description of conventional ethnography is drawn from Knoblauch (2005), while information drawn from (Muecke, 1994), Knoblauch (2005), Cruz and Higginbottom (2013) are used to fully explain the features of focussed ethnography.

It is impossible to explore all aspects of the culture at the research site; only a specific problem or focus within that culture (ICT integration by EFL teachers) can be studied. Hence, I conducted a focussed ethnography that explores a 'discrete community and phenomena' (Cruz & Higginbottom, 2013, p. 38) with limited participants and prioritised areas was appropriate.

While the conventional tradition of ethnography, sometimes referred to as the 'orthodox ethnographic approach' (Cruz & Higginbottom, 2013, p. 36), requires a certain research duration of at least 'one year' (Hammersley & Atkinson, 2007, p. 1). Table 4.3 shows that the conventional ethnography is time extensive, meanwhile focussed ethnography is time intensive. Also, the focussed ethnography emphasises the intensity of data analysis to ensure that the most important features of the selected culture are captured. Accordingly, this study included two stages of data collection: a duration of four and a half months for data collection in the first phase and another one and a half months in the second phase with episodic (in-the-field) observation and participation (Cruz & Higginbottom, 2013). However, despite the episodic observation, as in traditional ethnography, ensuring communicative activities with the culture selected and towards its participants is required in focussed ethnography. In so doing, I actually engaged with my participants over an extended period from several weeks before data collection, throughout the period between the two fieldwork episodes and continued after the final fieldwork session up until June 2015 in the form of Skype discussions and email correspondence. In addition, as is increasingly the case in conventional ethnography, I entered the field in the role of an insider to the culture (as described in the section on the role of the researcher below). Table 4.3 summarises the major features of focussed ethnography employed in this study.

Table 4.3 Conventional Ethnography versus Focussed Ethnography

Conventional ethnography	Focussed ethnography	
Long term field visits	Short term visit to the field	Problem-focussed and context specific
Experientially intensive	Data analysis intensity	Focus on a discrete community or social phenomena
Time extensity	Time intensity	Conceptual orientation of a single researcher
Writing	Recording	Involvement of a limited number of participants
Solitary data collection and analysis	Data session groups	Episodic participation observation
Open	Focussed	Participants usually hold specific knowledge
Social fields	Communicative activities	Used in academia as well as for development in healthcare services
Participant role	Field observer role	
Insider knowledge	Background knowledge	
Subjective understanding	Conversation	
Notes	Notes and transcripts	
Coding	Coding and sequential analysis	

Note. Adapted from Muecke (1994, column 3), Knoblauch (2005, column 1) and Cruz and Higginbottom (2013, column 2).

4.6 Role of the researcher and participants

I played an insider role to some extent since I worked at a public higher education institution as a permanent staff member and university teacher of English from my university graduation in 2002. As Vice Head of the Translation and Interpreting Division from 2011, I was also in the position to potentially drive ICT integration at the institution. I took a break from my work at the institution and became a researcher/research student. Further, I investigated all departments and centres that offer English training, not only the translation department. Therefore, my role can be described as an inside outsider; I was an academic studying academics (outsider) as well as an academic studying his own institution (insider) (Potts, 2007, p.159).

As an insider to the research context, I had several advantages (Potts, 2008, pp. 160-161). As a permanent full-time lecturer at the institution, I easily obtained permission and 'unfettered access' from the President of the Institution as well as the various Heads of Department and Centres Also, as a trusted colleague, my participants felt comfortable providing me with the

'volunteered information'. Understanding of the context and participants (based on my previous relationship with these participants) is central to ethnographic research because it affects the degree of 'closeness' (Hammersley, 1992, p. 198), deep interactions and 'engagement' between the researcher and participants (Hammersley & Atkinson, 2007, p. 229). This is important because the interaction clarifies the role of the researcher, the depth of the researcher's involvement in the research site and with the (potential) participants. Because of my inside outsider role, having known and worked with these English teachers for years and having established good rapport with participants, I could obtain a clearer picture of the 'perceptions and views' of the participants (Cohen, Manion, & Morrison, 2013, p. 128). The major participants in this study were English teachers working for the departments/centres at a public higher education institution in Vietnam. My insider knowledge also helped me to identify key informants other than the EFL teachers, such as the two Vice Directors of the Information Technology (IT) Centre and one librarian.

4.6.1 Criteria to identify participants

To identify these key participants, I used the following list of criteria (Cohen et al., 2013, p. 234):

• Whose accounts are more important than others?

In this study, the account of the EFL teachers was most important; however, to obtain a holistic view, accounts from leadership, a librarian and IT staff were also used in order to gain insights into how ICT was perceived and integrated.

• Which informants are competent to pass comments?

In this study, all participants were viewed as being competent to pass judgement. However, to gain a more comprehensive picture of the enablers and barriers of ICT integration, only participants who identified themselves as integrating technology were used for the follow-up observations and interviews. These participants were then divided into those who reported a deeper engagement with technology (as shown by them being able to teach the technology to colleagues and students; and to actually integrate technology into their EFL classes) and those who only reported being able to use various technologies for their own purposes.

• How do the informants operate in different settings?

In this study, I observed the participants in their various classroom settings as well as interviewing them either on site or in a setting of their choice. There were two participants who

requested a different venue, namely, in a cafeteria within the capital city. I also observed participants both in technology-rich and technology-poor environments.

4.6.2   The questionnaire as a tool for identifying key participants

The questionnaire was used to ascertain the EFL teacher's self-reported experiences and practices of ICT integration. This empirical data assisted in 'finding informants' and 'developing and maintaining relations in the field' (Cohen et al., 2013, p. 223). The questionnaire was designed to find '[key] informants and identify "key issues" [in this study]' (Arthur & Nazroo, 2003, pp. 117-124). In addition, the use of questionnaires shows 'what people [participants] do' and interprets why 'they [participants] do it' (Ary, Jacobs, Sorensen, & Walker, 2010, p. 490). Therefore, as many participants as possible were sourced from the target population. Questionnaires were delivered to all the participants in all the five cohorts: the English Department (ED), the Foundation Studies Department (FSD), the In-Service Department, and Distance Education Centre (DEC) and International Education Centre (IEC). As indicated in Table 4.4, the rate of returned questionnaires was extremely high: 133 out of 145. The questionnaire instrument is described in further detail in the data collection section below.

4.6.3   Observation and interviews of key participants

In the questionnaire, participants were requested to provide their contact details and preferred times and venues for a follow up interview if they were willing to participate further. Twenty-seven EFL teachers agreed to a follow-up interview and an additional four other key informants (the Deputy President of the institution, two Vice Directors of the IT Centre and a librarian) were sourced from individual requests based on my knowledge of the site. Based on the post-questionnaire interviews and the data in these participants' questionnaires, I identified six participants for classroom observations. These participants were selected as they represented the two largest cohorts (ED and FSD) as well as one participant from a smaller centre (IEC). Participants were also selected based on those who reported a greater engagement in ICT integration (as indicated by their reported ability to 'teach others' a variety of ICT tools and 'actually use' ICT in their EFL classes) versus those who reported only being able to use key tools themselves, I also selected one participant who reported less engagement in ICT for comparison purposes. Out of these six observations, five participants agreed to post-observation interviews. A summary of the data collection in the five cohorts is presented in Table 4.4 below.

Table 4.4 Summary of Data Collection in the Five Cohorts

Cohorts	Surveys delivered	Surveys received	Post-questionnaire interviews	Observations conducted	Post-observation interviews
English Department (ED)	72	70	23	4	4
Foundation Studies Department (ESD)	35	33	1	1	1
In-Service Department (ISD)	18	17	1	0	0
Distance Edu Centre (DEC)	12	8	1	0	0
International Edu Centre (IEC)	8	5	1	1	0
	145	133	27	6	5
Admin staff					
CU's Vice President			1	0	0
CU's Vice Directors of IT Centre			2	0	0
CU's Librarian staff			1	0	0
Sub-total		133	31	6	5

4.7   Methods of data collection and data analysis

In this study, the data collected consisted of policy texts, questionnaires, classroom observations and face-to-face interviews. The methods of data collection and analysis used for these various sets of data can be mapped onto Bhaskar's (1978, p. 13) domains of reality as well as Archer's (2007, p. 42) trajectory of 'Concerns', as illustrated in Figure 4.3 below. The ways in which the various methods of data collection and analysis interact in the study are described in more detail in following sections.
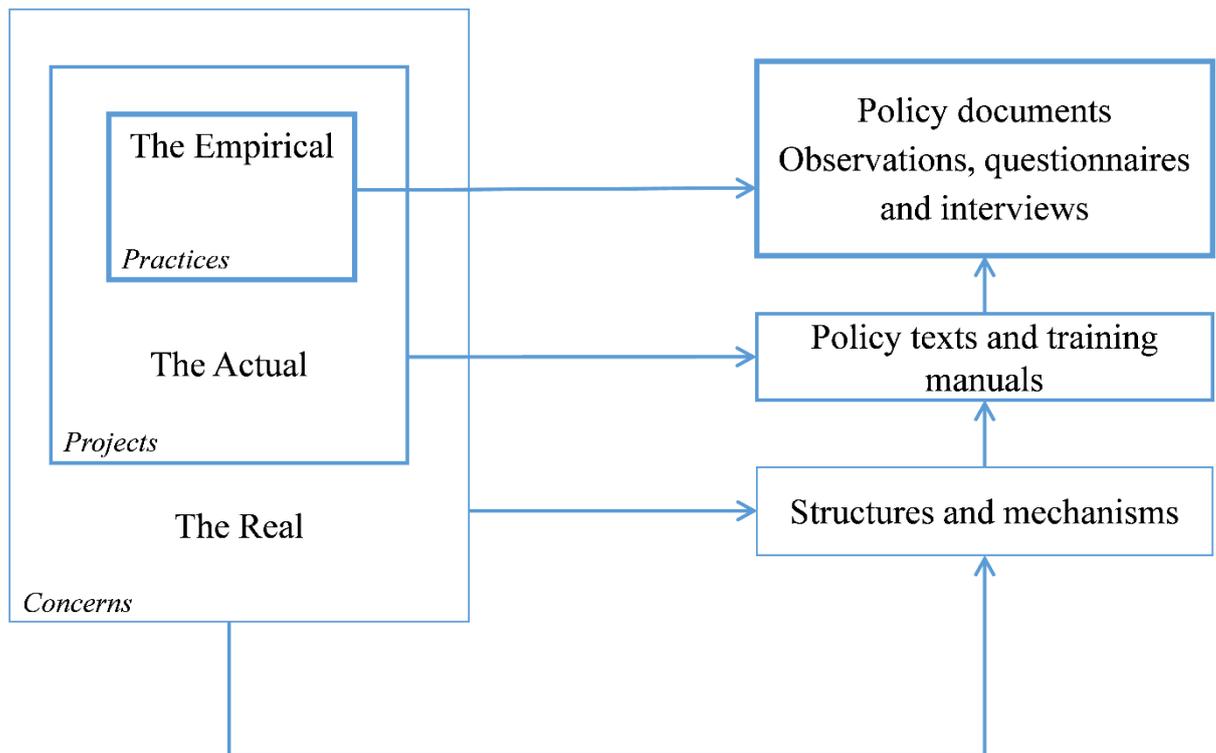
Figure 4.4 Relationship between theoretical framework and methods
Note. Adapted from Njihia and Merali (2013, p. 888) and Zachariadis et al. (2013, p. 4)

4.7.1 Focussed discourse ethnography and critical discourse analysis (CDA) of policy texts

In order to explore the policy texts in a manner compatible with critical realism and focussed ethnography, discourse ethnography in combination with critical discourse analysis was used to analyse the policy texts. Discourse ethnography is a research methodology that integrates the analysis of discourse and ethnographic investigation. This methodology was firstly introduced in the early 1960s and was initially called the 'ethnography of speaking' and 'ethnography of communication' (Hymes, 1962, 1964) before more recently being dubbed 'discourse ethnography'. This methodology 'enables a researcher to explore the distinctive configuration of verbal routines, conventions, and genres that structure communication' (Smart, 2011, p. 151). The underlying assumption is that linguistic competences have a mutual relationship with social competences. In other words, an individual within the community who learns language also learns socio-cultural aspects of the community's culture. To understand these connections, discourse ethnography is used to investigate phenomena in terms of language and culture. Discourse analysis can be used to explore the linguistic features and characteristics of a phenomenon, while ethnography can expose the phenomenon in terms of observable social practices (Lima, 2010). Ethnography can support discourse analysis that generally investigates the linguistics properties of the phenomenon. In other words, ethnography can provide an explanation for why certain discourses have been selected in relationship with the social

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practices and vice versa. Both ethnography and discourse analysis are complementary to each other as they both aim to reach a common target of unpacking or exploring a 'meaning-construction' approach (Hammersley, 2005, p. 7).

Critical discourse analysis is likewise complementary to critical realism since various researchers (e.g., Fairclough, Jessop, & Sayer, 2002) have shown its potential to unpack the deepest layer of reality ('the real') by determining the underlying mechanisms conveyed in textual forms, as is the case with critical realism. CDA also complements the study's overarching methodology of focussed ethnography since 'textual analysis is best framed within ethnography' (Fairclough, 2003, p. 15).

4.7.1.1 Collection of policy texts

As is common in focussed ethnography, I explored a discrete social phenomenon, in this case, ICT integration in an EFL higher education context in Vietnam. Since ICT integration involves a purposive planning of ICT use (Lloyd, 2005), all policy texts involved in the planning of ICT integration, development of pedagogy and evaluation of ICT integration were accessed. This included ICT policies, guidelines and training documentation. The MOET's Guideline on IT Task Implementation for the Academic Year 2009-2010 (coded as PT3, Chapter 5) was selected as T1 as it is the first Vietnamese document at a national government level to provide direct guidance on the integration of ICT. However, one policy text prior to this date (the MOET Directive on Enhancing the Teaching, Training and Application of Information Technology in Education Sector between 2008 and 2012 (coded as PT1, Chapter 5)) was also selected as it provides more general guidelines on the use of ICT in teaching and learning. The remaining 10 policy documents were selected as reflecting the interactions between international, national and institutional policy both in response to the policy document in T1 and other factors as seen in T2-T3. The rationale for the selection of each of these texts is discussed in detail in the policy text analysis chapter (Chapter 5). However, they were chiefly selected as representing the key policies that impacted on ICT integration in higher education in Vietnam in the 10 years prior to data collection.

4.7.1.2 Analysis of policy texts

In this study, CDA helps the movement in analysis from 'description' of linguistic features to 'explanation' of social practices (Fairclough, 1995) as is required in discourse ethnography. Fairclough notes that when analysing texts using CDA, three processes occur simultaneously: description (which is concerned with formal properties of the text, usually a focus on linguistic and thematic structure of a text); interpretation (which is concerned with the relationship between text and interaction - with seeing the text as the product of a process of production);

and explanation (which is concerned with the relationship between interaction and social context - with the social determination of the processes of production and interpretation, and their social effects). These various elements of analysis are represented in Figure 4.4 below.
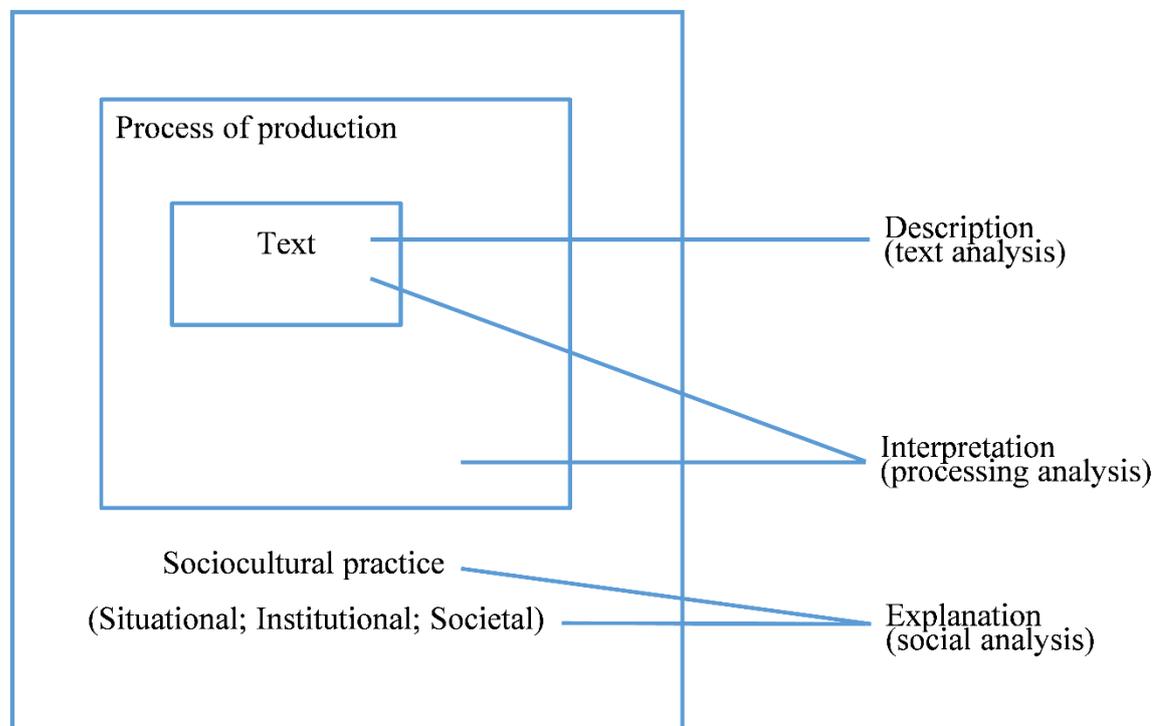
Figure 4.5 Analysis of policy texts at different layers
Note. Adapted from Fairclough (1995, p. 98).

The discourse ethnography component of this methodology helps to connect these three layers of analysis in terms of 'policy creation, interpretation and appropriation' (Johnson, 2011, p.267). This is achieved by describing the 'object of analysis' (each policy text) in terms of its 'thematic structure' and 'information focus' (Fairclough, 1989, pp. 110-111) as well as the context within which each policy document was developed which is a more ethnographic type of analysis and also links with the 'processing analysis' aspect of CDA. In addition, at a descriptive level, lexicalisation and choices of modality are explored as recommended by Fairclough (1989). At the same time, using these descriptive features, relationships between policy texts are interpreted as part of the process of exploring how the object (the policy text) is produced (Janks, 1997). Genealogies and hierarchies of texts identified through contextual information as part of an ethnographic process are thus confirmed at a text analysis level through the identification of intertextual and interdiscursive links (Johnson, 2011).

At a sociocultural level, the policy texts are explored in relation to 'ways of acting, interacting, feeling, believing, valuing' (Gee, 1999, p. 7). This aspect is identified through the levels already described which show the 'appropriation of policy' (Johnson, 2011, p. 267). In addition, I track how one individual participant (ET26) who was involved with the production of two of the

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policy texts was influenced in terms of his 'believing and valuing' (Gee, 1999, p. 7) by the policy texts that preceded them. This individual was selected as representative of the socio-cultural domain since, as well as being part of the production of two of the texts, s/he is also one of the study's participants and is represented in the questionnaire, observation and interview data.

4.7.2 Questionnaire

As noted above, a questionnaire administered to the entire population was used to identify 'key issues' and 'key informants' (Arthur & Nazroo, 2003, pp. 117-124) related to ICT integration in this context. The key issues that affected teacher's experiences and practices of ICT integration were identified in two ways: closed questions and open-ended questions.

The closed questions were developed using constructs from the literature that relate to effective integration of ICT. First, Puentedura's (2008, p. 3) model of Substitution, Augmentation, Modification and Redefinition (SAMR) was used to develop the construct of teacher-focussed ICT integration (Questions 6.1 to 6.6 in the survey) which explores the actions of the individual teacher as an agent in effectively integrating technology. A five-point Likert scale was used to determine the degree of agreement from participants with the statements that reflected teachers' use of effective substitutes for other learning resources and learning modes. This scale is also used to explore the effective augmentation of learning resources, and to examine modification of task design in order to see whether or not teachers effectively used ICT resources/modes of learning with or without redefinition or creation of previously inconceivable tasks.

Flexibility dimensions and teachers' application of ICT were also used to design the survey questions (Collis, 1999; Collis, Moonen, & Vingerhoets, 1997; Collis & Wende, 2002). The rationale for using these flexibility dimensions is that effective integration in the modern learning environment involves the response to a range of expectations from the learners and higher education institutions for 'just-in-time, anywhere, anytime and on any device' ICT integration (Aghaee & Larsson, 2013, p. 51; Jung, 2005; Mandula, Meday, Muralidharan, & Parupalli, 2013; Phelps, Graham, & Kerr, 2004). All these elements of responsiveness to student needs and flexibility of place, time and delivery are addressed in the 'flexibility' dimensions as defined by Collis et al. (1997) and Collis (1999). Hence, the construct of student-focussed use of ICT (Questions 6.7 to 6.11) addressed flexibility in responding to students' needs when integrating ICT.

The impact of other teachers on the individual teacher's ICT integration was also explored (Questions 6.12 to 6.16). These are dubbed 'group impacts' in the data analysis (Collis &

Wende, 2002, p. 16). The development of the institutional factors group (Questions 6.18 to 6.20) explores the impact of institutional policy and practices on ICT integration.

Although the literature (e.g., Collis et al., 1997) describes the concept of flexibility in detail, teachers in the study might not necessarily consider these factors as important to their pedagogy. Therefore, the survey includes questions (Questions 6.21 to 6.24) that explore whether the EFL teachers identify key elements of flexibility in ICT integration as an important part of their role as teachers. Questions asked are in relation to pedagogy, responsiveness, engagement and students' contribution to sharing knowledge. The teachers' actual use of ICT in EFL teaching was examined in Question 7, which focuses on the specific tools and to what extent teachers use these ICT tools in their EFL classes. This section was divided into seven sub-categories: general software, audio-video software, image-editing software, communication software, mobile devices, social networks and search engines. All the ICT tools mentioned in the survey were either available on the web at low or no cost or provided by the institution to its staff at the time of the research. Finally, the open-ended questions (Questions 8 and 9) were designed to uncover any additional elements that drove or prevented effective integration of ICT by the teachers. Full questionnaire can be seen in Appendix E (p. 277) of this study.

4.7.3 Observation

In order to further explore teachers' practices, this study makes use of observation data by 'observing teachers at work' (Reed & Bergemann, 2001, p. 19). In line with the focussed ethnographic approach, the emphasis in the observation was on 'critical events', described by Wragg, Wragg, and Brown (1999, p. 17) as 'simply things that happen that seem to the observer to be of more interest than other events at the same time, and therefore worth documenting in greater detail, usually because *they tell a small but significant part of a larger story*'. In this study, the emphasis was on critical events that related to changes from T1 to T4 and/or issues identified in the questionnaire as related to the enablement of or barriers to ICT integration in the context. Thus, as suggested by Hammersley and Atkinson (2007, p. 16), 'active observations' were conducted that were 'selective [and] with theoretical interpretation'.

4.7.3.1 The observation log

Although this study focuses on critical events, when observing each class and the critical events within each class, the aim was to provide as much detail as possible so as to enable 'thick description'. This concept, first described by Geertz (1973) is described by Denzin (1989, p. 83)

as 'more than record[ing] what a person is doing'. Instead, it 'goes beyond mere facts and surface appearances. It presents detail, context, emotion and the webs of social relationships that join persons to one another'. The details of what occurred in each classroom and within each critical event were recorded in my observation log. This observation log consists of a pre-observation form and an observation sheet (see Appendices G and H for full details, pp. 287-289). The pre-observation form is used to collect general information of the class (e.g., class size, and teaching subject). The pre-observation form also consists of five questions related to ICT integration in EFL teaching and one box seeking agreement from the classroom teacher for a post-observation interview. The observation sheet is comprised of focus area of the lecture, class setting, class description in detail, types of ICT used by classroom teacher, flexibility dimensions suggested by Collis et al. (1997), and aspects of flexibility seen through some ICT models, such as Substitution, Augmentation, Modification and Redefinition (SAMR) by Puentedura (2008) and Read, Reflect, Display and Do (R2D2) by (Bonk & Zhang, 2006). A detailed data analysis of the critical events from six classrooms observations is presented in observation chapter (Chapter 7).

4.7.3.2 The observation analysis

Besides describing the critical events as detailed above, the observation data is also explored in relation to the individual observed teacher's data as reported in the questionnaire chapter (Chapter 6). For this analysis, Archer's trajectory of 'Concerns, Projects and Practices' is used (Archer, 2007, p. 42). The aim was to explore whether the EFL teachers' concerns as reported in the open-ended questionnaire data are translated into their projects and whether their practices (as observed) reflected their prime concerns.

4.7.4 Interview

As noted above, two sets of semi-structured interviews were conducted: the post-questionnaire interviews with 27 EFL teachers and four other staff; and the post-observation interviews with five of the six observed EFL teachers. The questions described below were supplemented by probes and prompts based on the responses of the participants.

4.7.4.1 Post-questionnaire interviews

The post-questionnaire interviews related to eight key elements related to the questionnaire data. The first question aimed to explore potential changes over time from T1 to T4. Thus, participants were asked:

1. What ICT tools do you and other English teachers use most frequently at CU and why? Has this changed from your previous practices of five to ten years ago? If so, why?

The next two questions focussed on their beliefs related to the value of ICT in ELT since their beliefs and concerns could potentially impact on practices. Therefore, they were asked:

2. Do you believe that ICT integration is beneficial to EFL teaching? If so, what benefits do you see it bringing?
3. Have you or your colleagues experienced any challenges in integrating ICT into your EFL teaching? If so what are the challenges?

The next two questions focussed on the potential impact of ICT integration on their pedagogy:

4. Has ICT integration affected your pedagogy in any way? If so, please describe how?
5. Do you believe that ICT can affect your communication with students? If so, in what ways?

The next two questions aimed to explore the mechanisms underlying teachers being able to effectively integrate ICT into their teaching. Hence they were asked about the enablers and barriers to ICT integration:

6. What encourages you and your colleagues to integrate ICT into your teaching?
7. What discourages you and your colleagues to integrate ICT into your teaching?

The final question aimed to identify a teacher's perceptions of the concept of effective integration of ICT and whether this included the concept of flexibility as described in the literature:

8. How would you describe effective integration of ICT?

The questions above were changed for the other stakeholders in order to focus on their beliefs about EFL teachers within their institutions (see Appendix F for other interview questions, p. 285). They were also asked the following questions:

9. What policies and/or support does your institution provide for EFL teachers to integrate ICT into their teaching and what impact do you believe these policies/support have on their practices?
10. How would you evaluate the ICT integration competencies of EFL teachers at your institution? Why do you say this?

4.7.4.2 Post-observation interviews

The post-observation interviews were based on the observations in each class and on the critical events observed. For example, ET26 explained in some detail to his students how to use the Google search engine. Therefore, I asked him the reason he did this.

4.7.4.3 Data analysis of interviews

Interviews were recorded, transcribed and extracts from the interview transcripts (translated from Vietnamese into English) are quoted verbatim in the Observation Chapter (Chapter 8). General themes related to the eight questions were identified and the data was coded using NVivo 10 software. The data collected from the five respondents who participated in the post-questionnaire interview, observation and post-observation interviews were also explored in relation to Archer's (2007) trajectory with the ultimate goal of determining what moved their concerns into what Archer (2007, p. 42) calls 'a set of established practices'.

4.8   Validity and Reliability

By adopting critical realism along with Archer's morphogenesis and trajectory, this study aims to fulfil the criteria of ontological depth (Mingers, 2000), since the layered ontology by its very nature ensures the 'researcher's reflexivity' (Creswell & Miller, 2000, p. 126) and rigour through its multiple voicings, and reanalysis/reinterpretation of data through each successive chapter. In addition, although a focussed ethnographic approach was adopted, this still included fairly 'prolonged engagement' in the field and post-study interactions with the participants as described earlier in this chapter. This prolonged immersion, along with my experience in the context, assisted me in providing more 'authentic' (Northcote, 2012, p. 106) and consequently rigorous insights into how EFL teachers shaped their integration of ICT in the context of Vietnamese higher education.

4.9   Ethics

The major ethical issues in this study, as is common in ethnographic research, were 'informed consent' in relation to procedures, privacy, harm, exploitation and consequences for future research (Hammersley & Atkinson, 2007, p. 209). Even though good rapport was already established with the participants due to my 'inside outsider' role, the following steps were taken to guarantee no ethical criteria were violated. First, the research project information sheet was sent to participants informing them of the nature of the research and how would it be conducted in the institution to ensure they participated on the basis of voluntary grounds and 'confidentiality' guaranteed (Hammersley & Atkinson, 2007, p. 110) with 'privacy and anonymity' reassured (Ellen & Firth, 1984, p. 138). A letter of approval from the institution's President was attached to the research project information sheet and to the pre-observation form.

I take the issue of privacy into serious consideration as the Vietnamese culture is sensitive to losing face due to disclosure of private information. In the informed consent forms sent to participants, I emphasised that their privacy was guaranteed. This issue is critical to participants because some interviews were conducted not in the institution but in other settings such as in a café restaurant or in a public place. Thus, interviewees were able to select where they would meet the researcher and which classes would be observed. During these interviews the participants would like their participation to remain anonymous and in the case of names being used, they preferred pseudonyms for replacement of real names.

Any issues of 'harm' arising from participation in this study were minimised by ensuring that participation remained voluntary. As a member in this culture, I understand that harm is not associated with physical violence or force or coercion; rather, it implies potential harm such as disclosure of personal information which is not favoured by any participant in this study. The issue of exploitation might imply that the researcher might take advantage of the relation with the participants so that participants provide better access or further information needed for the research. Therefore, I was considerate in keeping myself distanced from making assumptions related to my established relationship with the EFL teachers in the research site.

4.10   Conclusion

This chapter presents a theoretical framework with an overarching methodology that is appropriate for this study. It argues that the use of ethnographic approach combined with discourse analysis facilitates the probe of EFL teacher integration of ICT in detail. The core foundation is that this approach is supported by critical realist ontology/epistemology to unpack the underlying mechanisms driving teacher integration of ICT in a higher education context like Vietnam. This chapter shows the rationale for specific methods of data collection and data analysis as well as how the different forms of data complement each other to form a study that rigorously explores the phenomenon of ICT integration in ELT in a Vietnamese higher education context.

CHAPTER 5
CRITICAL DISCOURSE ANALYSIS (CDA) OF ICT POLICY IN HIGHER EDUCATION

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5.1   Introduction

This chapter provides an account of ICT related policy texts using critical discourse analysis (CDA) as part of a focussed discourse ethnography to identify the cultural and structural reproduction and/or elaboration from one ICT policy to another as explicated in the Theoretical Framework and Methodology Chapter (Chapter 4). The policy texts were selected from three levels (international, national and institutional) and focus on ICT integration in higher education in general and in English language teaching (in Vietnam) in particular. CDA unpacks 'intertextual and interdiscursive connections between the various layers of policy texts and discourses' (Johnson, 2011, p. 267) by exploring these connections in individual and sets of policy documents. Focussed discourse ethnography places emphasis on 'sequential analysis' (Knoblauch, 2005, p. 9) which means tracking how one text potentially influences or has a relationship with another text or texts. This is in harmony with CDA as described by Fairclough (1989) and Janks (1997), who separate the layers of meaning and social practices encapsulated by a text. CDA analysis moves from textual description, through an interpretation of the processes involved in text creation, to an explanation of social-historical 'Discourses [sic]' underlying policy texts (see Fairclough, 1989, p. viii; Janks, 1997, pp. 329-330).

In this chapter, details are provided on the policy texts selected for analysis and their relationship to each other, providing a genealogy of policies and how they result in structural an. Archer's (1995) concept of structural reproduction is represented by the way in which policies almost identically reproduce each other or adapt from previous policies and move in new directions (structural elaboration). For example, the TESOL Vietnam (PT6) inherits structural features from the TESOL Framework (PT2). In this transition, structural reproduction occurs as the technology standards are translated/reproduced into Vietnamese from PT2 (see Section 1.4 and the Appendix of PT6). Additionally, both PT6 and PT2 have the same target audience: the English teachers. However, structural elaboration is seen as the relevance of the standards to the Vietnamese legal, policy, social and practical contexts related to higher education, ICT and ELT is elaborated in Sections 1.1 to 1.4 (PT6). Another example can be seen in the relationship

between the MOET Guideline 2010 (PT3) and the MOET Guideline HE 2010 (PT4). Structural reproduction can be seen in the transfer of almost all content and message from PT3 to PT4. Structural elaboration can be detected as the shift in focus is changed from education in general (PT3) to higher education emphasis (PT4). In addition, the role of one agent who was involved in the text creation process of some of the texts is explored. This person (coded as ET26) is also one of the key informants in the study as a whole. Thus, even though this chapter focusses on policy texts where the voices of ordinary teachers are usually not heard, through this participant we start to see how the multiple 'voices in the text enter into a relationship of echo and anaphora, dialogue and development' (Atkinson, 1990, p. 91).

This chapter assists in the process of unpacking the practices of higher education institutions in Vietnam and EFL departments/centres, particularly as they are related to ICT integration, by exploring the policy texts that potentially influence these practices. Although, as noted by Fairclough (1995, p. 87), CDA involves the integration of 'macro and micro levels of analysis', in the following section, I focus on all three dimensions of Fairclough's (1995, p. 98) analytical framework by examining discourse as 'text, discourse practice and social practice' at a macro level. I describe the 'thematic structure' and 'information focus' of each text, identifying the potential producers of the texts and their social networks by interpreting the contexts within which the texts operate, explaining what is known about their 'sociocultural practices (situational, institutional, societal)' (Fairclough, 1989, pp. 110-111). This is followed up by an exploration of the interrelationship between the texts in the subsequent section and finally a discussion of these texts in relation to Archer's (1995, 1999) morphogenetic approach and the role of one of the text producers in potentially bringing about morphogenesis and/or morphostasis.

5.2   Detailed description of policy texts

In this study, 12 policy texts (PTs) were selected to examine how ICT policy was formed and enacted. The texts selected are presented in Table 5.1 which shows the chronology of the texts, the policy level (international, national and institutional), and their assigned codes. Although the macro-structures of the individual texts are discussed in chronological order below, they do not necessarily have a linear chronological influence on each other. Instead, there are complex interrelationships and genealogies between these texts which are discussed in section 5.3. Table 5.1 shows how these policy texts are chronologically organised.

Table 5.1 Chronology of Policy Texts at International, National and Institutional Levels

Time	Policy texts (PT) as selected	Coded	Level
2008	MOET Directive on Enhancing the Teaching, Training and Application of Information Technology in Education Sector between 2008 and 2012 (MOET, 2008) (hereafter referred to as MOET Directive)	PT1	National
2009	Teaching English to Speakers of other Languages (TESOL) Technology Standards Framework (Healey, Ioannou-Georgiou, Kessler, & Ware, 2009) (hereafter referred to as, TESOL Framework)	PT2	International
2009-2010	Guideline on IT Task Implementation for the Academic Year 2009-2010 (MOET, 2009) (hereafter referred to as MOET Guideline 2010)	PT3	National
2010	Guideline on IT Task Implementation for the Academic Year 2009-2010 for Universities and Colleges (MOET, 2010) (hereafter referred to as MOET Guideline HE 2010)	PT4	National
2010-2011	Self-Evaluation Report of Capital University 2010 – 2011 (provided by CU staff) (hereafter referred to as Draft Report)	PT5	Institutional
2013	Project on Building the ICT Application Competence Standards for Vietnamese Teachers of English (provided by CU staff) (hereafter referred to as TESOL Vietnam)	PT6	National/ Institutional
2013-2014	Guideline on IT Task Implementation between 2013 and 2014 (MOET, 2013) (hereafter referred to as MOET Guideline 2014)	PT7	National
2014-2015	MOET Guideline on IT Task Implementation for the academic year 2014-2015 (MOET, 2014) (hereafter referred to as MOET Guideline 2015)	PT8	National
2014	The NMC Horizon Report: 2014 Higher Education Edition (Johnson, Becker, Estrada, & Freeman, 2014) (hereafter referred to as Horizon Report 2014)	PT9	International
2015	The NMC Horizon Report: 2015 Higher Education Edition (Johnson, Becker, Estrada, & Freeman, 2015) (hereafter referred to as Horizon Report 2015)	PT10	International
2015	Training for Teachers on ICT-Supported Pedagogy 2015 (provided by CU staff) (hereafter referred to as ICT Training VN)	PT11	Institutional

Policy text 1: Directive on Enhancing the Teaching, Training and Application of Information Technology in Education Sector between 2008 and 2012

Policy text 1 (PT1) is the Directive No. 55/2008/CT – BGDĐT issued by Vietnam Ministry of Education and Training (MOET) on 30 September 2008 on 'Enhancing the Teaching, Training and Application of Information Technology in the Education Sector between 2008 and 2012', hereafter referred to as MOET Directive. This MOET Directive has been designated as the T1 text in this study as per Archer's morphogenetic approach (Archer, 1995). This text is designated T1 as it is the first text to provide specific advice on ICT integration into education in Vietnam. In addition, since it was issued five years before the data collection, it would be expected that it had had an institutional level influence by the first stage of data collection for this study begun in 2013, especially since (as described in Chapter 2) Vietnam has a highly centralised education system of which MOET is the highest organ. The MOET Directive has nine major sections as follows:

- The first section is concerned with enhancing awareness of the role and position of IT with a central theme of 'an academic year to enhance IT applications, reform financial management and to build a friendly school and active students'.
- The second section refers to 'building an IT special task unit system in the education sector'.
- The third section discusses 'developing educational network and public services of educational information on the Internet'.
- The fourth is about 'the application of information and technology in the reform of teaching and learning methods at each level'.
- The fifth section touches on 'promoting IT applicaiton in educational operation and management'.
- The sixth section deals with 'strengthening teaching, training and applied research in IT'.
- The seventh section mentions 'promoting the international cooperation and socialisation'.
- The eighth section considers 'emulation and IT application evaluation', while the final section is concerned with implementation of all IT tasks mentioned in the preceding eight sections.

Policy text 2: Teaching English to Speakers of other Languages (TESOL) Technology Standards Framework

Policy text 2 (PT2) is the Teaching English to Speakers of other Languages (TESOL) Technology Standards Framework (Healey et al., 2009), hereafter referred to as TESOL Framework. The TESOL Framework is produced by the TESOL International Association (TIA), established in 1966 (Alatis, 1987) to promote the quality of English language teaching worldwide. TIA is the most influential organisation in the area of English language teaching (ELT) at an international level. The TIA released its 2014 report indicating that technology is deeply integrated in ELT. The TESOL Framework was designed by Healey et al. (2009) and defines ICT as 'the use of systems that rely on computer chips, digital applications, and networks in all of their forms' (Healey et al., 2009, p. 3). Throughout the document, the term 'technology' covers a wide range of other terms, such as mobile learning, Computer Assisted Language Learning (CALL), and digital and electronic devices.

Specific standards of the TESOL Framework draw upon content provided by the National Educational Technology Standards (NETS) of the International Society for Technology in Education (ISTE) which consists of two major sets of standards for language learners and for language teachers. PT2 is organised in four main parts. Part I is general description of the organisation of and the rationale for the production of the document; Part II refers to the implementation of technology; Part III deals with the integration of technology; and Part IV is concerned with supporting matters. The target audience of the TESOL Framework is English teachers with a focus on TESOL teachers worldwide. However, the framework is also aimed at teacher educators, administrators and course designers.

Policy text 3: Guideline on IT Task Implementation for the Academic Year 2009-2010

Policy text 3 (PT3) is the MOET Guideline on IT Task Implementation for the Academic Year 2009 to 2010. This guideline was issued and enacted by MOET on 11 November 2009. PT3 is used across the whole education sector, and higher education institutions (HEIs) are no exception. PT3 consists of three major parts: (i) Major Tasks; (ii) Emulation and Report System; and (iii) Implementation.

PT3 details 16 major tasks to be implemented for the period assigned. These tasks are almost identical to those in Guideline No.9772/BGDDT-CNTT reported in Chapter 2 (see Table 2.1 of Chapter 2) with the only changes being Task 1 and Task 16. Task 1 in PT3 emphasises the need to understand legal grounds in relation to IT implementation as opposed to Task 1 in the

Guideline which focussed on promoting 2008 to 2009 as 'the Year of ICT' in education (MOET, 2008, p. 1). This shift in focus is probably due to the fact that, from the Guideline released in 2008 to the Guideline released 2009, there has been a shift to actual implementation rather than just promotion of ICT. Likewise, Task 16 plans a pilot e-school model to be implemented for the academic year 2009-2010, while Task 16 in the Guideline No.9772/BGDDT-CNTT merely recommended an assessment of the 'actual situation of ICT use in educational institutions' (MOET, 2008, p. 5). The focus has also shifted from 'investment in ICT infrastructure' (MOET, 2008, p. 4) in Task 14 of the Guideline No.9772/BGDDT-CNTT to evaluation in Task 14 of PT3 which now suggests a need to conduct an IT survey and review so as to provide better advice on infrastructure. The remaining tasks, like that of Guideline No.9772/BGDDT-CNTT, suggest the need for resource and infrastructure development, and capacity building of staff through training and programme development.

Policy text 4: Guideline on IT Task Implementation for the Academic Year 2009-2010 for Universities and Colleges

Policy text 4 (PT4) is the MOET Guideline on IT Task Implementation for the Academic Year 2009-2010 for Universities and Colleges, hereafter referred to as MOET Guideline HE. This guideline text was released by MOET on 27 September 2010. The predecessor of this guideline is Directive No. 55 issued by MOET on promoting teaching, training and applying ICT in education between 2008 and 2012.

PT4 provides an explanation of recommendations regarding tasks referred to in Directive No.55 concerning the enhancement of teaching, training and application of ICT in education. The intended audience of PT4 includes education and training departments of the Vietnamese government, Education and Training Ministers, Vice Ministers of MOET and units under MOET control. As briefly stated before, in essence PT4 is a detailed description of the Directive on ICT application in the higher education sector. Nine major sections of Directive No. 55 have been broken down to become 16 Sections in this document. In terms of the application of ICT in education, and especially in the higher education sector, PT4 emphasises the need to build a task force unit in charge of IT/ICT. Other major applications include band-width Internet connection, building and using an e-mail system with domain name @moet.edu.vn for the purpose of 'general management of education sector' (Section 4, p. 3), website exploration and content provision to the MOET website (Section 5, p. 3).

In terms of resourcing, PT4 mentions three ICT-related resources. The first is ICT human resource development to meet new requirements of technology-based and technology-oriented

education (Section 1, p. 1; Section 13, p. 9). The second resource refers to capital resources provided by the state budget (Section 1, p. 1). The third category covers education material resources, such as electronic materials or electronic libraries for sharing via the MOET website. Education resources also include the use of open source code for the teaching, learning and management (Section 5, p. 4; Section 7, p. 5; Section 8, p. 5; Section 9, p. 7).

Policy text 5: Self-Evaluation Draft Report of the Capital University 2010 - 2011

Policy text 5 (PT5) is a 2010 self-evaluation draft report issued by Capital University (CU) on 10 September 2010 concerning the institution operation on an annual basis, hereafter referred to as Draft Report. This Draft Report also has reviewed ICT application status within the institution. The purpose of this Draft Report, as stated on the cover page 'Self-Evaluation Report', is to review for educational accreditation for universities. This report is comprised of two main parts. Part I refers to the Database for Quality Accreditation for University and Part II is the self-evaluation of the University. Part I contains seven sub-sections as below:

- Section 1 presents general information regarding the University.
- Section 2 provides a general introduction to the Institution.
- Section 3 presents information about institution staff.
- Section 4 describes the learners of the Institution.
- Section 5 focuses on academic research and technological transfer. This part is further explored in the analysis section of this chapter.
- Section 6 describes the physical, library facilities and financial bases of the Institution. This part is also a focussed analysis as it provides information regarding technological infrastructure owned by the Institution.
- Section 7 is a summary of important evaluation indicators.

Part II of the Draft Report covers a wide range of criteria for accreditation as a quality higher education institution. The institution evaluates itself based on these criteria.

Policy text 6: Project on Building the ICT Application Competence Standards for Vietnamese Teachers of English

Policy text 6 (PT6) is a document presenting a national and/or institutional level project on mapping out technology standards applicable to Vietnamese teachers of English, hereafter referred to as TESOL Vietnam. PT6 was introduced in October 2013. As stated in PT6 (p. 5), the Project was compiled by Da Nang University at the request of the National Foreign Language Project (NFLP) 2020 to standardise and improve the awareness of English teachers

in regard to ICT application in teaching and learning and research exchange amongst teachers. This training document consists of a technology team, also known as VietCALL, with the participation and contribution of 14 individuals: one professor from the USA, and 13 Vietnamese lecturers representing 11 universities or colleges. One of these VietCALL participants is from CU and is coded as ET26 in this study.

Policy text 7: Guideline on IT Task Implementation between 2013 and 2014

Policy text 7 (PT7) is a guideline, issued by the MOET on 4 September, 2013, consisting of three major parts. Part I presents major tasks to be completed by colleges and higher institutions, Part II focuses on emulation and reporting systems and Part III refers to implementation of these guidelines. Part I consists of 17 main sections exploring a range of issues from the understanding of legal documents on IT (section 1), investment related to IT (section 2), and administrative use of IT (sections 3, 4 and 5) to practical issues related to IT resource provision (sections 14, 15, 16), teaching using IT (sections 7, 8, 10 and 11) and the promotion of ICT among teachers through training (sections 9, 12, 13 and 17). The document even provides guidelines on the organisation of competitions to promote ICT use stating 'no organisation or person participating in the organisation of contest is allowed to advertise related products from businesses' (section 6, p.). Part II elaborates on awards that could be provided for creative implementation of IT in the learning and teaching process. This Part also emphasises crucial recognition for teachers that successfully integrate technology in their teaching. Part III details how the implementation of this guideline can be organised and put into practice.

Policy text 8: Guideline on IT Task Implementation for the academic year 2014-2015

Policy text 8 (PT8) is a text descendent of PT7. It was released by MOET with a focus on related ICT official policy documents and a shift in focus regarding specific technologies use in education. PT8 is divided into two major parts. Part I focusses on major tasks and Part II on implementation of tasks. Some critical differences from PT7 are found in terms of organisation of some parts and tasks as well as addition of some ICT resources or links.

Policy text 9: The NMC Horizon Report: 2014 Higher Education Edition

Policy text 9 (PT9), the NMC Horizon Report: 2014 Higher Education Edition, is a report disseminated in soft copy by the New Media Consortium (NMC). NMC was originally founded in October 17, 1993 in the USA by a group of hardware manufacturers, software developers, and publishers producing multimedia-capable products for higher education. This primarily commercial organisation started undertaking more educational work in 2003 with the launch of

the first *Horizon Report* research cycle involving predominantly researchers from USA universities with researchers from countries including Australia, Brazil, China, Germany, Japan, Switzerland and the United Kingdom. The reports are part of the work of the NMC Horizon Project which strongly focuses on promoting the 'uptake of best [technology] practices' (Johnson et al., 2014, p. 28). From the early days of the report (2004) separate K-12 and Higher Education editions of the report were produced. The report claims to be international, but since 2009, regional editions have been produced, such as the Australian and New Zealand edition. However, there is no edition for South East Asia and/or specifically focussed on Vietnam. PT9 was selected for analysis for two reasons. Firstly, 'it provides details of the context within which the participants operate' as recommended by Bowen (2009, p. 29). In this case, it is a document on ICT integration trends relevant to the higher education sector. Secondly, it is a highly cited, high status document as evidenced by 1689 citations of the 2010 report (Google, 2016a), 43 citations of the 2013 report (Google, 2016b) and 18 citations of the 2014 report (Google, 2016c) in less than one year as at 15 June 2016 on Google Scholar. An analysis of citations reveals a mixture of academic journals, government reports and educational policy documents internationally citing this report. Hence, it can be considered a representative 'policy' document for 'global' Discourses related to ICT integration in higher education. Hence this document is a 'grandfather' document in the genealogy/hierarchy of ICT integration in higher education.

Policy text 10: The NMC Horizon Report: 2015 Higher Education Edition

Policy text 10 (PT10), The NMC Horizon Report: 2015 Higher Education Edition, like PT9 is produced by an expert panel of 56 academics. Although the researchers from the USA still dominate, in this report, a wider range of countries are represented than in PT9 with a researcher from Turkey and Malaysia each added as well as additional European countries. This policy specifies its audience as higher education practitioners, educators, leaders, policy makers and technology experts and provides what the panel view as 'five year trends' in technology development likely to impact higher education. This document was selected for the same two reasons as PT9, but additionally as 'a means of tracking change and development' (Bowen, 2009, p. 30). As Bowen (2009, p. 30) suggests, the issue of development over time is an important element of discourse ethnography, since 'even subtle changes in a draft can reflect substantive developments in a project'.

PT10 covers three major areas: key trends accelerating technology adoption in higher education; significant challenges impeding technology adoption in higher education; and important developments in education technology for higher education. Like PT9, PT10 refers to three tiers

of trends in higher education: long-term, mid-term and short-term. As mentioned in the executive summary of PT10, a core component of this report presents analysis of 'the key trends, significant challenges, and important technological developments' (Johnson et al., 2015, p. 1) likely to impact on the higher education sector in the next five years.

Policy text 11: Training for Teachers on ICT Supported Pedagogy 2015

Policy text 11 (PT11) was originally written in Vietnamese by a group of ICT trainers working as permanent staff of CU. This internal training document was translated into English for analysis purposes (see Appendix N, p. 303).

Although primarily for internal purposes (for the CU), PT11 is part of a training series produced by the National Project on Foreign Language 2020. It is comprised of three major sections. Section A presents characteristics of the 21st century learners. Section B focuses on learning design and assessment for development of relevant 21st century skills for learners. Section C discusses a specific ICT integration model entitled 'TPACK - an Effective Model of ICT Integration in Effective Teaching'. Each section of PT11 is structured in three steps: (i) warm up; (ii) read and reflect; and (iii) experiment.

The focus of PT11 is to provide training for classroom teachers to effectively use ICT tools available in teaching. The document instructs teachers regarding: (i) ICT tools available; (ii) how to experiment with available tools using suggested approaches; and (iii) evaluating the experiment. Most ICT tools are associated with the 21st century learning skills and are available online.

5.3   Macro analysis of and relationship between individual policy texts

Despite the chronology of these texts provided above, the policies do not necessarily have a linear influence on each other. Hence, the policies where a direct relationship can be discerned are grouped below and discussed in pairs in relation to repetition, addition, filtering, omitting and adapting of content. They are first grouped for the purpose of analysis at international, national and institutional levels and then cross level relationships between texts are discussed.

5.3.1   Policy texts at international level: PT9 & PT10

Both PT9 (Horizon Report 2014: Higher Education Edition) and PT10 (Horizon Report 2014: Higher Education Edition) started with a title page followed by an executive summary. In this section, these two international level documents are explored for their thematic structure and content focus as well as their lexicalisation and modality through the table of contents and the

executive summaries of each text. The aim was to identify any repetitions as well as shifts in focus and in content.

Both PT9 and PT10 have similar key themes focussing on key trends, significant challenges and developments in educational technology in higher education. These two policy texts look at short-term (also called 'fast'), mid-term and long-term trends. However, the order and focus of each trend varies. For example, the Horizon Report 2014 refers to specific use of ICT tools, the integration of different online platforms, and institutional collaboration, while one year later the Horizon Report 2015 mainly promotes cultural change. The 2014 version is much more specific than the 2015 text in terms of talking about specific tools and modalities. PT10 places more emphasis on cultural issues and the role of (higher education) institutions.

In terms of the identification of key trends, both PT9 (2014 version) and PT10 (2015 version) start by identifying three main trends in ICT adoption in higher education entitled 'Key Trends Accelerating Higher Education Technology Adoption'. However, while PT9 starts the table of contents with the 'fast trends' that predict the changes in ICT adoption that will occur 'over the next one to two years', PT10 starts with the 'long-term trends' that envision changes in ICT adoption in higher education that will occur in 'five or more years'; suggesting that PT10 has a longer term focus which also accords with its emphasis on 'cultural change' and the role of the institution over time, as is discussed in the lexicalisation analysis of these two texts. In contrast, PT9, emphasises the immediate impacts of specific ICT tools (e.g., social media).

In terms of mid-term trends, PT9 and PT10 use different words, yet have the same focus. Both texts focus on measurement and assessment of learning, but PT9 appears to be more specific than PT10. For example, version 2014 focuses on 'data driven learning and assessment', while version 2015 (PT10) explores the 'measuring [of] learning' and learning analytics in general. Besides this repetition or slight elaboration, there is also a shift in focus from PT9 to PT10. While PT9 focusses on 'students as consumers and creators', PT10 focuses on 'the proliferation of open educational resources', again suggesting a shift from the actions of individual teachers and learners to cultural and institutional level change. Perhaps this shift is due to the fact that in order to facilitate the role of the students, the authors are starting to recognise that it is necessary to increase their access to open educational resources.

In terms of long-term trends, PT9 describes the 'evolution of online learning' which became a short-term trend in PT10 described as the 'increasing use of blended learning'. Therefore, an emerging long-term aim in PT9 has become a more established or 'increasing' short-term aim in PT10. PT9 also describes 'agile approaches to change' as a long-term trend. PT10 focuses on

'advancing cultures of change and innovation' as well as 'increasing cross-institution collaboration'; thus focussing on structural and cultural change at an institutional level in contrast with the emphasis in PT9 on pedagogical tool implementation. A summary of the shifts from PT9 to PT10 in terms of short/fast, mid-term and long-term trends is provided in Table 5.2 below.

Table 5.2 Key Trends of ICT Integration in Higher Education

Horizon Report 2014 (PT9)	Horizon Report 2015 (PT10)
Key Trends Accelerating Higher Education Technology Adoption	Key Trends Accelerating Technology Adoption in Higher Education
Fast trends	**Short-term trends**
Growing Ubiquity of Social Media	Increasing Use of Blended Learning
	Redesigning Learning Spaces
Integration of Online, Hybrid and Collaborative Learning	
Mid-range trends	**Mid-term trends**
Rise of Data-Driven Learning and Assessment	Growing Focus on Measuring learning
Shift from Students as Consumers to Students as Creators	Proliferation of Open Educational Resources
Long-range trends	**Long-term trends**
Agile Approaches to Change	Advancing Culture of Change and Innovation
Evolution of Online Learning	Increasing Cross-Institution Collaboration

The second section of the table of contents shows a slight change in emphasis in its title: it is dubbed 'Significant Challenges Impeding Higher Education Technology Adoption' in 2014, while it is called 'Significant Challenges Impeding Technology Adoption in Higher Education' in 2015. This is perhaps because the emphasis in PT9 is on higher education pedagogy and the impact of technology on this, while PT10 emphasises the role of technology in changing higher education institutional culture and practice. Both PT9 and PT10 group challenges into three headings: 'solvable challenges', 'difficult challenges' and 'wicked challenges'. There is an interesting shift from PT9 to PT10 with regards to the headings of challenges: 'relative lack of rewards for teaching' and 'competition from new models of education' which are classified as 'solvable' and 'difficult' problems respectively in PT9, both move to 'wicked challenges' that are too 'complex to define' and 'much less address' in PT10. This is perhaps due to the fact that

through experience of these issues in practice, the report authors have realised their challenges. The shift of these challenges is presented in Table 5.3 below.

Table 5.3 Significant Challenges of ICT Integration in Higher Education

Horizon Report 2014	Horizon Report 2015
Significant Challenges: Impeding Higher Education Technology Adoption	Significant Challenges: Impeding Technology Adoption in Higher Education
Solvable Challenges: Low Digital Fluency of Faculty Relative Lack of Rewards for Teaching	Solvable Challenges: Blending Formal and Informal Learning Improving Digital Literacy
Difficult challenges: Competition from New Models of Education Scaling Teaching Innovations	Difficult challenges: Personalising Learning Teaching Complex Thinking
Wicked Challenges: Expanding Access Keeping Education Relevant	Wicked Challenges: Competing Models of Education Rewarding Teaching

The final section of both documents is entitled 'Important Developments in Educational Technology for Higher Education'. This section is divided into the following headings: 'time-to-adoption horizon: one year or less', 'time-to-adoption horizon: two to three years or less' and 'time-to-adoption horizon: four to five years'. The technologies described in the two texts are compared using the '2014 NMC Master List of Tracked Technologies' (2014, p.35) as well as the list with the same categories in the 2015 text. Although the categorization of the technologies remains the same (e.g., consumer technologies, digital strategies, internet technologies, learning technologies, social media technologies, visualization technologies and enabling technologies), the technologies listed under each category have changed slightly due to the emergence of new technologies over time. Both documents name 'flipped classroom' (a 'digital strategy') under the first heading. While PT9 also names 'learning analytics', which can be classified as a 'learning technology' under this heading, PT10 focuses on 'bring your own device' which is also a learning technology, but suggests change at an institutional level in contrast with the student level of PT9. Under the 'two to three years or less' heading, both texts focus on 'digital strategies' with PT9 discussing 'games and gamification' while PT10 discusses 'makerspaces'. Again, PT9 focuses more on pedagogical tools, while makerspaces are 'community oriented workshops where tech enthusiasts meet regularly to share and explore electronic hardware, manufacturing tools and programming techniques and tricks' (2015, p. 40), thus focussing on the 'culture' of the institution and what it provides for both learners and teachers, rather than on pedagogy in individual courses. However, PT9 describes a 'visualisation technology' (3D printing), while PT10 emphasises a 'consumer technology' (wearable technologies). Again, the emphasis in PT9 is classroom activity, while PT10 takes the learning outside of the classroom.

Under the final heading (4 to 5 years' time-to-adoption), there is a complete shift in emphasis with PT9 emphasising a 'consumer technology' ('quantified self') and 'enabling technology' ('virtual assistants'), while PT10 moves towards a 'personal learning technology' ('adaptive learning technologies') and an 'Internet technology' ('the internet of things'). All this repetition/reproduction, elaboration and shifts in emphasis is detailed in Table 5.4 below.

Table 5.4 Important Developments in Educational Technology for Higher Education

Horizon Report 2014 Important Developments in Educational Technology for Higher Education	2014 NMC Master List of Tracked Technologies (p. 35)
Time-to-Adoption Horizon: One Year or Less Flipped Classroom Learning Analytics	 Digital Strategy Learning Technology
Time-to-Adoption Horizon: Two to Three Years 3D Printing Games and Gamification	 Consumer Technology Digital Strategy
Time-to-Adoption Horizon: Four to Five Years Quantified Self Virtual Assistants	 Consumer Technology Enabling Technology
Horizon Report 2015 Important Developments in Educational Technology for Higher Education	List of Technologies (p. 35)
Time-to-Adoption Horizon: One Year or Less Bring Your Own Device (BYOD) Flipped Classroom	 Digital Strategy Digital Strategy
Time-to-Adoption Horizon: Two to Three Years Makerspaces Wearable Technology	 Digital Strategy Consumer Technology
Time-to-Adoption Horizon: Four to Five Years Adaptive Learning Technologies The Internet of Things	 Personal Learning Environments Internet Technology

In terms of lexicalisation, PT9 and PT10 both heavily used ICT-related terminology or disciplinary jargon in relation with the higher education sector as summarised in Table 5.5. For example, both texts refer to terms such as 'emerging technologies', 'technology trends, and 'technology experts' in their summaries. The disciplinary jargon related to ICT is also employed. For example, PT9 contains jargon with a broad prediction of technology trends such as 'Technology Outlooks' or with a specific application tool like 'Android devices'. Meanwhile,

PT10 notes the jargon like 'drivers of change and innovation' and 'technology skills'. The lexicalisation can be seen in the use of ICT abbreviations. For example, PT9 uses 'EdTech' or 'CCR' (Up-Scaling Creative Classrooms), and PT10 employs 'BYOD' (Bring Your Own Device). Other lexicalisation features/properties can be observed in terms of using pronouns ('you', 'we') and quantifiers ('all', 'each', 'some') in order to 'personalise' the message in a quantifiable way to an intended audience. In the summaries of these two texts, it is interesting to note that while PT9 uses the term 'educational technology' in its executive summary, this term does not appear in PT10. Instead, PT10 employs the term 'educational change' twice in its executive summary, reinforcing the concept of cultural and institutional change already described above. Table 5.5 summarises the lexicalisation used in these two summaries.

Table 5.5 Lexicalisation and Extracts from the Executive Summaries

Lexicalisation	Horizon Report 2014	Horizon Report 2015
ICT related terminologies	'emerging technologies' 'technology trends' 'technology experts'	'emerging technologies' 'technology trends' 'technology experts'
ICT jargon	'Technology Outlooks' 'creative inquiry' 'real-time view' 'Android devices'	'Drivers of innovation and change' 'technology skills' 'Digital Information Framework'
Abbreviations	'EdTech' 'CCR' (Up-Scaling Creative Classrooms)	'BYOD' (Bring Your Own Device)
Pronoun use	'you'	'you', 'we'
Quantifiers	'all', 'each', 'some'	'all', 'some'

In terms of modality, both PT9 and PT10 employ a mixture of modality represented in forms of verbs (e.g., can, should and may), adverbs (e.g., increasingly), nouns (e.g., changes, implications), and adjectives (e.g., long-term, likely) in order to express the degree of certainty/uncertainty of ICT trends in higher education as well as the obligations of university teachers and institutions (e.g., 'should begin to take notice…?'), expectations, determination, and prediction as reflected in the executive summaries of these two policy texts. PT9 indicates certainty and obligations related to changes (in higher education) arising from 'emerging technologies and/or practices', again emphasising practical application of technology in the classroom; in contrast, PT10 expresses certainty and obligations related to a more long-term

vision of institutional and cultural 'technological developments'. This comparison is reflected in Table 5.6.

Table 5.6 Modality and Extracts from the Executive Summaries

Modality	Horizon Report 2014	Horizon Report 2015
Certainty/uncertainty: *will*	'key trends and challenges that *will* affect current practice'	'Which trends and technologies *will* drive educational change'
Verbs: *can, should*	'creative inquiry *can* also be found'	'how *can* we strategise effective solutions' 'all institutions *should* be'
Nouns: *changes, challenges, implications*	'*challenges* are discussed' (p. 3)	'*changes* in higher education'
Adverbs: *increasingly, completely*	'the wiki is a *completely* transparent window' (p. 4)	'the flipped classrooms are expected to be *increasingly* adopted by institutions'
Adjectives: *long-term, likely, potential*	'*potential* impact' (p. 3) 'emerging technologies or practices that are *likely* to enter mainstream'	'*long-term* trends' 'technological developments that are *likely* to impact changes'

From the modality and lexicalisation, these two executive summaries could be viewed as having different audiences with PT9 presenting student-centred and classroom-centred information for university teachers, while PT10 presents future trends and advice for informing policy makers. The pedagogical emphasis in PT9 is particularly clear in the 'Elements of the Creative Classroom Research Model' (PT9, p.4) where all other elements of 'content and curricula, assessment, learning practices teaching practices, organisation, leadership and values, connectedness and infrastructure' revolve around the central focus of 'innovative pedagogical practices'. In contrast, the model in PT10 (PT10, p.2), only describes the interaction among the elements of trends, challenges and technologies.

5.3.2 Policy texts at national level: PT3 & PT4

The national level documents which have a clear relationship with each other are PT3 (a more general guideline from MOET (MOET Guideline 2010) and PT4 a more specific guideline from MOET for Higher Education (MOET Guideline HE 2010). Both documents emphasise the implementation of ICT into education. This is emphasised by the use of the adjective 'electronic' scattered throughout both texts and used variously in conjunction with the nouns 'documents', 'learning materials', library', 'guideline book' etcetera. 'While PT3 mainly refers to the application of ICT in all areas of the national education system, PT4 clearly states that

the MOET Guideline 2010 is central to the implementation of ICT for 'colleges and universities'. It is also important to note that both PT3 and PT4 are in line with PT1, the overarching MOET policy for ICT integration in Vietnam. This alignment of policy and guidelines across the Vietnamese education sector reflects the centralised Vietnamese Higher Education governance as briefly described in Chapters 1 and 2. It also demonstrates the strong desire for educational reform, particularly in relation to investment in learning and teaching and ICT as part of this investment initiated at a central level (as described in Chapter 2).

Although most of the content presented in PT3 and PT4 is identical, several key differences can be identified. Both PT3 and PT4 contain three main sections called 'Major Tasks', 'Emulation and Report System' and 'Implementation'. However, under the Major-Task section, PT3 has 16 tasks, while PT4 indicates 18 tasks. These two extra tasks are 'Workshop/Conference on IT' (Task 17) and 'Informatics Contest at National and International Level' (Task 18). The possible reasons for the additional two tasks in the higher education document are that the higher education sector might be expected to lead research in ICT (task 17) due to the nature of the institutions; further university students might feel more empowered than school students to take part in national and international contests. The international focus might also reflect the trend of increasing internationalisation of higher education, as discussed in Chapter 2. As well as these two additions, some of them have been reorganised in PT4 with the amount of detail either reduced, added or adapted. For instance, Task 1 in PT3 has been moved to Task 2 in PT4 and the wording slightly changed. While Task 1 in PT3 refers to 'Tiếp tục tổ chức quán triệt văn bản quy phạm pháp luật về CNTT; xây dựng kế hoạch triển khai hoạt động CNTT năm 2009-2010 [Continue to ensure a thorough understanding of legal documents on IT: building IT implementation plans for 2009-2010]', while PT4 (p. 1) refers to 'quán triệt văn bản quy phạm pháp luật về CNTT [ensure a thorough understanding of legal documents on IT]'. This omission suggests that the 'plans' have already been made and an initial understanding has been achieved. This is reinforced by the fact that Task 2 (in PT4) had additional policies listed that had been developed since PT3 and also provides a link to the original documents of all the policies.

Another example can be seen in the reordering of Task 9 in PT3 to Task 12 in PT4 with the same heading title 'Implement educational technology programme and e-learning'. Both policy texts focus on promoting the integration of Learning Management System (LMS) (e.g., Moodle) in education in general (PT3) and for the higher education sector (PT4). PT3 also refers to the need for launching ICT training and ICT contests, but it does not have a separate heading for these tasks as per PT4 where these aspects are emphasised probably for the reasons detailed

above. More details regarding the thematic structure and lexicalisation of PT4 are described below in conjunction with PT5 (the CU Draft Report).

Both PT3 and PT4 use quantifiers such as 'all', 'every' and 'any' with different implications in their delivery of policy content. PT3 aims to provide a large scale of Internet coverage as it plans to 'provide broadband Internet connection to all educational institutions' (PT3, p. 2); meanwhile PT4 claims that Internet can be accessed 'everywhere and any time (PT4, p. 3) for 'all colleges and universities nationwide' (PT4, p. 6). PT6 even stresses that 'all learning materials and training programmes are delivered on higher education institution's website and MOET's website for reference' (PT6, p. 8). The use of such quantifiers might refer to the high degree of certainty committed or promised by MOET in providing ICT access to both higher education institutions, teachers and students.

In terms of modality, the use of the modal verb 'will' in PT3 indicates the intention or 'you-will-do-this' directive of MOET in keeping abreast with digital technology development (e.g., 'will implement a pilot e-school model') in the national education system. Interestingly, no explicit use of 'will' is seen in PT4. However, such an intention expressed by the use of will can be detected from the implied message, for instance PT4 states that 'MOET will evaluate the reward scheme' (PT4, p. 10). The 'scheme' just appears to be a potential promise by MOET.

Both PT3 and PT4 use varied modal verbs to express the possibility and potential use of ICT in teaching and learning. For example, PT3 employs modal verb 'can' (four times throughout its content) to indicate that learning and teaching activity or events 'can be viewed online' (PT3, p. 4). Through application of ICT tools, both PT3 and PT4 also state that students and staff 'can make their presentation more vivid' (PT3, p. 6; PT4, p. 6) by using different ICT devices to record real life events to be integrated in their learning and teaching activities. Meanwhile, PT4 uses 'can' (10 times across its content) to express specific action as in 'related documents from MOET can be downloaded from the link http://vanban.moet.vn.vn at IT tab' (PT4, p. 2). Modal verb 'can' is also used to provide guideline for colleges and universities as highlighted in PT4 that 'colleges and universities can download university entrance exam result software at http://edu.net.vn/media' (PT4, P.6). PT4 uses 'can' in order to refer to the potential use of a particular technology to increase Internet access as in 'students can use 3G technology to access Internet anytime and anywhere' (PT4, p. 3). While there is an absence of 'should' in PT3, PT4 uses 'should' five times throughout its content. For example, PT4 indicates that video conference is costly and to get it successfully organised the higher education institutions 'should have a private leased line' (PT4, p. 5). In contrast, the modal verb 'need' is used 16 times in

PT3 as compared to five times in PT4. Table 5.7 summarises the use of lexicalisation and modality of these two national policy texts.

Table 5.7 Lexicalisation and Modality Extracts from the National Policy Texts

Lexicalisation	MOET Guideline 2010 (PT3)	MOET Guideline HE 2010 (PT4)
ICT related terminologies	'educational technology'(p. 6) 'Moodle' (pp. 5 – 7) 'e-learning' (p. 7)	'educational technology'(p. 7) 'Moodle' (p. 7) 'e-learning' (pp. 7 -9)
ICT jargon	'workshop/training on IT' (p. 8) 'Learning Management System' p. 7)	'leased line' (p. 3) 'web conference' and 'audio conference' (p. 5) 'e-school'
Abbreviations	'LMS' (p. 7), 'IT' (pp. 1- 11)	'IT' (pp. 1- 10)
Adjectives	'electronic'	'electronic'
Noun	'documents' (p. 7), 'learning materials' (p. 4), library' (p. 4)	'document' (p. 8), 'guideline book' (p. 6), 'library' (p. 4)
Quantifiers: all, any	'provide broadband Internet connection to all educational institutions' (p. 2)	'everywhere, any time' (p. 3) 'all colleges and universities nationwide' (p. 6)
Modality	MOET Guideline 2010 (PT3)	MOET Guideline HE 2010 (PT4)
Certainty/intention: '*will*'	'*will* implement a pilot e-school model' (p. 10)	'MOET *will* evaluate the reward scheme' (p. 10)
Verbs: *can, should, need*	'teaching activities *can* be viewed online' (p. 4) '*need* to explore information' (p. 4)	'*can* make presentation more vivid' (p. 6) '*should* have a private leased line' (p. 5)

5.3.3   Policy texts from national to institutional levels: PT4 & PT5

As described above, PT4 has 18 tasks that are part of the guidance from the MOET 'for academies, institutes, universities and colleges' (2010, p.1). These tasks cover the full gamut of IT implementation from institutional structures and resources to training, pedagogical innovation and networking between staff to enhance practice. These elements required at a national level are reflected in the institutional self-report document (PT5). For example, in Part II of PT5, where the majority of the quality assurance data of the report is located, the report's authors mention that one of the institution's strengths is its ability to 'strongly integrate information technology in teaching' (PT5, p.51), thus fulfilling task 1 ('promoting ICT integration'), and task 11 ('use IT to enhance learning and teaching methods') of PT4. PT5 even

reports on the institution's implementation of very specific IT tools as required by PT4. For example, PT5 speaks of the institution's implementation of 'the Moodle Software learning management system for all subjects and disciplines' (PT5, p.50) within the institution as one of its successes in accordance with under task 12 (PT4, p.7). Above all, PT5 reports on the institution's intention to 'improve the quantity and quality of technology-related activities of the staff' (PT61), in a similar vein to PT4 that admonishes institutions to 'improve the awareness of, and responsibility to the whole teachers and cadres in local authorities, for unit leaders, educational and training institutions' related to ICT integration (PT4, p.1). ICT implementation is continually emphasized with a shift in focus as seen in the subsequent national policy texts (PTs 7 and 8) in the following section.

5.3.4   National to national: PT7 & PT8

PT7 (the MOET Guideline 2014) and PT8 (the MOET Guideline HE 2015) are both strongly influenced by the Ministry-level guideline on ICT implementation (PT3) and the Guideline on IT Task Implementation for the Academic Year 2009-2010 for Universities and Colleges (PT4). The primary difference from PT3 and 4 is that these two documents provide more specific details on the technologies recommended and the use thereof, as well as focussing on the needs of the students. To focus on higher education, PT4 and PT8 are almost identical. The only new section in PT8 is Task 16 which recommends an 'investment increase for IT infrastructure' (PT8, p. 9) and the appendix in PT7 (pp. 10-11) that provides a 'warning and recommendation on IT application activities'. In PT7 (p. 2), institutions are warned against focussing on 'old thinking about technology', which is described as 'fragmented' with each school/department having its own system. They are also given specific instructions regarding the use of IT technologies such as 'don't SMS via mobile phones as charges will be applied' but 'do send message via websites' (PT7, p. 9). These and other admonishments all aim at reducing the costs to educational institutions who are recommended to instead 'mobilise central state resources' (PT8, p. 2). This pragmatic emphasis is the major change from the earlier documents.

Both PT7 and PT8 make use of modality to emphasise MOET guidelines with quantifiers such as 'every' (PT7, p.14) and 'all' (PT8, p. 8) providing strong recommendations for the actions of institutions. Like PTs 3 and 4 discussed above, PT7 and PT8 use ICT related lexicalisation throughout the documents. For instance, while PT7 indicates the need to embrace 'educational technology' in education (PT7, p. 4), PT8 suggests that 'modern technology' (PT8, p. 3) is required for the higher education sector. Other ICT terminologies such as 'Cloud Computing', 'FireFox', and 'Chrome' in PT7 have been omitted in PT8. This might explain that there is an assumption of an ICT knowledge of these ICT applications being commonly known to the

higher education sector. The emphasis in the ICT jargon shifts slightly in the two policy texts. While PT7 focuses on 'IT human resource' and 'new technology thinking' (PT4, pp. 1-2), PT8 emphasises a particular generation of technology such as '3G technology' (PT8, p. 3) or technology that allows instant communication such as 'live technology' (PT8, p. 6). Adjectives related to description of technology are also used. For example, 'electronic' is used in 'electronic portal' (PT7, p. 1) and 'electronic device' (PT8, p. 9) in these policy texts. Nouns like 'resource' are used to refer to different foci. For example, PT7 focuses on 'state budget resource' (PT7, p. 2) that can be mobilised for IT development nationwide; PT8 focuses on 'human resource development' (PT8, p. 9) to increase the qualifications of IT staff.

Regarding modality, PT7 is inclined to be specific in expressing the MOET's intentions as it states that educational institutions 'will update software' (PT7, p. 2) with support given by MOET; in contrast, PT8 focuses on professional development by stating that 'MOET will organise IT application workshops' (PT8, p. 9) for teaching staff and leaders. Different foci can also be seen in the use of 'can' in these two texts. PT7 uses 'can' to express specific support available from the MOET, for instance the MOET 'can support servers' (PT7, p. 10) for educational institutions. Meanwhile, PT8 uses 'can' for evaluation purposes, such as 'IT application can be measured' (PT8, p. 10) according to a set of established criteria. The use of both lexicalisation and modality concerning ICT implementation guidelines in education in general and in higher education in particular is summarised in Table 5.8 below.

Table 5.8 Lexicalisation and Modality Extracts from the National Policy Texts

Lexicalisation	MOET Guideline 2014 (PT7)	MOET Guideline HE 2015 (PT8)
ICT related terminologies	'educational technology' (p. 4) 'Cloud Computing' (p. 10)	'modern technology' (p. 3)
ICT jargon	'IT human resource' (p. 1) 'new technology thinking' (p. 2)	'3G technology' (p. 3) 'live technology' (p. 6)
Abbreviations	'IT'	'IT', 'ISB' (p. 9)
Adjectives: *electronic*	'*electronic* portal' (p. 1)	'*electronic* device' (p. 9)
Noun: *resource*	'IT development from state budget *resource*' (p. 2)	'IT human *resource* development' (p. 1)
Quantifiers: *every, all*	'*every* student to use open code software' (p. 7)	'*all* training programmes' (p. 8)
Modality	MOET Guideline 2014 (PT7)	MOET Guideline HE 2015 (PT8)
Certainty/intention: '*will*'	'*will* update software' (p. 2)	'MOET *will* organise IT application workshop' (p. 9)
Verbs: *can, should*	'*can* support server' (p. 10)	'IT application *can* be measured' (p. 10)

5.3.5 Policy texts at institutional level: PT5 & PT11

PT11 (the ICT Training Material) also reveals the impact of the national level documents in a similar way to PT5. While PT5 is a comprehensive report showing CU's implementation of ICT infrastructure and pedagogical policy drawing on the national guidelines, PT11 is very specific in terms of providing a description of the practical implementation of a particular ICT model: the TPACK. However, PT11 also repeats, adds, filters and adopts IT-related concepts from PT5 (and consequently PT4). Therefore, both PT5 and PT11 use the term 'information technology' frequently. PT5 uses the term 14 times in full and an additional 10 times in abbreviated form, while PT11 uses the term 19 times in abbreviated form in only 8 pages of training material. Perhaps it is assumed that the readers of the document are aware of the acronym since they are participating in IT training. While PT5 mainly uses 'information technology' to refer to the general application of technology in both administration as it states 'applying information technology in management and outcome evaluation' (PT5, p. 53), PT11 refers to the specific application of ICT tools such as OneNote or ICT model (e.g., TPACK) in its content. This is probably because the training document has a narrower focus exploring teaching for university teachers on IT-supported pedagogy, while PT5 has a broader remit. ICT related jargon is also

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used throughout these two policy texts with the same pattern occurring (as seen in ICT terminology use): PT5 addresses general and larger scope of ICT integration in learning and teaching and PT11 deals with specific use and/or integration of ICT tools, online links and applications. The typical specific ICT tools include 'OneNote', 'Padlet' and 'Hot Potato software' as seen in PT11.

In terms of modality, both texts frequently use modal verbs such as 'will', 'can', 'need', 'should', and 'must'. PT5 uses 'will' to describe the institution's intentions to enhance various resources (e.g., 'computer rooms will be upgraded' (PT5, p. 82) in the near future). In addition, PT5 also uses 'will' to refer to its general commitment to ICT enhancement ('the institution will continue to enhance and supplement facilities to be used in the shortest time possible' (PT5, p. 76); in contrast, PT11 uses 'will' in an interrogative form to encourage teachers to question their own their own prior knowledge of pedagogy ('what ICT tools will support [teaching] most effectively?').

PT5 informs teachers that they 'must' update and share their technology skills' (PT5, p. 82) with their colleagues, PT11 likewise uses a strong modal 'should' to describe the nature of integration, i.e., 'ICT integration should be flexible' (PT11, p. 6). However, in relation to the actions of teachers, they are once again posed a question ('why should we take the ICT integration in teaching into consideration?) (PT11, p. 4) to encourage them to think about ICT in their pedagogy. It is interesting to note that like the international higher education policy texts described above (PT9 & PT10), PT5 also lays its emphasis on the 'short-term and long-term [ICT development] strategy and plan' (PT5, p. 59). This is in contrast with PT11 that only focuses on the immediate training needs of the participants. Both documents use the nouns 'capacity' and 'ability' to reflect their emphasis on teaching and technical staff development as is also suggested in PT4 on a national level in tasks 8 and 11. The use of lexicalisation and modality in PT5 and PT11 is reflected in Table 5.9 below.

Table 5.9 Lexicalisation and Modality Extracts from Institutional Policy Texts

Lexicalisation	PT5 (Draft Report)	PT11 (ICT Training VN)
ICT terminologies	'information technology' (p. 53) 'web technology' (p. 79) 'website of departments' (p. 40) 'intranet and Internet connection' (p. 75)	Information Technology (p. 1) 'link' (p. 1) IT tools (p. 2)
ICT related jargon/ disciplines	'Technology support' (p. 57) 'technology transfer' (p. 61) 'technology planning' (p. 61) 'science and technology tasks' (p. 61) 'technology strategy planning in mid-term and long-term' (p. 62) 'electronic library' (p. 77) 'network safety and security' (p. 85)	'OneNote' (p. 1) 'Yammer webpage' for learners (p. 1); 'video clip' (p. 2) 'PowerPoint, Excel, blog, wiki' (p. 3) 'Padlet' (p. 4); 'forum, Skype' (p. 6); 'Hot Potato software' (p. 8)
ICT abbreviations	'IT solutions' (p. 57) 'ADSL' (p. 75)	'IT' (p. 1); 'TPACK' (p. 2)
Modality	PT5 (Draft Report)	PT11 (ICT Training VN)
Certainty/uncertainty: *will*	'*will* install two more LAB rooms' (p. 82) 'computer rooms *will* be upgraded' (p. 82) '*will* renovate facilities in the short time possible' (p. 76)	'What IT tools *will* support [teaching] most effectively? (p. 4)
Verbs: *can, should, need, must*	'Teachers and technical staff *must* exchange and update their technology skills' (p. 82)	'Why *should* we take the ICT integration in teaching into consideration? (p. 4) 'IT integration *should* be flexible' (p. 6)
Nouns: *opportunity, capacity, ability*	'develop self-study *ability*' (p. 51) '*capacity* standards' (p. 67)	'*capacity* required of [EFL] teachers' (p. 5) '[EFL teachers'] *ability* to use simulation software' (p. 6)
Adverbs: *strongly, directly, indirectly*	'*strongly* integrate information technology in teaching' (p. 51)	'What is the role of technology in developing skills *directly* and *indirectly*' (p. 1)
Adjectives: *long-term, main*	'short-term and *long-term* strategy/plan' (p. 59)	'share the *main* point in Yammer' (p. 3)

5.3.6 ICT and TESOL policy texts at international and national levels: PT2 & PT6

The two main TESOL policy texts selected in this study are the Teaching English to Speakers of other Languages (TESOL) Technology Standards Framework (Healey et al., 2009) (PT2) and the ICT Application Competence Standards for Vietnamese Teachers of English (PT6). Both documents have an intended audience of EFL teachers and place an emphasis on ICT integration in ELT. These documents show how international developments in ICT integration in TESOL have a direct influence at a national level, but there is also an influence from a general national educational level impacting PT6 as is described below.

The two documents also have some similarities in their thematic structures and content. The thematic structure of PT2 includes a brief introduction, a description of why standards are needed and then provides technology standards for language learners with three goals, and technology standards for language teachers with four goals, before providing a glossary and appendixes. In contrast, PT6 has the thematic structure of a project proposal. It starts with an overview of the legal, practical and theoretical grounds for developing technology standards for Vietnamese EFL teachers. In this section, it is made clear by the use of the following sentence that the document is of high status and has a direct relationship with the national document (PT6, p. 4) described above:

> 'Chuẩn năng lực Công nghệ Thông tin dành cho giáo viên tiếng Anh ở Việt Nam do Trường Đại học Ngoại ngữ, Đại học Đà Nẵng biên soạn theo yêu cầu của Đề án Ngoại ngữ Quốc gia 2020 nhằm chuẩn hóa và nâng cao nhận thức của giáo viên tiếng Anh trong việc ứng dụng Công nghệ Thông tin vào các hoạt động dạy và học.'

> 'IT competence standards are for Vietnamese teachers and they are compiled at the request of the MOET National Foreign Language Project 2020 so as to standardise and improve the awareness of English teachers concerning Information Technology in learning and teaching activities.'

This is followed by an elaboration of IT standards in the Vietnamese context, and the application of these standards in online teaching. Then the actual situation of IT application competence of EFL teachers in Vietnam is briefly outlined. The second major heading describes general building principles for technology standards, while the final sections focus on developing IT competence standards for teachers. This final major section consists of four parts. Part I describes standards development principles, Part II outlines proposed governance of the standards, Part III includes a draft of standards for Vietnamese teachers of English and Part IV describes the application of these standards in foreign language teaching online. Part III of PT6 is almost identical and a direct translation into Vietnamese of the standards and goals for

teachers described in PT2. PT6 acknowledges this direct translation with a citation in Vietnamese that reads 'Compatible with TESOL Technology Framework' (PT6, p. 59). This acknowledgement also shows that the authors of PT6 aim to be in line with international trends in IT integration for TESOL teachers; however, they also wish to make the framework 'compatible' and comprehensible to teachers in the local context. This is consolidated by the statement in PT6 that the TESOL Technology standards are 'adjusted and supplemented with distinctive features in Vietnam' and that they must be 'in line with the ways of thinking and doing of the Vietnamese people' (PT6, p. 48).

The biggest difference in the thematic structures of PT2 and PT6 is that PT2 is a comprehensive framework providing guideline on how ICT can be integrated by EFL and language classroom teachers internationally and, as stated in the text, it is 'intended to be used in a wide range of settings and for very diverse audience' (2009, p.11). PT6, on the other hand is an adapted version of PT2 within the institutional and national scope of Vietnamese context and is part of a proposed project to develop technology standards for Vietnamese English teachers. Although the technology standards for language teachers proposed in PT2 came into being in 2009, it is selected as the core component in PT6 because it has close connections with the EFL teachers and the standards can be localised to meet the needs of the Vietnamese teachers of English. In integrating an international seminal text such as PT2, PT6 aims to affirm the need to keep up with the world trends with regard to ICT integration in higher education in general and in the EFL area in particular. Although the core standards are borrowed from an international text, they are selected on theoretical and practical grounds as indicated in PT6. PT6 also makes a criteria list explaining the rationale for the selection of PT2.

As far as the translation issue is concerned, as the core standards in PT2 are translated language, there are some linguistic features that need to be taken into consideration. For instance, loan words occur in PT2 in which the source language (that is, English) has been kept in the target language (Vietnamese). Typical words are 'Internet', 'blog', 'wiki', 'podcast', 'web', 'lab', 'Speech Recognition', 'Moodle' and 'chat logs'. In some cases, both source language and target language are employed simultaneously. For example, 'chat logs' in PT2 has been kept and translated in Vietnamese in PT6 into 'nhật ký tương tác kỹ thuật số' that literally means 'digital interactive diary', or 'checklist' (in PT2) into 'bảng liệt kê những mục cần kiểm tra' (PT6) that literally means 'a list of things that need to be checked'. Under the perspective of EFL Vietnamese teachers, this kind of translation is helpful to them in understanding ICT-related terms borrowed from an international document.

In terms of lexicalisation, both PT2 and PT6 heavily use ICT terminology and jargon. Most ICT terminology used in PT2 and PT6 are related to Internet or online technologies. Frequently used ICT terms are 'access', 'blog', 'electronic portfolio', 'checklist', 'CALL' and 'Internet resources', just to name a few. In PT6, the lexicalisation can be seen in the way that many of these words are maintained in the language of PT2 and copied directly to PT6. For example, terms such as 'blog', 'podcast', 'checklist', and 'download' can be easily recognised in PT2. This might reflect that ICT terms are commonly adapted from one cultural setting (the developed world) to another (the developing context). The terms are kept in both languages because Vietnamese language does not have the exact equivalents. In an attempt to make it comprehensible to a Vietnamese audience, the terms are translated into Vietnamese as detailed above.

In terms of modality, both PT2 and PT6 employ a variety of modality forms including modal verbs (e.g., can, should and will), adverbs (e.g., certainly), nouns (e.g., opportunity, implications), and adjectives (e.g., long-term, likely) in order to express the degree of certainty/uncertainty of ICT trends in higher education as well as the obligations (e.g., '…should begin to take notice…?'), expectations, determination, and prediction as reflected in the executive summaries of these two policy modal verbs, nouns, adverbs, and adjectives and in expressing the degree of certainty, prediction, assertion and/or obligations. In some cases in PT6, both 'need' and 'should' are used in one sentence as highlighted in the following quote (PT6, p. 7):

> *'Giáo viên không chỉ cần biết những lợi ích , hiệu quả mang lại trong việc sử dụng Công nghệ Thông tin trong dạy và học, mà còn cần phải biết cả những hạn chế và khó khăn để xử lý, sử dụng một cách hiệu quả nhất.'*

> 'Teachers not only need to know the benefits and effectiveness brought about through the use of Information Technology in learning and teaching, but also should be aware of the limitations and difficulties arising so as to achieve the most effective use [of technology].'

In other cases, as found in PT6, the modal verb 'must' is also used with the object (ICT) playing the role of a subject (person or things), for instance 'Information Technology in language teaching must surely provide students with learning materials through which they can absorb knowledge' (PT6, p. 9). This might reveal that the use of the ICT term in the context of Vietnamese education has become ubiquitous to the extent that it has been personified to make it closer to the intended audience, the Vietnamese EFL teachers whose knowledge of English can be quite varied. The use of lexicalisation and modality from PT2 and PT6 is summarised in Table 5.10 below.

Table 5.10 Lexicalisation and Modality Use at International and Institutional Levels

Lexicalisation	PT2	PT6
ICT terminologies	'Access' (p. 7), 'blog' (p. 27), 'podcast' (p. 27), 'download' (p. 30)	'blog' (p. 19), 'download' (p. 32), 'checklist' (p. 56), 'podcast' (p. 57)
ICT related jargon	'IT competence' (p. 10)	'IT competence' (p. 8)
Modality	PT2	PT6
Certainty/uncertainty: *will*	'the Technology Standards *will* help teachers understand technological literacy' (p. 11)	'ICT integration *will* make a fundamental change' (p. 6)
Verbs: *can, should, need*	'language learners *can* perform basic functions' (p. 21)	'teachers *need* to understand ICT' (p. 9)
Nouns: *opportunity, capacity*	'the Technology Standards can provide an *opportunity* for the ELT community' (p. 10)	'teachers need to have a *capacity* of ICT use' (p. 9)
Adverbs: *certainly, ultimately, surely*	'Communicative language teaching *certainly* did not emerge from drill-and-practice software' (p. 17)	'interaction between computer and human is *surely* not as good as the interaction between teacher and student' (p. 35)
Adjectives: *long-term, likely, potential, clear*	'the *potential* benefits of technology' (p. 9)	'*clear* timeline' (p. 28)

In brief, there is a shift in content from the source language (English as seen in PT2) into an adapted and translated content in a target language (Vietnamese as seen in PT6). Such a translation aims to produce a version that is compatible with the local context, thus making it in alignment with the 'ways of acting, interacting, feeling, believing and valuing' (Gee, 1999, p. 7) of the local people, this case Vietnamese EFL teachers.

5.4   Intersecting impacts at international, national and institutional levels

As argued above, although the policy texts can be arranged and coded in chronological order or grouped in terms of level (international, national and institutional) and compared in terms of their focus on or shift in content, the interaction among these texts is not necessarily linear. As already discussed in the paired texts above, PT6 (TESOL Vietnam) uses identical language in some of its sections to PT2 (TESOL Framework); and it has been 'recontextualised' to fit in the local context. However, despite its international antecedent, this document also has a local genealogy as illustrated by the fact that the standards were 'compiled at the request of the MOET National Foreign Language Project' and were part of a national process of standardisation and improvement of ICT awareness (PT6, p.4). The most recent text at an institutional level (PT11) reflects a complex genealogy. On the one hand, as described above, it can be viewed as being influenced directly by PT5 which in turn is influenced by all the national level documentation

from the initial directive in 2008 (PT1) to PT3 and PT4. However, PT11 can also be viewed as reflecting PT6 which is in turn affected by PT2. This can be seen in the fact that Goals 2 and 3 of the TESOL Vietnam document emphasise integrating technology into all aspects of learning, teaching, reporting and assessment in ELT and put ICT-supported pedagogy at the centre of professional development. These aspects can be seen in the training material (PT11) which focuses on helping the teachers to understand 'the characteristics of 21st century learners' and then to 'design activities' to enhance '21st century learning skills through ICT application'. Thus like in the TESOL Framework (PT2) and TESOL Vietnam text (PT6), ICT is an integral learning tool central to learners, teachers and learning design, rather than just an add on.

PT11 can also be viewed as being indirectly influenced by international trends as reflected in PT9 and PT10 which were developed in 2014 and 2015, respectively. For example, in these documents, the teachers are asked in the training material (PT11) to access existing resources such as 'social media' and 'online, hybrid and collaborative learning' (PT9, p.1) as well as 'open-educational resources' (PT10, p.1) to support the students' transition from 'consumers' to 'creators' of knowledge (PT9, p.1) and to embrace a 'culture of change and innovation' (PT10, p.1). The content in PTs 7 and 8 also reflect the current trends of ICT integration towards the development of online learning and e-learning model in the national education system.

This complex relationship which could be viewed as due to structural reproduction and elaboration (Archer, 1995) driven by a strong centralised national government and its policies and distribution of institutional resources, also operates at a cultural and agential level. In terms of cultural reproduction and elaboration, the beliefs, ideologies and behaviours surrounding ICT integration as reflected in PT11 were also influenced by general international trends in ICT (as reflected in PT9 and PT10) which are promulgated through various international networks and websites, as well as the specific TESOL Technology Framework (PT2) which is promoted through the TESOL international network.

Interestingly, a single agent (ET26) can also be identified as potentially having an influence on the adoption of ICT in the local institutional setting and on cultural elaboration and/or reproduction within this setting. ET26, was a participant in VietTESOL (a conference strongly influenced by TESOL International – the originator of PT2). This participant was also a member of the tech team of VietCALL (the organisation taxed by the MOET to develop IT standards for EFL teachers as part of the NFL project) and thus was one of the authors of PT6. In addition, this participant was a full-time EFL teacher in the Foundation Studies Department (FSD) of CU where he taught an online course, also known as an ICT-supported language learning online

course. He also played various roles in mentoring and training other CU staff in FSD including being a consultant for the development of the training material (PT11) as revealed in the interview data in Chapter 8. Thus ET26 was likely to have been influenced by institutional knowledge and policy related to ICT integration. This participant's data is explored in further detail in the observation and interview chapters. The relationship among the various texts at different levels is summarised in Figure 5.1 below.
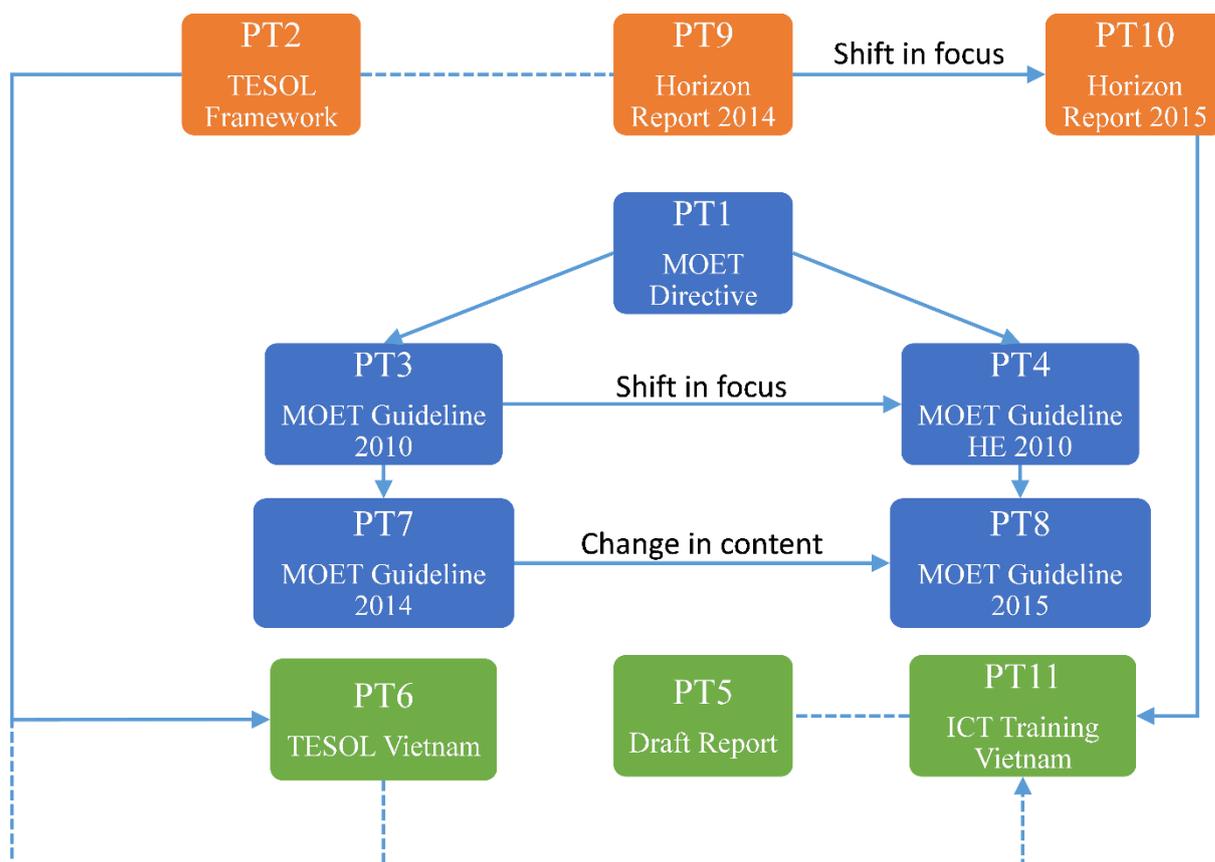

Figure 5.1 Intersecting relationship among policy texts

Note. This figure is colour-coded for ease of identification of policy texts at different levels. Orange=international policy texts; blue colour=national policy texts; green=institutional policy texts. Dotted lines represent the indirect relationship among these texts. Solid lines represent the direct relationship among the texts, and the new or revised version of the same document.

5.5   Conclusion

The common rhetoric in all the policy texts described is that ICT can result in breakthroughs in learning and teaching, even in terms of critical and innovative thinking, and that integrating ICTs will transform teachers' experiences and practices. However, this chapter reveals contradictions within and between ICT-related policies that impact on each other. In addition, although some of the texts refer to the local context, the analysis shows that the challenges of integrating ICT in higher education in a developing context like Vietnam are not fully addressed by the policy texts. There are three main points that have emerged from this analysis of policy

documents: the repeated message of the importance of ICT; the adaptation of international ICT knowledge; and a lack of consideration of limitations in implementing ICT policies.

First, the policy documents at all levels, from the international, national, and down to the local institutional level, repeatedly promote the central importance of integrating technology into teaching. In Vietnam, this call for greater integration of ICT into teaching has its roots in *Doi Moi* and has been strengthened with further higher education reform and governance. The Vietnamese Government's resolution (e.g., Resolution No. 14/2005/NQ-CP dated 2 November 2005, context chapter) at the highest level leads to the production of a directive at a high level, and guidelines at a lower level (analysed in this chapter); all have imposed potential technology challenges on teachers at both national and institutional levels. It is also important to note that, while *Doi Moi* and higher education reform policies aim to liberalise teachers' thinking and unleash their creativeness, this barrage of directives and guidelines is likely to act as a constant reminder to (Vietnamese) university teachers that they are expected to integrate ICT into their pedagogy at a deeper level and/or to the desired extent regardless of the challenges confronting them. That is, teachers are not entirely free to teach as they please: ICT must be integrated into their pedagogical practices.

Second, knowledge inherited from the international EFL scene is adapted to make it compatible with the local context of Vietnam. In Vietnam, the TESOL Framework (PT2) has been translated from English into Vietnamese and is adapted on legal, theoretical and practical grounds (PT6). This is because EFL teachers in Vietnam have an uneven knowledge of English as detailed in the National Foreign Language Project between 2008 and 2020 (see introduction chapter). Therefore, the translation is thought to support their understanding of technology standards applicable to these EFL teachers. However, no complete review of the application of TESOL Vietnam standards (PT6) is produced to examine whether or not this type of support makes the application successful. The inheritance and/or adaptation of international ICT knowledge and expertise might lead to incremental pressure against teacher's efforts in keeping abreast with swift changes in ICT development. As a result, the contradiction remains unsolved: the EFL university teachers are constantly pushed to receive and apply new ICT knowledge/expertise in their teaching, yet these teachers are not provided adequate opportunities, hands-on practice and training in relation to ICT use in teaching.

Finally, there exists an assumption at all the levels of these policies that teachers have equal access to technology facilities and resources; there appears to be no consideration of limitations in terms of time, opportunity, or collegial and leadership support. Local teachers have to balance

their teaching and training time. The contradiction is that not all teachers can participate in the training offered due to various reasons, such as geographical barriers, lack of background knowledge or even lack of willingness to enhance their ICT skills. The opportunities offered to classroom teachers can be seen in various forms as stated in the policy texts ranging from workshop, conference and overseas training, to online education and web-based participation. This rhetoric does not take into account the likelihood of teachers' access to these resources due to the constraints mentioned earlier. Leadership support appears inadequate and seems to be only 'on paper' because no specific reward schemes are indicated in the local policy texts. Tension remains unreduced as teachers, once again, are urged to link their pedagogy with ICT without being given proper impetus and assistance.

The assumptions and contradictions outlined above seem to produce a cumulative tension between the rhetoric about ICT integration and the reality of how ICT is actually used in English teaching in Vietnam. The following chapters in this study explore how the policies proclaimed in the documents analysed above are implemented in the classrooms of EFL teachers at one Vietnamese university. These subsequent chapters also go some way towards establishing just how successful or otherwise this integration has been.

CHAPTER 6
SELF-REPORTED ICT INTEGRATION PRACTICES: KEY ISSUES AND CONFLICTING PERSPECTIVES

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6.1   Introduction

Chapter 5 revealed the structural and cultural reproduction and elaboration of certain beliefs, ideologies, values, and ways of thinking related to ICT integration in policy texts across international, national and institutional contexts. As a critical realist, it is important to explore beyond the institutional and policy levels to identify how these ways of thinking have affected the thinking and behaviours of individuals and how their agency is in turn affected by the cultural and structural conditioning they experience within their institution. These elements are all examined in this chapter through a questionnaire identifying the self-reported perceptions of EFL teachers about their own integration of ICT and the institution's provision of ICT infrastructure and support, as well as the barriers and enablers of their integration. In addition, as noted in Chapter 4, questionnaires are used as part of a focussed ethnographic approach to identify key informants and key issues, as well as the teacher's understandings of the concept of effective integration of ICT. This chapter relates to both of this study's research questions since it focuses on identifying EFL teachers' self-reported practices and experiences of ICT integration.

6.2   Findings and analysis

6.2.1   EFL teacher background information

Demographic information regarding gender, age, workplace, teaching experience and highest qualification (Questions 1-5) was collected to gain an insight into the background of participating EFL teachers. Table 6.1 shows the gender of the respondents with 73% ($n = 96$) female and 27% ($n = 35$) male teachers. Two respondents did not provide information regarding gender. The age range of respondents was approximately 47% ($n = 62$) between 22 and 31 years old, while 35% ($n = 47$) of participants were in the age group of 31 to 40 years. The largest proportion of respondents (35%, $n = 46$) had been teaching English for more than five years. However, a significant proportion of respondents (29%, $n = 38$) had less than five years teaching experience (Table 6.1).

Table 6.1 further shows that most respondents worked for the English Department (ED), accounting for 52.6% ($n = 70$) of the sample. The second largest group was the Foundations Studies Department (FSD) (24.8%, $n = 33$) and the next highest was the In-service Department (ISD) which accounted for 12.8% ($n = 17$). The fewest respondents, 6% ($n = 8$) and 5.8 % ($n = 5$), were from the Distance Education Centre (DEC) and the International Education Centre (IEC), respectively (Table 6.1).

The sizes of the respective populations are indicated in Table 6.1: there were 70 lecturers in ED, 33 in FSD, 17 in ISD, eight in DEC and five lecturers in IEC at the time of the study. Thus, the entire population of ED and almost all ISD staff completed the questionnaire, with a high proportion of returned questionnaires from other departments also. Perhaps the high response rate in ED was because my substantive position is in ED and my colleagues were willing to participate because they knew me and wanted to support my study.

A high proportion of EFL teachers surveyed (34%, $n = 45$) held a BA degree and/or were newly graduated or novice teachers (Table 6.1). The majority of the sample held an MA degree (63%, $n = 84$), while only 2% held a PhD degree. This demographic information is a general reflection of EFL and university teachers in Vietnam, and in other developing countries, where the lecturer population is relatively young and has comparatively lower qualifications and teaching experience compared to that of university lecturers in developed countries, such as the United Kingdom and Australia. Similar to the rest of the world, the EFL teacher population in this survey is female-dominated (Al-Seghayer, 2014; Aydin, 2014).

Table 6.1 EFL Teacher Demographic Characteristics (n = 133)

Categories	Groups	*n*	%
Gender	Male	35	26.7%
	Female	96	73.3%
	No response	2	1.5
Age	22-30	62	46.6%
	31-40	47	35.3%
	41-50	9	6.8%
	>50	15	11.3%
Teaching experience	< 5 years	38	28.6%
	5-10 years	46	34.6%
	11-15 years	27	20.3%
	16-20 years	11	8.3%
	> 20 years	11	8.3%
Cohort (workplace)	ED	70	52.6%
	FSD	33	24.8%
	ISD	17	12.8%
	IEC	5	5.8%
	DEC	8	6.0%
Highest education qualification	BA	45	33.8%
	MA	84	63.2%
	PhD	3	2.3%
	Other (e.g., Diploma)	1	0.8%
Total sample size		133	

Note. ED = English Department; FSD = Foundation Studies Department; ISD = In-Service Department; IEC = International Education Centre; and DEC = Distance Education Centre.

6.2.2   Actual use of ICT by EFL teachers

Question 7 was designed to explore the degree to which teachers use an ICT tool based on the following scale: 1 = 'cannot use this', 2 = 'can use with assistance', 3 = 'can use independently', 4 = 'can teach others' and 5 = 'actually use in EFL classes'. The response categories 'can teach others' and 'actually use in EFL classes' were selected to identify the degree and quality of ICT integration, as teachers may know how to use a technology, but may not actually apply it in the EFL classroom. Equally, if a teacher is able to teach others how to use a technology, the quality of their understanding and integration of ICT is likely to be greater than for a teacher unable to teach others how to use a technology, as suggested by the literature (e.g., Henderson, Selwyn, & Aston, 2015; Watson, 2001). Question 7 consisted of 41 items categorised into seven major

groups, as described above. Each category had a number of questions. For example, under the general software group, five items asked about the use of Microsoft Word, Excel, Adobe Reader, PowerPoint and Prezi. The ICT tools included on the questionnaire were selected as they were all either available to teachers through the institution and/or freely accessible online in Vietnam.

Data shown in Table 6.2 suggests that respondents were inclined to actively use familiar general software, such as Microsoft Word and PowerPoint, with nearly 50% ($n = 65$) and more than 43% ($n = 58$) of respondents, respectively, reporting that they 'actually use in EFL classes'. Regarding Microsoft Word, a significant proportion of respondents felt confident to teach others (20%, $n = 15$) with fewer (10.5%, $n = 14$) feeling confident to teach PowerPoint to others. A comparatively high percentage of respondents also felt confident using Excel and Adobe Reader in EFL classes with 16.5% ($n = 22$) and 24.8% ($n = 33$), respectively. However, similar to PowerPoint, they felt less confident to teach use of the tool to others with 10.5% ($n = 14$) of respondents choosing this option for both tools. In contrast, respondents were less confident to use Prezi with nearly 60% ($n = 79$) claiming that they did not know how to use the tool. Only two respondents (1.5%) stated that they actually used Prezi in EFL teaching and the same two respondents were confident to teach it to others (Table 6.2).

Table 6.2 Participant Use of General Software (n = 133)

General software	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
Word	1	0.8	2	1.5	42	31.6	20	15.0	65	48.9
Excel	3	2.3	35	26.3	54	40.6	14	10.5	22	16.5
Adobe reader	2	1.5	21	15.8	54	40.6	14	10.5	33	24.8
PowerPoint	1	0.8	4	3.0	52	39.1	14	10.5	58	43.6
Prezi	79	59.4	25	18.8	12	9.0	2	1.5	2	1.5

Respondents indicated less confidence regarding integrating audio-video software into teaching, as indicated in Table 6.3. Surprisingly, while a large proportion of respondents 48.1% ($n = 64$) claimed to use Window Media Player in their EFL classroom, a smaller percentage of respondents (31.6%, $n = 42$) could use a Window Media Player independently. Also, only 6.8% ($n = 9$) could teach others how to use this ICT tool. This anomaly in the data suggests that respondents received assistance to use Window Media Player from colleagues and/or students. This is an issue to further explore in other data. A comparatively large number of respondents claimed to be able to use Quick Time Player independently (39.8%, $n = 53$), but fewer used it

in their EFL classes (23.3%, $n = 31$) and only 9% ($n = 12$) could teach others this skill. All other audio-video software received comparatively low scores except for Moviemaker which was used independently by 27.1% ($n = 36$) of respondents, but only 9.8% ($n = 13$) were able to use it in their EFL classes and even fewer (5.3%, $n = 7$) felt confident to teach others how to use this software (Table 6.3).

Table 6.3 Participant Use of Audio-Video Software (n = 133)

Audio-video software	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
WMP	1	0.8	15	11.3	42	31.6	9	6.8	64	48.1
QTP	11	8.3	19	14.3	53	39.8	12	9.0	31	23.3
Movie Maker	25	18.8	43	32.3	36	27.1	7	5.3	13	9.8
CyberLink PD	61	45.9	40	30.1	17	12.8	2	1.5	2	1.5
Sound Forge	48	36.1	37	27.8	23	17.3	4	3.0	10	7.5
Gold Wave	49	36.8	37	27.8	21	15.8	9	6.8	9	6.8
Jet Audio	31	23.3	28	21.1	36	27.1	15	11.3	14	10.5

Note. WMP = Window Media Player; QTP = Quick Time Player; PD = PowerDirector.

Regarding image-editing software (see Table 6.4), Microsoft Office Picture Manager was the most popular with 33.1% ($n = 44$) of respondents indicating that they could use this ICT tool independently. Photoshop was the second most popular with 23.3% (31) indicating independent use. However, far fewer respondents actually used these tools in EFL teaching. Although CorelDraw was available to teachers through different legitimate sources, no respondents were able to use this tool, perhaps because teachers found it too technical. Thus, it is likely CorelDraw is used more by technology discipline lecturers rather than the English teachers in this cohort.

Table 6.4 Participant Use of Image-Editing Software (n = 133)

Image-editing software	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
Photoshop	38	28.6	46	34.6	31	23.3	9	6.8	4	3.0
CorelDraw	79	59.4	34	25.6	10	7.5	2	1.5	0	0
MO PM	28	21.1	38	28.6	44	33.1	7	5.3	9	6.8
Picasa	49	36.8	33	24.8	26	19.5	10	7.5	5	3.8

Note. MO PM = Microsoft Word Picture Manager.

As presented in Table 6.5, a high percentage of respondents could use the following communication tools independently: Outlook (48%), Skype (50%), Yahoo Messenger (52%) and Viber (47%). Facetime had the lowest reported independent use, although use was still relatively high at 36.1% ($n = 48$). Outlook and Yahoo Messenger were employed most in teaching of EFL classes with 20.3% ($n = 27$) and 21.8% ($n = 29$), respectively, yet fewer respondents felt confident to teach Outlook to others (12.8%, n = 17). A potential explanation for this finding is that, as the tool was available on the university system, it was easy to use in class, but more complicated to explain to others. Other communication tools received high scores for the ability to teach others with Skype, Yahoo Messenger, Viber and Facetime receiving 18%, 19.5%, 19.5% and 18.8%, respectively. However, once again use and independent use far outweighed respondent willingness to use tools in EFL classes and ability to teach others (Table 6.5).

Table 6.5 Participant Use of Communication Software (n = 133)

Communication software	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
Outlook	7	5.3	15	11.3	64	48.1	17	12.8	27	20.3
Skype	4	3.0	15	11.3	67	50.4	24	18.0	17	12.8
Yahoo Manager	1	0.8	1	0.8	70	52.6	26	19.5	29	21.8
Viber	8	6.0	15	11.3	63	47.4	26	19.5	15	11.3
Facetime	27	20.3	21	15.8	48	36.1	25	18.8	6	4.5

Table 6.6 shows that mobile devices, namely smartphones and tablets, were extensively employed by EFL teachers. In fact, no respondent (0%) reported being unable to use a smartphone and only 5.3% ($n = 7$) reported being unable to use a tablet. A high percentage of respondents (44.4%, $n = 59$) were able to use a smartphone independently and similarly 39.8% ($n = 53$) could use a tablet independently. This suggests that respondents probably own and use these devices. Unlike some other categories of ICT tools, the number of respondents who used smartphones and tablets in EFL teaching was fairly high as 33.1% ($n = 44$) of respondents used smartphones to teach EFL classes and 23.3% ($n = 31$) used tablets for EFL classroom teaching. It is worth noticing that the institution did not provide EFL teachers with these devices. However, in developed countries (see Burston, 2015; Kukulska-Hulme, Norris, & Donohue, 2015) and some other developing countries (see Ally & Prieto-Blázquez, 2014; Motlik, 2008) there is a move towards the use of mobile personal devices, rather than institutionally provided static machines. In developing nations, particularly in Southeast Asia, a growing trend towards the use of mobile technology, cloud computing and virtual learning has intensified since 2000 (Hong & Songan, 2011). Another reason for high use of mobile technologies amongst respondents may be due to the abundance of mobile apps available for language learning and teaching (Nisbet & Austin, 2013; Shih, Lee, & Cheng, 2015).

Despite strong reported use of these technologies, a far lower number of respondents (11.3%, $n = 15$ for smartphones and 12%, $n = 16$ for tablets, respectively) felt confident to teach others. As reported by Bottino (2014, p. 9), increased use of ICT in daily teaching jumped from 54.4% to 70% between 2013 and 2014. A likely explanation for this increase is that use of devices has become 'woven into' daily life for many of us (Selwyn & Facer, 2014, p. 482), but this unconscious use does not necessarily translate into something that we can teach peers or students. In other words, the mismatch between drastic changes in ICT and slow pace of development in education remains a challenge (Huang & Price, 2014, p. v).

Table 6.6 Participant Use of Mobile Devices (n = 133)

Mobile devices	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
Smart phone	0	0	9	6.8	59	44.4	15	11.3	44	33.1
Tablets	7	5.3	20	15.0	53	39.8	16	12.0	31	23.3

As shown in Table 6.7, social networks were extremely familiar to EFL teachers as a high percentage of respondents could use these independently with Google+ receiving the highest percentage of independent use (54.1%, $n = 72$), followed by Facebook (51.9%, $n = 69$), Twitter (41.4%, $n = 55$), Flickr (33.1%, $n = 22$) and LinkedIn (27.1%, $n = 36$). Although a fairly high percentage (33.1%, $n = 44$) of respondents reported being unable to use LinkedIn and 23.3% ($n = 31$) and 21.8% ($n = 29$) reported being unable to use Flickr and Twitter, respectively, only 2.3% ($n = 3$) were unable to use Facebook and only 9% ($n = 12$) reported being unable to use Google+. Choices of social media reflected respondent demographics as Facebook and Google+ are popular worldwide amongst people in their thirties and forties (Kivunja, 2014; Siddike, Islam, & Banna, 2015). Social media use in class or for teaching purposes was low, with the highest percentages for Facebook and Google+ of 21.1% ($n = 28$) and 15% ($n = 20$), respectively. Other social media tools were generally not used in class or for teaching purposes, for example, only three respondents reported using Flickr.

Table 6.7 Participant Use of Social Networks (n = 133)

Social networks	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
Facebook	3	2.3	6	4.5	69	51.9	24	18.0	28	21.1
Twitter	29	21.8	29	21.8	55	41.4	10	7.5	5	3.8
Google+	12	9.0	13	9.8	72	54.1	11	8.3	20	15.0
LinkedIn	44	33.1	36	27.1	36	27.1	7	5.3	1	0.8
Flickr	31	23.3	34	25.6	44	33.1	5	3.8	3	2.3

Integration of search engines was extremely varied, as shown in Table 6.8. While Google and YouTube had extremely high reported use in the EFL classroom compared to other ICT tools (40.6%, $n = 54$ and 31.6%, $n = 42$) and Yahoo had 22.6% ($n = 30$), AltaVista and Bing had only 0.8% and 5.3% use in the EFL classroom, respectively. In fact, a large proportion of respondents were unable to use AltaVista (42.9%, $n = 57$) and Bing (36.1%, $n = 48$). Even though YouTube and Yahoo are reported as having ubiquitous use in the literature (see Dao, 2015, p. 156; Fuchs & Akbar, 2013, p. 159), 0.8% ($n = 1$) and 1.5% ($n = 2$) of respondents could not use these search engines. Even more surprisingly, considering respondents were university lecturers, nearly 15% ($n = 19$) reported they could not use Google Scholar. The percentages for reported ability to teach others were lower than those for use, but still reasonable with 11.3% ($n = 15$) of respondents claiming they could teach others how to use Google Scholar. Similarly, respondents

indicated the ability to teach others to use YouTube and Yahoo with 17.3% ($n = 23$) and 18.8% ($n = 25$), respectively.

Table 6.8 Participant Use of Search Engines (n = 133)

Search engines	Cannot use this		Can use with assistance		Can use independently		Can teach others		Actually use in EFL classes	
	n	%	n	%	n	%	n	%	n	%
AltaVista	57	42.9	31	23.3	29	21.8	3	2.3	1	0.8
Bing	48	36.1	29	21.8	29	21.8	10	7.5	7	5.3
Google	0	0	3	2.3	52	39.1	20	15.0	54	40.6
Google Scholar	19	14.3	22	16.5	44	33.1	15	11.3	25	18.8
YouTube	1	0.8	6	4.5	56	42.1	23	17.3	42	31.6
Yahoo	2	1.5	2	1.5	67	50.4	25	18.8	30	22.6

6.2.3   Teacher-focussed use of ICT

The next section of the questionnaire explored whether teachers use ICT for their own purposes in preparing for and teaching lessons/lectures. This section consists of six statements using a five-point Likert scale to determine level of agreement: strongly disagree = 1; disagree = 2; undecided = 3; agree = 4; and strongly agree = 5.

Table 6.9 shows that more than half of respondents (57.1%, $n = 76$) strongly agreed with the statement that they 'designed instructional materials' using ICT tools. This finding is consistent with results presented in Table 6.2 that indicate a high percentage of teachers reported used Microsoft Word, PowerPoint or certain search engines to teach EFL classes. However, as shown in Tables 6.4 and 6.5, far fewer interactive tools, such as communication tools, social media or creative use of content (audio-video software and image-editing software), were reported as being used in EFL teaching. Thus, design of instructional materials using ICT may be interpreted by respondents as use of ICT without true integration that enhances pedagogy, as defined by Rao (2013).

Table 6.9 also indicates that the highest proportion of respondents (57.13%, $n = 76$) explored different functions of a specific type of ICT tool (e.g., Microsoft Word) for the main purpose of 'designing instructional materials'. A high proportion of respondents (40%, $n = 53$) reported combining various ICT sources into EFL teaching (Table 6.9). This can be considered effective, resourceful integration, as described by Healey, Ioannou-Georgiou, Kessler, and Ware (2009, p. 29). A comparatively high percentage of respondents (30.8%, $n = 41$ and 36.1%, $n = 48$, respectively) also reported diversifying their use of technology and providing students with

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different forms of feedback through ICT, suggesting 'modification' of teaching style through ICT, as suggested by Puentedura (2008). 29.3% ($n = 39$) also reported 'diversifying' technology, thus making changes necessary for their teaching materials (Healey et al., 2009, p. 29). In addition, a significant percentage of respondents strongly agreed or agreed (34.6%, $n = 46$ and 21.8%, $n = 29$, respectively) that they supported colleagues by sharing their ICT skills (Table 6.9).

Teacher-focussed use of ICT suggests that, although standard ICT tools were used, teachers reported using them in a way that met the standards of effective integration. However, adding technology can sometimes be a 'coping tactic', as defined by Healey et al. (2009, p. 29), and may not necessarily reflect creative and effective pedagogy. For example, if a technical breakdown occurred, a teacher might add another form of technology to serve the same purpose. The issue of whether reported use is reflected in actual practice is addressed in Chapters 7 and 8.

Table 6.9 Teacher-Focussed Use of ICT (n = 133)

STATEMENTS	SD n	SD %	D n	D %	U n	U %	A n	A %	SA n	SA %
I *design* instructional materials using different functions of Word (e.g., insert picture & symbols).	3	2.3	5	3.8	21	15.8	27	20.3	76	57.1
I *combine* various ICT resources to make English language teaching more effective (e.g., PowerPoint & video clips from YouTube).	0	0.0	12	9.0	22	16.5	46	34.6	53	39.8
I *add* technology convenience by using other ICT alternatives (e.g., use pdf or Word files for presentation if PowerPoint is not working).	1	0.8	10	7.5	37	27.8	43	32.3	39	29.3
I *support* my colleagues by sharing my ICT skills with them (e.g., skills in using different search engines).	0	0.0	13	9.8	43	32.3	29	21.8	46	34.6
I *diversify* my teaching content by drawing on a variety of available online sources (e.g., teaching reading websites, English teaching blogs).	1	0.8	16	12.0	34	25.6	39	29.3	41	30.8
I *provide* my students with different forms of feedback by using different ICT tools (e.g., e-mail, insert comments on Word or PowerPoint)	1	0.8	17	12.8	29	21.8	37	27.8	48	36.1

Note. SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strong Agree.

6.2.4 Student-focussed use of ICT

Table 6.10 shows how teachers responded to learner needs, which is another aspect of ICT integration identified by Collis, Moonen, and Vingerhoets (1997). A generally high percentage of respondents claimed to help students access ICT learning materials 'beyond the classroom' with 18% ($n = 24$) strongly agreeing and 30.8% ($n = 41$) agreeing with this statement. A large percentage (31.6%, $n = 42$) was undecided and 15.8% ($n = 21$) disagreed with this statement. Only 3.8% ($n = 5$) showed strong disagreement to this statement. Similarly, although a high percentage strongly agreed (24.1%, $n = 32$) or agreed (36.1%, $n = 48$) that they referred students to ICT options to improve language skills outside of the classroom, a significant percentage (27.8%, $n = 37$) were uncertain on this issue. It is worth noting that 41.4% ($n = 55$) of respondents agreed or strongly agreed that they encouraged students to communicate with them using online networks and the same percentage claimed to assist students in searching for various learning materials. These findings indicate effective integration of ICT in terms of communication (Collis et al., 1997). It is interesting that the responses in this category far exceeded respondents' reported use of social networks and/or search engines in the classroom or for teaching purposes (Tables 6.7 and 6.8). This contradiction in findings is explored in more depth in Chapter 7 (observation data) and Chapter 8 (interview data).

A number of teachers reported teaching students how to use ICT to enhance collaborative learning with 15.8% of respondents ($n = 21$) strongly agreeing with this statement and 18.8% ($n = 21$) respondents agreed, which in total is 46 respondents. Thus, Table 6.10 indicates that at least a third of respondents believed that they 'trained students how to use specific ICT tools' for collaboration.

Table 6.10 Student-Focussed Use of ICT (n = 133)

STATEMENTS	SD n	SD %	D n	D %	U n	U %	A n	A %	SA n	SA %
I *help* my students use available ICT tools to access learning materials beyond classroom (e.g., use of Dropbox or SlideShare web page).	5	3.8	21	15.8	42	31.6	41	30.8	24	18.0
I *refer* students to a variety of ICT-supported learning options to improve their language practice skills outside classroom (e.g., talking with native speakers via Skype, learning from English video clips on YouTube).	4	3.0	12	9.0	37	27.8	48	36.1	32	24.1
I *train* students how to use specific ICT tools to increase collaboration among them (e.g., online forums, wikis, and use of Skype for group discussion or set up a Google group account for sharing materials).	4	3.0	37	27.8	46	34.6	25	18.8	21	15.8
I *encourage* my students to communicate with me via online networks (e.g., e-mail, Facebook or Yahoo Messenger).	4	3.0	9	6.8	26	19.5	39	29.3	55	41.4
I *assist* my students in searching various learning materials (e.g., use of Google to search for pronunciation drills).	3	2.3	13	9.8	22	16.5	44	33.1	50	37.6
I *help* my students use available ICT tools to access learning materials beyond classroom (e.g., use of Dropbox or SlideShare web page).	5	3.8	21	15.8	42	31.6	41	30.8	24	18.0

Note. SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strong Agree

6.2.5 Impetus for ICT integration

While teachers may choose to integrate ICT for teaching purposes and/or to meet student needs, they might be strongly influenced in this decision by colleagues and the institution. Consequently, the influence of external actors enabling or preventing effective integration of ICT was explored in this study. Results relating to the influence of colleagues and institution on ICT use in the EFL classroom are presented in Tables 6.11 and 6.12 below.

Table 6.11 shows that 21.2% ($n = 28$) of respondents strongly agreed and 32.6% ($n = 43$) agreed that they received assistance from colleagues in the use of ICT tools available at the institution. This means more than half of the respondents received collegial support, suggesting that there is a strong culture of collegial support around ICT integration in the departments and centres surveyed.

In response to the statement 'teachers in my department *show* me how to explore different ICT tools to make teaching tasks more efficient', 28.2% ($n = 37$) of respondents indicated strong agreement and 29.8% ($n = 39$) indicated agreement. Similarly, 27.1% ($n = 36$) indicated strong agreement and 37.6% ($n = 50$) indicated agreement that colleagues are willing to 'share teaching materials with students via the Internet'. This willingness was extended in some cases to communicating with colleagues online with 34.6% ($n = 46$) of respondents strongly agreed and 29.3% ($n = 39$) agreed that that they communicated with colleagues using different online tools. These results are in line with the data presented in Table 6.9 where a significant percentage of respondents claimed to support colleagues. The data suggest that respondents developed effective integration of ICT through what Collis and Wende (2002, p. 16) dub 'flexible partnerships'. Data in Table 6.11 also indicates that 15% ($n = 20$) of respondents who strongly agreed and 23.3% ($n = 31$) who agreed kept each other informed of ICT-related policies within their institution. However, more than one-third of respondents (36.8%, $n = 49$) were unsure if their colleagues updated them with latest ICT policy within the CU. This reflects a relatively low level of what Collis and Wende (2002, p. 16) call effective 'staff-related policies'. Hence, ICT support appears to be based on the kindness of teachers supporting colleagues as individuals, rather than linking with the institutional support mechanisms.

Table 6.11 Group Impact on Effective Integration of ICT by Teachers (n = 133)

STATEMENTS	SD		D		U		A		SA	
	n	%	n	%	n	%	n	%	n	%
Teachers in my department *show* me how to explore different ICT tools to make teaching tasks more efficient (e.g., using audio-editing software for interpreting practice).	3	2.3	16	12.2	36	27.5	39	29.8	37	28.2
Teachers in my department are willing to share teaching & learning materials with students via the Internet (e.g., sharing translation e-books via mailing list).	2	1.5	6	4.5	39	29.3	50	37.6	36	27.1
Teachers in my department keep me updated with the latest policies concerning ICT application within my university (e.g., installation of a new Lab for simultaneous interpreting practice).	8	6.0	25	18.8	49	36.8	31	23.3	20	15.0
Teachers in my department facilitate communication with other colleagues by using online tools (e.g., via e-admin system of HANU called Tac Nghiep (E-GOV) or Facebook).	5	3.8	11	8.3	30	22.6	39	29.3	46	34.6
Teachers in my department assist me in using the ICT tools available in my university (e.g., how to use the Lab for pronunciation teaching).	3	2.3	20	15.2	38	28.8	43	32.6	28	21.2

Note. SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strong Agree.

In contrast to the comparatively positive experiences of collegial support, respondents indicated less enthusiasm regarding institutional impacts on effective integration of ICT (as seen in Table 6.12). A high percentage were uncertain about the adequacy of facilities (36.1%, $n = 48$) and less than half strongly agreed (16.5%, $n = 22$) and agreed (27.1%, $n= 36$) that there were sufficient ICT facilities for teaching. This divergence of opinion and high level of uncertainty was perhaps due to the unequal distribution and limited access to resources by some departments. This issue is explored in more detail in the observation and interview data.

A high percentage of respondents (30.1%, $n = 40$) were uncertain about adequacy of training and professional development. Again less than half of the respondents were satisfied with the professional development with only 9.8% ($n =13$) strongly agreeing and 30.8% ($n = 41$) agreeing, respectively. Less than one third of respondents strongly agreed (9.8%; $n = 13$) and agreed (18.0; $n = 24$) that the institution had a proper reward scheme for teacher initiatives in integrating ICT into teaching. Hence, although more agreed that training was provided, respondents did not necessarily have incentives to integrate ICT into teaching and/or to teach others. This reality was further explored in the post-questionnaire interviews (see Chapter 8 for in-depth analysis).

Table 6.12 Institutional Impact on Teachers' Effective Integration of ICT (n = 133)

STATEMENTS	SD n	SD %	D n	D %	U n	U %	A n	A %	SA n	SA %
My university provides teachers with sufficient ICT facilities for organising teaching events (e.g., stand-alone data projector, audio/video devices for a simulation workshop).	4	3.0	23	17.3	48	36.1	36	27.1	22	16.5
My university provides teachers with regular ICT training for their professional development (e.g., training how to use PowerPoint, Prezi, GoldWave etc.).	11	8.3	28	21.1	40	30.1	41	30.8	13	9.8
My university has a reward scheme for ICT initiatives to improve both teaching and learning (e.g., reward for using video to teach writing skills).	29	21.8	30	22.6	37	27.8	24	18.0	13	9.8

Note. SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strong Agree.

6.2.6 EFL teachers' concept of effective integration of ICT

Although teachers may report that they effectively integrate ICT into their teaching, in order to understand what they mean in their self-report, it is important to explore their understanding of the concept of effective integration. The results indicate that the majority of respondents supported fully integrating ICT into their pedagogy (Table 6.13). More than half of the respondents (54.1%, $n = 72$) strongly agreed that students should be taught how to use ICT to enhance their learning with a further 30.1% ($n = 40$) agreeing with this statement. A lower, but still relatively high, percentage of respondents viewed ICT as a medium for responding to student needs with 43.2% ($n = 57$) strongly agreeing and 32.6% ($n = 43$) agreeing with this statement. A number of teachers also valued the interactivity of ICT to assist in the learning process as 41.2% ($n = 54$) strongly agreed and 35.1% ($n = 46$) agreed that teachers should engage students actively in learning through ICT. A similar percentage of respondents 43.5% ($n = 57$) felt that students should play a more active role in their learning through the medium of ICT. It is interesting to note that positive attitudes towards ICT integration as a tool for effective and active learning are not mirrored so strongly in the respondent reports of actual ICT use in EFL

teaching. The reasons for positive perceptions of ICT but lower actual use are explored in more detail in the open-ended questions of this survey (see section 6.2.7).

Table 6.13 Teacher Concepts of Effective Integration of ICT (n = 133)

	SD		D		U		A		SA	
STATEMENTS	n	%	n	%	n	%	n	%	n	%
I believe that students should be taught how to use ICT to improve their learning quality (e.g., organising folder-based information, searching for missing information via reliable sites).	1	0.8	7	5.3	13	9.8	40	30.1	72	54.1
I believe that teachers should respond to students' learning needs through ICT use (e.g., use blog to practise writing in English).	0	0.0	11	8.3	21	15.9	43	32.6	57	43.2
I believe that teachers should engage students more in the teaching & learning process through ICT use (e.g., use Facebook to share free English learning sources).	2	1.5	11	8.4	18	13.7	46	35.1	54	41.2
I believe that teachers should encourage students contribute more to enrich learning resources (e.g., asking students to share a useful link for pronunciation practice weekly).	0	0.0	9	6.9	11	8.4	54	41.2	57	43.5

Note. SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strong Agree.

6.2.7 Open-ended questions

In order to better understand teacher views on what stimulated or obstructed effective integration of ICT into teaching, two open-ended questions, Questions 8 and 9, were included in the questionnaire. A high rate of response for these two questions was obtained with 89% (*n* = 118) and 85% (*n* = 113) of respondents responding to Question 8 (Q.8) and Question 9 (Q.9), respectively. Answers were categorised into overarching grand themes or discourses and sub-discourses related to barriers and enabling factors. The coding rule was as follows: '*n*' refers to the total number of teachers who articulated factors coded under the same overarching

discourse, for example, '$n = 87$' means that 87 teachers noted that they used ICT for teaching purposes. ET refers to the code given to each individual English teacher, i.e., ET01, ET02 and so on. It is important to note that one respondent could potentially provide information under more than one 'grand' discourse and/or sub-discourse. For example, in response to Q.8, ET22 provided a response that was categorised under the grand discourse of 'teacher-focussed' ICT enablement and the sub-discourses 'convenience' and 'enhanced content delivery'. In addition, he/she provided responses categorised under the grand discourse of 'ICT use for teachers and students' and the sub-discourses of 'convenience for both parties'. Hence, percentages are an indication of coverage of a discourse in data, rather than of division of discourses within the given sample.

6.2.7.1 ICT enablers

Results for ICT enabling factors presented in this section were determined from the 118 participants who completed Q.8. It is important to note that totals do not add up to 118 due to answers of one teacher potentially applying to several sub-discourses. Sub-totals work in the same way.

Eight major discourses emerged from responses to Q.8. Therefore, Q.8 was coded and categorised into eight grand discourses ($n = 8$). These grand discourses are presented in four Tables, namely teacher-centred use of ICT (Table 6.14); student-centred use of ICT (Table 6.15); ICT use for teachers and students (Table 6.16); and time, infrastructure, institutional impact, ICT literacy and assessment (Table 6.17). Each grand discourse was categorised into sub-discourses. Below is detailed analysis of these grand discourses and sub-discourses.

The discourse with the highest percentage of 73.72% ($n = 87$) was 'teacher-centred ICT use'. This means that nearly three-quarters of respondents claimed that they integrated ICT in the classroom for their own purposes, for instance, use of ICT to help them in teaching activities and/or in preparing and teaching lessons. The 11 sub-discourses under this grand discourse were: use of ICT to ensure effective teaching; convenience; helped teachers be more resourceful; ensured that work was up-to-date; reduced teacher workload; provided teaching alternatives; diversified content delivery; enhanced interaction; provided references for content that students could later look up themselves; assisted teachers in managing teaching tasks; and enhanced student motivation. These sub-discourses and percentage of respondents mentioning them are presented in Table 6.14. Respondents' written answers are used for illustration of ICT integration choices.

The two sub-discourses with the highest coverage were 'effective teaching' and 'convenience', as indicated in Table 6.14. Thirty percent of respondents (26 of 87) indicated that one of the main reasons they integrated ICT into EFL teaching was because it made teaching more effective. Equally, 30% ($n = 26$) felt that integrating ICT made life more convenient for them in the classroom.

For a number of respondents, 'effective teaching' was synonymous with making the lesson 'interesting' (ET92, ET93, ET110, ET114, and ET128). For example, a lesson is deemed more interesting with ICT-supported visualisation techniques/aids (ET13, ET16, ET66, ET70, and ET96). These teachers indicated that the visualisation technique was helpful because it was relevant to the lecture and was appealing to students. Some emphasised that using visual aids helped students easily follow the lesson (e.g., ET63). Respondents also suggested that 'effective teaching' was ensured by using ICT as it makes the lesson 'lots of fun' (ET37 and ET118).

There were a relatively high number of responses categorised under the sub-discourse of 'convenience' ($n = 26$), as mentioned above. The 'convenience' factors mentioned by respondents were: ease of use (ET16); information availability (ET13); ease of integration (ET22); easy and quick access (ET23); rich resources and user-friendly environment (ET61); small-sized and communicative technology tools (ET109); and information sharing and provision (ET61) with attractive ('beautiful' *sic*) interface (ET125). Some English teachers found that the ability to easily correct learner language errors made ICT particularly convenient. For example, ET13 found it convenient to use ICT because it helped him/her check accuracy of pronunciation. These convenience factors can, however, also be defined as resourceful use of ICT, as defined in the literature (Kolawole, 2014; Salehi & Salehi, 2012; Yunus, Nordin, Salehi, Sun, & Embi, 2013), since the teachers resourcefully provided rich resources that were easy to access for themselves and their students.

There were also a number of smaller themes that arose from the open-ended responses categorised as 'student-centred use of ICT'. 10% ($n = 9$) of respondents who answered Q.8 indicated that ICT technology helped them to be more up to date in EFL teaching. This finding is in line with Kajee (2005) who noted the value of ICT in assisting teachers in being up-to-date in their field. ICT could potentially also assist in effective teaching by reducing workload. In this study, only a few respondents (6%; $n = 5$) indicated that using ICT helped reduce workload. This is not surprising since a number of ICT studies in English language teaching (ELT) have noted that ICT integration can actually increase teacher workload (Auer, 2012; Ismail, Azizan, & Azman, 2011; Mak, 2010). A few respondents suggested that ICT integration was particularly

useful in providing material for 'content based instruction', that is, an ELT teaching method that can support the learning of both language and content (Davies, 2003). This method of language teaching has been used for a long time (Nunan, 2006), but access to a range of disciplinary content to meet the needs and interests of the teacher and learner has become easier with the emergence of ICT (Kasper, 2002).

A small number of respondents (3.5%, $n = 3$) stated that effective teaching via ICT integration was due to better access to content which they can use to teach English, with an additional respondent ($n = 1$) reflecting on access to 'many ideas of related scholars concerning the issue being discussed' (ET26). An interesting point in this finding is that teachers did not place much emphasis on the content delivered or referenced (3.5% and 1.5%, respectively). In post-questionnaire in-depth interviews, most respondents revealed that what they aimed to teach is language skills, not the language content. In other words, this finding was very much in alignment with the finding of Svinicki and Dixon (1987, p. 141) who indicate the importance of not 'equating teaching with covering the content'.

Many studies, as shown in the literature review (Chapter 3), have shown the value of ICT as an alternative to other forms of teaching and/or as a back-up strategy if other types of teaching do not work (Beauchamp & Kennewell, 2008; Epelboin & Director, 2013; Watson, 2001). However, in this study, only one respondent stated that integrating ICT was valuable as a teaching alternative. This is in contrast to the observation data and follow-up interviews where the use of ICT as a 'coping mechanism' featured far more strongly (Chapters 7 and 8).

The other three sub-discourses within the teacher-focussed discourse were classified as 'interaction', 'teaching control' and 'motivation'. These were each mentioned by only one respondent and were also placed under the discourse of effective teaching via ICT integration. The literature suggests that ICT integration can facilitate interaction between teachers and students using social network tools, such as Facebook (Yunus, Salehi, & Chenzi, 2012), as well as more collaborative approaches to learning and teaching (Kajee, 2005). Although respondents in this study appear to value this aspect in the quantitative data, it does not have such a strong showing in the qualitative data as an enabling factor as do other factors, such as convenience or perception of 'effective teaching'.

Again, only one English teacher indicated that using ICT tools could help them feel in control of their teaching and have greater confidence. The literature has suggested that ICT is particularly useful in helping English teachers cope with anxiety in delivering lectures (Rahimi

& Yadollahi, 2011). This is reflected by ET29 who stated that ICT integration helps teaching control because it is very 'systematic and logical to control the teaching programme'.

Surprisingly, considering the high percentage of teachers who reported using ICT and the high percentages of respondents reporting support from colleagues and their own support of colleagues, only one respondent suggested that motivation by colleagues was an enabling factor for using ICT in their EFL classes. This respondent (ET83) described being motivated to teach English with ICT thanks to the 'rewards or encouragement from colleagues and department' in line with the literature that collegial support encourages staff to integrate ICT tools into their teaching (Genc, 2011).

Table 6.14 Teacher-Centred Use of ICT (n = 118)

Grand discourse	Sub-discourses	n	%
Teacher-centred use of ICT		87	73.72%
	Effective teaching	26	22.03
	Convenience	26	22.03
	Resourcefulness	13	11.01
	Up-datedness	9	7.62
	Reduced workload	5	4.23
	Content delivery and reference	4	3.38
	Teaching alternative	1	0.84
	Interaction	1	0.84
	Teaching control	1	0.84
	Motivation from colleagues	1	0.84

In Table 6.15, sub-discourses related to the overarching discourse of 'student-focussed' enablers of ICT integration are summarised. In these extracts, the respondents feel enabled to use ICT because they perceive it will benefit their students. Six sub-discourses emerged from this grand discourse. Each sub-discourse is analysed in detail, below.

The highest percentage of respondents (13.55%, $n = 16$) indicated they were able to integrate ICT because they felt it enhanced student engagement. For example, both ET05 and ET22 mentioned that they chose to integrate ICT because they could bring more 'interesting and exciting activities to engage students to get involved in classes'.

In the sub-discourse 'motivation', a substantial percentage of respondents (9.32%, $n = 11$) indicated employing ICT enabled their EFL teaching because it helped them motivate students

to learn a foreign language. This reflects a common discourse in foreign language education in general, and in English language teaching in particular, where the motivating element of technology has been reported on for some time (Cabrerizo, Bermejo, & Álvaro, 2011, July; Kajee, 2005; Kim, 2008; Lin & Yunus, 2012). The reasons why respondents thought the use of ICT could spark motivation in this study were varied. For example, ET10 stated that ICT integration enhanced learner participation because 'it motivates students to learn by themselves', while ET16 stressed that 'more importantly (ICT) encourages my students to actively take part in the teaching and learning activities'.

In a similar vein to ET10 above, three respondents (ET86, ET94 and ET97) reported they were motivated to integrate ICT due to increasing learner autonomy. ETA94 and TA97 noted that ICT integration helped 'encourage students to study and work independently'. Two of the respondents (ET34 and ET107) were facilitated to use ICT because of convenience, particularly for young people accustomed to using ICT. For example, ET34 described ICT as 'convenient, fast and appropriate for the youth's preference'. Another two respondents (ET12 and ET32) mentioned being encouraged to use ICT because of the ability to provide 'quality' lessons and resources that enable 'a high quality lesson which integrates different sources of information so that students are exposed to different approaches of learning foreign language' (ET12). This sub-discourse is related to the characteristic of 'resourcefulness' as described in the literature on 'flexible integration of ICT' (Collis et al., 1997, p. 201), and is consequently labelled accordingly.

Finally, in relation to student-focussed enabling factors, one respondent (0.84%) noted that his/her integration of ICT was encouraged because ICT could be used for 'updating students with latest changes around them using English language' (ET40).

Table 6.15 Student-Centred Use of ICT (n = 118)

Grand discourse	Sub-discourses	n	%
Student-centred use of ICT		35	29.66
	Engagement	16	13.55
	Motivation	11	9.32
	Learner autonomy	3	2.54
	Convenience	2	1.69
	Resourcefulness	2	1.69
	Up-datedness	1	0.84

Table 6.16 presents discourses where respondents indicate enabling factors arising from the needs of teachers and students and/or where they describe the enabling factor without mentioning whether it relates to students or teachers. The sub-discourse with the highest rate of response (5.08%, $n = 6$) was 'interaction'. For example, ET17 claimed that ICT was used for 'creating an interactive teaching and learning environment'. In a similar vein, ET36 stated that ICT could be employed for 'better interaction between teachers and students', while ET71 suggested ICT involving 'more students' participation in their self-study' enabled them to interact better with their teachers by 'building an interactive teaching and learning environment' (ET71). Like the teacher-focussed and student-focussed enablement of ICT discourses, two respondents also referred to the convenience of ICT for both teachers and students as a factor encouraging their use. For example, ET50 noted, 'using ICT is convenient for both teachers and students. For example, it helps save time by using slides instead of writing on the board or students can concentrate more on listening instead of spending time taking notes due to the fact that teachers will send them the slides via e-mail after each lesson.'

Some respondents were motivated to integrate ICT into their EFL classes because they believe this boosts the quality of learning and teaching. ET82 wrote, 'ICT helps my teaching to be more effective and involves more students' participation in their self-study; Teaching and learning quality enhancement will be ensured'. The desire to be up to date was another factor helping both teachers and students in using ICT. ET19 noted that 'teachers and students will be updated with the latest news and information; communication between teachers and students will be more effective'. One respondent (ET83) noted that ICT was 'rewarding' for both students and teachers, but did not elaborate.

Table 6.16 ICT for Both Teachers and Students (n = 118)

Grand discourse	Sub-discourses	n	%
ICT for both teachers and students		35	29.66
	Interaction	6	5.08
	Up-to-dateness	3	2.54
	Teaching & learning quality	3	2.54
	Resourcefulness	3	2.54
	Convenience	2	1.69
	Rewarding	1	0.84

As shown in Table 6.17, the remaining major factors enabling teachers to integrate ICT were time; infrastructure; institutional impact; ICT literacy; and assessment. Although using ICT was viewed as time-consuming by some respondents, as evident in the ICT barriers discussed below, some of the teachers ($n = 10$) saw the time-saving characteristic of ICT as an enabling factor for ICT use and noted that ICT saved time in terms of 'lecture delivery' (ET16), 'lesson preparation' (ET24), and making the best use of 'class time' (ET26 and ET28). Three teachers (ET48, ET50 and ET53) noted that availability of ICT infrastructure was the main factor enabling ICT use in teaching. For example, they were enabled through 'the development of ICT and the availability of e-devices; Lab and Internet are needed and available anywhere at university and available facilities' (ET48). Institutional support in the form of policy and encouragement was also a factor for two respondents with ET20 noting 'institutional support' (ET20) received and ET53 referring to the 'school's support'. The value of ICT in designing assessment tasks was also noted by one respondent (ET3). Interestingly, some of the enabling factors described above were viewed as barriers by a number of respondents.

Table 6.17 Time, Infrastructure, Institutional Impact, ICT Literacy and Assessment (n = 118)

Grand discourses	Sub-discourses	n	%
Time	Pre, while and post teaching	10	8.47
Infrastructure	E-devices, Internet, available facilities	3	2.54
Institutional impact	Institution's ICT policy	2	1.69
ICT literacy	Technical skills	1	0.84
Assessment	Learning and teaching assessment	1	0.84

6.2.7.2 ICT barriers

Question 9 was designed to ascertain respondent perceptions of factors obstructing the integration of ICT into their EFL teaching. The same tabulating and coding techniques and categorisation rules were applied as for the previous question. However, most of the barriers to ICT integration that respondents described were factors external to teaching and students. The nine main factors respondents identified as barriers to the integration of ICT are presented in seven tables, namely ICT infrastructure (Table 6.18); time (Table 6.19); ICT literacy (Table 6.20); Internet connections (Table 6.21); institutional support (Table 6.22); software issues (Table 6.23); technical problems students' attitudes, and age (Table 6.24).

Table 6.18 shows the grand discourse with the highest percentage. More than half of respondents surveyed (53.98%, $n = 61$) cited ICT infrastructure as a barrier to ICT integration in the EFL classroom. This is interesting as three respondents viewed ICT infrastructure as an enabling factor. Under this grand discourse, more than 36% ($n = 41$) stated that a lack of ICT facilities, including teaching equipment and technological infrastructure, hampered integration of ICT into EFL teaching. Lack of ICT facilities ranged from a lack computers (ET39), radios (ET18) to overhead projector and speakers (ET53), and language laboratories (ET55). Nearly 10% ($n = 11$) of respondents claimed facilities were unavailable when they wished to use them for teaching. For example, respondents revealed they felt discouraged to employ ICT because 'learning and teaching facilities are not yet readily available (e.g., classrooms with overhead projectors)' (ET11) and 'sometimes it is the infrastructure (for example, the design of classroom is not [suitable] to use OHP), the lack of equipment (some classrooms don't have OHP or speaker) or maintenance issues (damages or loss) that prevent me from integrating ICT in my teaching' (ET53) or because 'sometimes equipment doesn't work' (ET65). The EFL teachers also expressed concern that ICT equipment was not sufficiently updated, as one respondent noted, 'the update of equipment for ICT integration into teaching remains limited. Physical facilities are not adequate' (ET129). Interestingly, despite CU buildings being fully operated with electrical power, two respondents (1.76%, $n = 2$) claimed that electricity conditions sometimes prevented use of ICT tools.

Table 6.18 ICT Infrastructure (n = 113)

Grand discourse	Sub-discourses	n	%
ICT infrastructure		61	53.98
	Lack of facilities	41	36.28
	Unavailability of facilities	11	9.73
	Poor quality	10	8.84
	Electricity conditions	2	1.76

As shown in Table 6.19, the barrier to ICT integration in the EFL setting with the second largest number of respondents ($n = 34$, 30.08%) was the time-wasting characteristic of ICT. This grand discourse covered eight sub-discourses, making the time factor a complex construct. The sub-discourse with the largest percentage, more than 12% ($n = 14$), was that respondents felt discouraged in integrating ICT into their teaching due to the time needed for preparation. For example, some EFL teachers complained that it required 'lots of time spent for compilation and preparation of lecture' (ET14, ET131). Nearly 8% ($n = 9$) stated that using ICT was time consuming without providing more detail. Predictably, more than 5% ($n = 6$) of respondents

indicated that it took time to learn certain software. One respondent (0.88%, $n = 1$) in each case referred to the time ICT wasted in completion of tasks (ET2), time wasted in correcting technical problems (ET11, ET21, ET28, and ET31) and the time wasted downloading software and materials (ET84 and ET86). Two respondents (ET20 and ET85) also referred to general 'limitations' of ICT without going into further detail, while a further two respondents noted issues with fitting ICT into the curriculum. For example, ET28 pointed out that 'curriculum time is not appropriate', implying that the time portion allotted for integration of specific types of technology (for example, the language laboratory) was inadequate.

Table 6.19 Time (n =113)

Grand discourse	Sub-discourses	n	%
Time		34	30.08
	Preparation	14	12.38
	Consuming	9	7.96
	Software familiarisation	6	5.30
	Curriculum arrangement	2	1.76
	Limitation	2	1.76
	Completion	1	0.88
	Download speed	1	0.88
	Fixing technical problems	1	0.88

Table 6.20 shows that a number of respondents ($n = 19$, 16.81%) felt their own lack of ICT literacy discouraged them from integrating ICT. Eight respondents (7.07%) referred to their own lack of skills in ICT preventing integration, with the same number noting that a lack of 'knowledge' prevented integration. More generally, not being familiar with ICT prevented two respondents (1.76%, $n = 2$) from integrating ICT, and one respondent (ET103) noted that he/she did not have enough training opportunities and thus felt discouraged to integrate ICT.

Table 6.20 ICT Literacy (n = 113)

Grand discourse	Sub-discourses	n	%
ICT literacy		19	16.81
	Poor skills	8	7.07
	Limited knowledge	8	7.07
	Familiarisation	2	1.76
	Training opportunity	1	0.88

Table 6.21 shows that nearly 10% of respondents ($n = 11$) were not satisfied with the Internet connection at their institution. These EFL teachers stated that the network was not reliable and they had difficulties with speed and the Wi-Fi system. A small number of respondents (3.53%, $n = 4$) revealed that Internet disconnections discouraged them to integrate ICT into their teaching, as noted by ET84: 'the Wi-Fi network at the teaching place is not always available; sometimes if there is Internet signal, it's so slow that it takes a long time to download material in the classroom'.

Table 6.21 Internet Connection (n = 113)

Grand discourse	Sub-discourses	n	%
Internet connection		11	9.73
	Unreliable network	4	3.53
	Disconnection	4	3.53
	Slow speed	2	1.76

In Table 6.22 institutional factors inhibiting the use of ICT in EFL teaching are presented. Under this grand discourse, one respondent stated that the institution lacked ICT training, budget and assistance from the board of directors. For example, ET33 suggested that 'university budget is not sufficient to acquire modern facilities such as projector; sound system for all classrooms'. Two percent ($n = 2$) said that the lack of a reward scheme from the institution discouraged them to integrate ICT in their teaching. This low percentage is perhaps because many of the respondents had already made this point in the closed questions.

Table 6.22 Institutional Support (n = 113)

Grand discourse	Sub-discourses	n	%
Institutional support		9	7.96
	Lack of rewards	2	1.76
	Lack of ICT-based curriculum	2	1.76
	Lack of ICT integration facilitation	2	1.76
	Lack of ICT training	1	0.88
	Lack of budget	1	0.88
	Lack of support from board of directors	1	0.88

Table 6.23 indicates that 6% ($n = 8$) indicated concern over software issue. Unfamiliarity with new software (3.53%, $n = 4$), safety in using software (1.76%, $n = 2$), unavailability of software

(0.88%, *n* = 1), and expense of software (0.88%, *n* = 1) were identified as barriers to using ICT in their class.

Table 6.23 Software (n = 113)

Grand discourse	Sub-discourses	n	%
Software		8	6.01
	Unfamiliarity	4	3.53
	Safety	2	1.76
	Unavailability	1	0.88
	Expensiveness	1	0.88

Table 6.24 shows two barriers to ICT integration: technical breakdown and operation error accounting for 3.75% (*n* = 5) and 1.76% (*n* = 2) of respondents, respectively. For instance, ET26 noted that 'errors during equipment operation' could be identified and led to 'a waste of time' (ET98) in class. Table 6.24 also shows that some teachers felt that negative attitudes of students affected teacher integration of ICT. One in each case noted that students were not willing and serious enough to study with ICT, while two felt that students lacked the ability to learn with ICT. In addition, Table 6.24 indicates that age was a factor discouraging one EFL teacher to integrate technology in his/her teaching. This teacher cited their age as a barrier as they did not possess ICT skills required for integration in EFL teaching.

Tables 6.24 Technical Problems, Student Attitudes and Age (n = 113)

Grand discourses	Sub-discourses	n	%
Technical problems		7	5.26
	Tech breakdown	5	3.75
	Operation error	2	1.76
Student attitudes		5	3.75
	Lack of willingness	1	0.88
	Lack of seriousness	1	0.88
	Lack of control	1	0.88
	Lack of ability	2	1.76
Age		2	1.76
	Lack of ICT use skills	1	0.88
	Old age	1	0.88

Note. Totals do not add up to 113 due to answers of one teacher may apply to several sub-discourses. Sub totals work in the same way.

6.3   Discussion and concluding thoughts

The quantitative and qualitative survey data presented in this chapter confirm the institutional discourses revealed in analysis of policy documents/texts (Chapter 5) and findings from the literature (Chapter 3). However, there are a number of contradictions between responses to

different questions in the survey, between the survey data and the literature and with data presented in Chapter 5. These agreements and contradictions are described below.

6.3.1   Demographic data

The majority of the EFL Vietnamese teachers surveyed in this study (81.9%) have an age range between 22 and 40 years. The literature suggests that at this relatively young age lecturers are more inclined to adopt technology, especially ICT, in foreign language teaching and that older teachers are more likely to find it difficult to use technology and are reluctant to integrate ICT into teaching (e.g., Adams, 2002; Elsaadani, 2013). These findings from the literature are confirmed in this study, as the few teachers over fifty (11.3%) – which is nearing retirement age in Vietnam (men retire at sixty and women at fifty-five) – reported lower adoption of ICT. In the open-ended questions, two respondents (ET34 and ET48) indicated 'age' as a disabling factor in their ICT adoption. Therefore, although this is only two participants, other age related factors are explored in the observations and interviews of older participants (see Chapters 7 and 8).

6.3.2   ICT use versus ICT integration

As elaborated in the literature review chapter, a focus on merely using ICT can result in an arbitrary application of ICT tools, leading to a lack of student engagement and teacher centeredness (Rao, 2013). On the other hand, ICT integration in its fullest sense refers to purposive planning of ICT employment facilitating teaching, creating pedagogical change, and engaging students in the learning process (Lloyd, 2005; Rao, 2013).

The survey data reveals that EFL teachers participating in this study used a range of technology tools for personal purposes, but there was a low number of ICT tools used for teaching EFL classes, and even fewer teachers who had confidence to teach ICT skills to others, that is, would be able to teach students to use ICT tools. Therefore, although the teachers partially fulfilled the first TESOL Technology Standard (TSS) which requires language teachers to 'demonstrate knowledge and skills in basic technological concepts and operational competence', they were not necessarily able to fully meet the technology standards as they could not apply this knowledge and skills in 'whatever situation they teach' (Healey et al., 2009, p. 29).

6.3.3 ICT used for displaying content

Although personal use of ICT at home was higher than use in the classroom, a large percentage of respondents reported using ICT for teaching, but this use was mainly for teacher-centred activities. As Healey et al. (2009) note, ICT should be used to facilitate the learning process, not be an add-on tool. However, survey results showed that EFL teachers were inclined to use ICT to display content to the class, rather than for personalisation of learning or experience or evaluation of student learning as recommended in policy texts 9 and 10 (Chapter 5). Therefore, most surveyed teachers reported using Microsoft Word and PowerPoint for display purposes.

Although the literature reports that it is increasingly common and crucial for today's EFL teachers to employ multimedia in teaching, particularly the use of audio, video, and graphics (see Akyuz & Yavuz, 2015; Kirkpatrick, 2012; Mathew & Alidmat, 2013; Moqbel & Rao, 2013), fewer than expected of the surveyed teachers used this technology in EFL classes. There was one form of audio and video software that nearly half the respondents used in teaching: Windows Media Player (WMP). This tool was already embedded in the Windows Operating System used by CU. The literature suggests that a lack of use of more sophisticated tools could be due to a lack of 'confidence and competence' (Bingimlas, 2009, p. 235), leading to teachers preferring tools with which they are familiar. However, despite knowledge and availability of WMP, more than half the respondents did not use this tool in classes. This omission is explored in more detail in the interview and observation chapters.

The literature suggests that EFL teachers commonly use images, photos or edited pictures to support language comprehension and acquisition (Mathew & Alidmat, 2013; Yunus, Nordin, Salehi, Sun, & Embi, 2013). However, in this study, image editing software (e.g., Photoshop or Picasa) appeared to be less favoured by EFL teachers. Few teachers reported the ability to use this technology independently, or to teach EFL classes to use it. The reason might be the degree of difficulty in using some of these tools, which in turn can impair integration of an ICT tool, as suggested by (Venkatesh, Morris, Gordon, & Davis, 2003).

6.3.4 Preference for mobile technologies

The literature suggests that mobile technologies can be used to personalise learning, provide relevant content and just-in-time feedback and support (Pilar, Jorge, & Cristina, 2013, p. 1189). Findings from the survey data suggest EFL teachers had a strong inclination to use 'mobile devices' (Zhang, 2015, p. 3) and mobile technologies. Respondents also claimed to be confident users of mobile devices, smartphones and social networks. However, far fewer participants integrated these ICT tools into EFL classes. In addition, no respondent indicated use of these

technologies in the open-ended questions. Although teachers surveyed reported that they used communication tools, for instance Viber or Skype, on mobile devices to make students efficient in communication with teachers and their peers (Lan, Sung, & Chang, 2007; Lee, 2002; Safari & Sahragard, 2015), just a small percentage (less than 1%) of surveyed teachers reported that they could teach others (colleagues and students) how to use these ICT tools. Whether or not increased familiarity with ICT tools helped teachers better integrate ICT in teaching is further explored through classroom observations (Chapter 7) and follow up interviews (Chapter 8).

In the open-ended questions, teachers reported that less use of these (and other) technologies for EFL teaching was due to the institution's lack of adequate infrastructure in general and poor Internet coverage in particular. This contradicts the claim made by CU in the ICT policy document (see Chapter 5) that it had adequate ICT resources and the latest technology infrastructure available to serve teaching and learning purposes. The literature in Chapter 5 also reveals increased use of mobile apps and incremental reliance on mobile devices worldwide (Johnson, Becker, Estrada, & Freeman, 2014). It is suggested that university students in some countries spend an average of '3.5 hours per day using their mobile phones' (Johnson, Becker, Estrada, & Freeman, 2015, p. 36) but whether or not student use of mobile phones is successful in learning depends on the attitudes of both teachers and students (Şad & Göktaş, 2014). Teachers, if not aware of this fact, might fail to explore fully potential use of mobile devices for teaching. It is necessary to take into account contextual factors concerning mobile devices integrated in EFL classes. In a developing country like Vietnam, a smartphone is expensive in relation to average earnings. Thus, it is difficult for Vietnamese students to afford one of good quality. However, university teachers themselves earn a comparatively high salary when compared with other Vietnamese citizens, thus they need to operate within these restrictions, as stated in Goal 2, Standard 1 (Healey et al., 2009, p. 24).

Another conflicting discourse is teacher use of social networks. Social networks are increasingly gaining popularity in language teaching; for instance, Facebook is one of the most common tools used by English language teachers for social network-based learning and communication (Kao & Craigie, 2014; Yen, Hou, & Chang, 2015; Yu, 2014). However, few study participants actually used social network tools in teaching EFL classes. Perhaps this is because students lacked access to these tools or the teachers wished to keep their personal and teaching lives separate. This is another issue explored in the observation and interview chapters.

Another contradiction identified was the claim of using search engines in EFL teaching and in academic research. For example, while Google Scholar is a powerful tool for searching related

academic articles that has become very popular in the Western world (Falagas, Pitsouni, Malietzis, & Pappas, 2008; Jean-François, Laetitia, & Stefan, 2013; Kousha & Thelwall, 2007), in developing countries, such as Vietnam, this is not necessarily the case (Arunachalam, 2003; Chandra, Nugroho, & Saleh, 2015). Only a handful of teachers surveyed actually used this search engine in EFL classes. One reason could be that the institution did not have a strong research culture and consequently teacher practice was not research oriented. This is also a trend worldwide where teaching-focussed university appointments have become common (Shin, Arimoto, Cummings, & Teichler, 2014). There were also a small number of teachers who reported that they did not know how to use Google Scholar for searching for academic information. The sources the teachers used for searching for information and the quality of information obtained is further explored in the observation chapter.

6.3.5 ICT integration into student learning activities under-explored

As described above, ICT integration is mainly used for teacher-centred activities in the classroom, although it is also commonly used for lesson planning and enriching teaching resources. The teachers reported being resourceful, yet there was a lack of diversification of teaching and engagement of the students in activities that fully utilised ICT. Also, teachers did not report providing students with support to use ICT or provide feedback using ICT. This is in contradiction to policy texts (PT) described in Chapter 5 (see PTs 1, 3, 7 and 8) which stipulate that teachers use ICT to support learners so as to enhance quality of teaching and learning.

6.3.6 Barriers to ICT use

The respondents reported a number of barriers to using/integrating ICT in EFL teaching in the open-ended questions included at the end of the survey. These barriers can be categorised according to Archer's (1995) morphogenetic approach as structural, cultural and agential barriers.

6.3.6.1 Structural barriers

At a structural level, three major contradictions between the findings of the survey data and policy documents in Chapter 5 were identified: supportive mechanisms, financial reward scheme, and ICT infrastructure. First, the findings show that teachers reported a lack of support mechanisms for ICT integration in teaching. Meanwhile, in its Draft Report the institution claimed that there was a 'flexible mechanism' available or a mechanism that 'supports technological solutions' was offered (PT5, pp. 37 and 57). In particular, teachers were not content with the training provided and the low degree of ICT application in CU as a whole. Nevertheless, CU's Draft Report indicated that the ICT training opportunities offered 'exceeded

the requirements set by the MOET' (PT5, p. 51) and that ICT was applied 'in teaching to a great degree' (PT5, p. 51).

Second, teachers indicated dissatisfaction with institutional support and pointed out the lack of a financial reward scheme to facilitate initiatives in ICT integration in EFL teaching (e.g., ET22, ET37). As shown in the previous chapter, mention of a financial scheme of good practice use was mentioned [recommended?] in the MOET Guidelines on ICT implementation (PTs 3, 4, 7 and 8). In the institutional Draft Report, however, mention is made of a budget for ICT training and infrastructure development, but none for individual incentives. This is an area explored in more detail in interview data analysis (Chapter 8).

Finally, most teachers surveyed complained that the main obstacle in integrating ICT in teaching was poor ICT infrastructure. The international literature confirms the crucial role of higher education institutions in providing 'guidance and funding for institutional technology infrastructure and support' (Healey et al., 2009, p. 13). Teacher concerns contradict the CU Draft Report which claims that it has a 'good information technology infrastructure…meeting the need for development in the next 10 years' (PT5, p. 76). The Draft Report, however, does concede that there are limitations on technical infrastructure and this constraint is due to a lack of qualified ICT staff (PT5, p. 49).

6.3.6.2   Cultural barriers

At a cultural level, teacher integration of ICT is partly shaped by peers. In the survey data, this is categorised as group impacts. Although teachers reported that communication amongst English teachers in the institution could be enhanced by using the internal network (EGOV) which received the highest scores in group impact questions, very few teachers were aware of the policies regarding ICT infrastructure. This suggests a lack of culture of sharing policies related to ICT, again contradicting the CU Draft Report which mentions extensive socialisation of policy throughout the institution (PT5). Just over a quarter of respondents reported that colleagues help them to explore various ICT tools and assist them to use tools available at CU. The literature suggests that sharing ICT information and support is particularly important in a developing country context as it ensures a sense of ownership of ICT development and consequently greater access to resources and empowerment of teachers and students to use resources (Hue & Ab Jalil, 2013; Pelgrum, 2001). Whether EGOV promoted their communication amongst teachers or not and the reason why collegial support was lacking is examined in the interview chapter.

No respondents referred to using research search engines in the open-ended questions. However, this absence is also a cultural issue. A lack of a research or scholarly culture can impact ICT integration of research tools. Only a handful of teachers actually used Google Scholar or other academic search engines in EFL classes as reported in the closed question and this area is explored further in the observation and interview data.

6.3.6.3 Agential barriers

Contradictions between institutional policy documents and individual perspectives reported by respondents regarding structural issues could be due to individual access issues that are influenced by institutional policies and practices. Thus, although the institution might provide ICT integration training, this might clash with an individual's timetable or personal commitments. In addition, although the institution might have sophisticated equipment available, this may not be available equally to all teachers. Thus, this is an area that is explored in greater detail in the observation and interview chapters.

Similar to institutional barriers mentioned above, the individual might have the opportunity to interact with their colleagues and obtain support, yet still not access this interaction or support for various reasons. Potential reasons include the cultural ethos of the institution which prevents sharing, losing face in public, or an individual's preference or prejudices regarding interacting with certain people in the group. It is unclear why there was no data regarding group interactions with other teachers in the open-ended questions. The only group related factor viewed as a barrier to ICT integration was student lack of seriousness towards using ICT for learning, lack of willingness to integrate ICT and lack of control and ability. These student-related factors may be why few teachers appear willing to teach students how to use ICT tools or to use them in student-centred activities. Nonetheless, this issue is explored in more detail in the observation and interview chapters.

6.3.6.4 Individual barriers

A number of individual factors were identified by teachers in the survey. These was a focus on the amount of time it took teachers to individually prepare lessons that used ICT and the limitation of their own ICT literacy. Teachers also complained that they did not have enough time for fixing the technical problems. Lack of ICT skills and knowledge of ICT were considered as barriers preventing teachers to use ICT in their teaching. Age, as described above, was also a barrier to ICT use and integration for two participants.

6.3.7 Enablers

Like the barriers to ICT use and integration in the EFL classroom described above, the enablers can also be explored in relation to structural, cultural and agential factors (Archer, 1995). However, the majority of enablers are individual factors that motivate teachers to use ICT in EFL teaching.

6.3.7.1 Structural factors

Three teachers mentioned infrastructure as an enabler of ICT integration. Specific enabling infrastructure mentioned was availability of e-devices and the Internet. However, these respondents did not share whether the institution provided these or whether they were available in society in general. This topic is particularly explored in the observation chapter. Two respondents indicated being influenced by institutional policy to integrate ICT. However, they did not elaborate on how the policy influenced them or why. Therefore, this is further explored in the interview chapter.

6.3.7.2 Cultural factors

The only identified cultural factors that enabled teachers to integrate ICT were student-related factors. The most important factor was engagement, followed by motivation, a closely related factor. This is in accordance with the literature (e.g., Bingimlas, 2009) which stresses the importance of ICT integration as a factor for engaging and motivating 21st century learners. However, learner autonomy was only mentioned by a few respondents as an important reason for ICT integration, although the MOET Directive (see PT1, Chapter 5) and literature highlight learner autonomy as equally important to engagement and motivation. The reasons for this are explored in more detail in subsequent chapters.

6.3.7.3 Agential factors

A number of agential factors enabled teachers to integrate ICT into EFL learning. The most important of these, mentioned by over a quarter of respondents, was that ICT helped them to become effective teachers. Convenience was viewed as equally important. However, why teachers found ICT integration convenient or assisting in effective teaching and whether this is merely because it helped them prepare or deliver teacher-centred content (as suggested by closed survey questions) is unclear and is explored in more detail in the following chapters.

Another important individual issue was that 10 participants stated that ICT integration saved them time. This is ironic as 34 participants mentioned that time spent on ICT integration was a barrier to ICT use and integration in teaching. Likewise only one participant referred to his/her technical skills as an enabler to ICT integration in contrast to 19 respondents who felt their own

lack of ICT literacy was a barrier to integration. The literature suggests that these two factors are interrelated (Bingimlas, 2009) and, therefore, are explored together in the interview data and analysis chapter.

6.4   Implications for further research

The findings in this chapter do not 'necessarily put forward universal truths' for flexible integration of ICT in English language teaching; rather, the discussion aims to offer 'insights and aspects' to the issue of technology use in teaching a foreign language (Bekaert, 2014, p. 97). Therefore, this chapter opens up contradictions that call for further investigation. The issues of teacher familiarity with ICT tools and use of mobile devices were not adequately addressed in the survey. It is critical to understand how teachers use ICT tools, even familiar ones, in actual teaching practice. In order to explore teacher integration of ICT in action, classroom observations were conducted and are accordingly presented in the subsequent chapters of this thesis.

Another crucial aspect to explore is teacher personal preference for certain types of technology in EFL teaching. It is necessary to probe whether or not teachers are inclined to use particular types of ICT in teaching. This question is dealt with in the interview chapter.

Other aspects pertinent to issues of ICT infrastructure, provision and access were not comprehensively reported by study participants. Most conflicting reports are discussed further in the chapters on classroom observations and face-to-face interviews.

The last crucial point that needs further exploration is concerned with teachers' 'undecided' answers in the questionnaire. For example, Table 6.10 indicates that more than one-third of teachers were unsure of whether or not they 'trained students how to use specific ICT tools to increase collaboration among students'. The assumption might be that students themselves knew how to do it through ICT tools available to them and teachers might have little knowledge of what ICT tools should be introduced to students to enhance the collaboration among them. Another example can be seen in Table 6.11, which also indicates that more than one-third of respondents were unsure about 'the latest policies concerning ICT application' in their institutions. Uncertain answers like these will be particularly addressed in the interview data (Chapter 8).

As stated above, the focus of integrating ICT, as argued by Healey et al. (2009), is on the learning and teaching process, not on the technology itself. Therefore, in this study, along with the self-reported data presented in this chapter, it is also important to unpack teacher technology

integration practices in actual teaching situations and listen to their voices with regard to conflicting views that remain unresolved. These aspects are explored in the observation and interview data reported in Chapters 7 and 8.

CHAPTER 7

ICT INTEGRATION IN ACTION AS OBSERVED: EFFECTIVENESS OF ICT TOOLS USE IN EFL CLASSES

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7.1   Introduction

Because reality cannot be reduced to just an empirical level (Danermark, 2002; Sayer, 2000) and self-reported ICT integration concerns and practices do not comprehensively reflect how teachers actually use and/or integrate ICT tools in practice, it is important to see whether or not these concerns and practices are transformed into projects through practices as reflected 'in action' (Cooper, 2013, p. 14) in EFL teachers' actual classes. Consequently, in this chapter, Archer's (2007, p. 42) trajectory of 'Concerns, Projects and Practices' is used as an overarching tool for data analysis. I look at how EFL teachers' concerns are translated into their projects and whether their practices (as observed) reflected their prime concerns as per the questionnaire data. The ultimate goal is to find out what moved their concerns into 'a set of established practices' (Archer, 2007, p. 42). To that end, this chapter examines six EFL classroom observations of university teachers at CU. They were selected from the entire cohort of 43 participants willing to be observed and interviewed as representing staff who reported integrating ICT to a great extent (ET01, ET07, ET26, ET30 and ET32), as well as one participant who reported less integration of ICT (ET29). The extent of ICT integration as described in the previous chapter was judged by the EFL teachers' reported ability to use ICT in the classroom as well as being able to teach it to others. The emphasis on self-declared 'tech-savvy' respondents in the observation was in order to find out what effective and flexible integration as perceived by these participants actually signified and whether their perceptions and practices met the principles of such integration as described in the literature. The one less tech-savvy participant was involved in order to see whether, as she self-reported, her problems were primarily due to institutional structural and cultural issues.

As described in the methodology chapter (Chapter 4, Figures 4.2 and 4.3), the EFL teachers were exposed to structural conditioning at T1 that is reflected in the policies they were exposed to (as analysed in the policy analysis chapter) as well as their self-report of the policies and facilities they were exposed to (analysed in the questionnaire chapter). However, the

aforementioned data do not explore the socio-cultural interaction (T2-T3) with students and colleagues which could potentially result in structural elaboration or structural reproduction (T4) as per Archer's (1995, p. 157) morphogenetic cycle. Hence this chapter first explores the six observed teacher's self-reported concerns regarding the barriers and enablers to ICT integration as reported in Questions 8 and 9 of the survey data. Next, the observations are described individually in detail and then the discussion section of the chapter relates the findings to relevant literature and Archer's (2007) trajectory mentioned above. While the questionnaire data reveal the teachers self-reported concerns and practices and their experiences of structural conditioning, the actual observation data unveil their (ICT) projects and practices in action. The six teachers all agreed in the questionnaire to be contacted to arrange for observations and post-observation interviews, but in the end only five participated in post-observation interviews. Chapter 7 concludes by describing areas that required further probing in the post-observation interviews and are further addressed in the interview chapter (Chapter 8).

7.2   Overview of teachers' concerns as self-reported

This section explores the answers of the teachers selected to be observed for Question 8 (Q.8) and Question 9 (Q.9) in the questionnaire. Table 7.1 indicates teachers' major concerns categorised into ICT enablers and ICT barriers. These six teachers had varied concerns over what enabled them to integrate ICT in their EFL teaching, however, their concerns appeared similar regardless of their reported ICT expertise and background. They believed that the use of ICT made their classes more appealing to students (e.g., 'vivid and diversified' (ET01), 'students stay motivated and better focused' (ET32) and 'it is fun' (ET26)) and allowed easy access to the latest information and resources (e.g. 'updated information' (ET32), 'the content is objective' (ET01) and 'easy to access, search, copy and use' (ET26)). The teachers also self-reported their concerns over what prevented them from integrating ICT in their teaching. The major concerns that constituted barriers for these six respondents were related to 'lack of ICT infrastructure' (e.g., ET07, ET26, and ET32, 'access' (ET 26, 29) and related technical problems ('technical problems and Internet connection' (ET01)). Practical issues such as lack of time in the curriculum (ET07; ET29) and class size (ET07) were also mentioned with one respondent also noting the lack of tangible '[financial] rewards' (ET29) for using ICT. These concerns are relatively representative of the entire sample as described in Chapter 6. Table 7.1 also presents of self-evaluation of ICT expertise of these teachers. Specifically, ETs 01, 07, 26, 30 and 32 saw themselves as tech-savvy teachers; in contrast, ET29 considered herself as a non tech-savvy teacher.

Table 7.1 Teachers' Concerns as Self-Reported

Teachers	ICT enablers	ICT barriers	Learning environment
ET01 (NQT)	Make lecture vivid and diversified in teaching resources. The content is objective because quotations from several scholars/experts could be cited	Technical problems: connection speed, volume, download and upload; Applications: convert web-based files into editable formats	Technology-rich (Language laboratory) Tech-savvy
ET07 (HTA)	Time saving, vivid; it is systematic, logic and easy to control the program	Poor infrastructure; Large-sized class with time not appropriate Curriculum schedule	Technology-rich (Lecture theatre) Tech-savvy
ET26 (PTH)	ICT is resourceful - it provides more teaching and learning ideas than the textbook; It is convenient - easy to access, search, copy and use; it is fun - very good alternative learning environment for students, they can connect easily to share their thoughts and materials.	Curriculum design - hardly any opportunity for ICT integration; Facility - Lack of computers and internet access for students; CU policy- ICT integration is welcome but not facilitated yet.	Technology-poor (Traditional classroom) Tech-savvy
ET29 (NTD)	More convenient, integrate students easily; Easy to deliver teaching contents	Facilities; Time; Rewards/ Money	Technology-poor (Traditional classroom) Non tech-savvy
ET30 (DNT)	Quality of learning process	Infrastructure	Technology-rich (Language laboratory) Tech-savvy
ET32 (NDK)	Make lecture more diversified Updated information Lecture more appealing and effective Students stay motivated and better focused.	The institution's facilities and infrastructure are not adequate	Technology-poor (Traditional class) Tech-savvy

These varied concerns covering a wide range of ICT-related issues from lecture delivery to logistic support necessitate an exploration of whether or not these concerns became enablers or barriers to their teaching practice. The subsequent section provides a detailed description and discussion of six observed classes.

7.3   Description of observed classes

The first two observations, hereafter referred to as ET01 and ET30, were conducted in a language laboratory which in this context can be viewed as an 'ICT-rich' learning environment. Although Wi-Fi enabled, the Wi-Fi was not stable and the desk arrangement was set up with 30

language booths that included static desks, booths separating the students from each other, desktop monitors and a small console with a two-cassette tape recorder and player for each student. This set up is similar to what had been used internationally in the 1980s and the first stage of CALL centres. Because of this major infrastructure, the teachers and students tended to use the ICT tools and infrastructure provided by the institution, but with some teachers customising it with their own tools and resources. The classroom was set up for the classroom teacher to manage the whole language laboratory in a teacher-fronted arrangement. The teaching master console included a digital cassette player and USB port, but no desktop computer for the teacher. A large-screen TV (70 inches) served as a projector. The language laboratories were mainly used for speaking (reserved for teachers who taught speaking or pronunciation skills) and for interpreting (used by or reserved for Translation and Interpreting teachers). The audio source from the teacher's console could be transferred to the students' booths for self-practice. Students could also record their own interpreting using the cassette tape in their own booth and the teacher could listen in on any student engaged in individual activity at their console, interrupt their practice and provide individual feedback. Behind the master console was a traditional whiteboard. This class arrangement is depicted in Figure 7.1 below. Details of how the laboratory was used by the teachers are provided in the description and discussion of each observation.
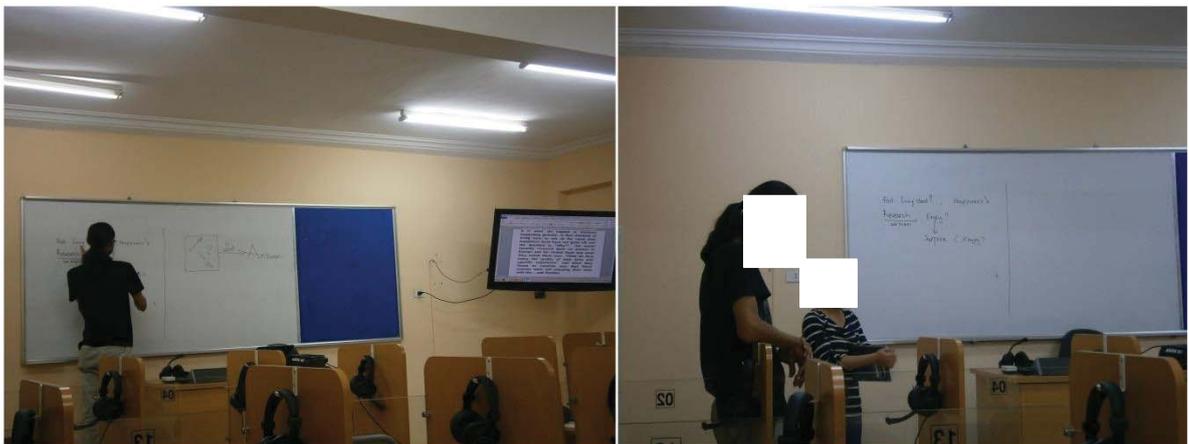
Figure 7.1 EFL teacher's integration of ICT in a language laboratory

The second two observations of ET26 and ET32 were conducted in an ICT-poor learning environment which was set up as a traditional classroom with rows of chairs and tables facing the teacher and the whiteboard. These classrooms at CU did not have built-in projectors or sound systems. The classrooms were old teaching rooms situated on the first floor of a building in the CU. Although the rooms had been renovated the previous year, no changes in infrastructure had

been made. There were two ceiling fans (for the whole class), three sets of ceiling lights, one wall fan for the teacher. One of the classes was equipped with blackboard and chalk. The room was quite small which was suitable for a small-sized class. The other class had a whiteboard. Neither room was spacious enough for moving around or having the class change its seating arrangement. This type of class is depicted in Figure 7.2. Details of how the traditional classroom was used by the individual teachers are provided in the description and discussion of each observation.

Figure 7.2 EFL teachers' integration of ICT in a traditional classroom

Finally, in the last two observations, coded as ET30 and ET6, both teachers experienced technology breakdowns during their class teaching. It is important to note that ET07 dealt with technology difficulties in an ICT-rich learning environment which was a large-sized lecture theatre, while ET29 experienced similar issues in an ICT-poor environment which was a traditional classroom setting.

7.3.1   ICT-rich learning environment

7.3.1.1 Observation 1: ET01

ET01 was a senior male lecturer who had been teaching at CU since 1984 majoring in translation and interpreting (T/I) education. ET01 was the Head of the T/I Division in the English Department, CU. In this class, he was delivering interpreting education for 12 third-year students in a language laboratory as described above. ET01 according to his self-report in the questionnaire data could be viewed as a confident and competent user of ICT.

Instead of using the digital cassette player with USB port, the ET01 chose to use his own laptop for the purpose of teaching. He connected the laptop with the console so that his presentation

could be displayed on the TV screen. He used the television speakers to produce the audio rather than the students using headphones.

ET01 wrote on the whiteboard and informed the students that the focus of the class was 'mind-mapping in interpreting'. He then played a video clip in English from his laptop which was connected with the console of a single speaker delivering a talk to a general audience on the topic of happiness on the TV screen. The video clip had written instructions inserted by the teacher as well as his initials showing that he had edited the video for teaching purposes. ET01 asked the students to watch the clip and take notes in either Vietnamese or English in any way they preferred that would assist them in reproducing the content of the clip.

After watching the clip and taking their own notes, they then listened and watched two student interpreters on the video delivering their own interpretations in Vietnamese of this clip. The students were asked to note the similarities and differences of the interpretations. It is important to note that the students were not asked to do any interpreting yet. The students were then asked to select which interpretation they thought was the best one and why.

ET01 then wrote two sets of notes in English on the whiteboard, one using the mind-mapping method and the other randomly organised written notes. The teacher elicited from various students that the better interpretation was due to better organisation of ideas. He demonstrated how the better interpretation had been developed using the mind-mapping technique. After that, ET01 gave the students a brief explanation of how this technique could be applied in constructing meaning from any talk. Next, ET01 told the students to listen to the next clip and to take their own notes using the mind-mapping method. He played an audio clip on his laptop on the topic of child development that also included photos for illustration. The students were given three minutes only after the listening to complete their own mind-maps. ET01 then moved around the class observing the students while they completed their mind-maps. Students appeared engaged, actively answered questions and completed the assignments in the allotted time slots. The students interacted with the teacher and asked for individual feedback when the teacher moved around the room. At the end of the three minutes, he asked one of the students to draw her mind-map on the whiteboard and provided feedback on ways to reduce the number of words by using symbols and focussing on key concepts. He explained that the process of interpreting was different to that of taking down dictation and then translating. Instead, he noted that it is a process of using notes to capture the essence of what the speaker is saying and then delivers this in the target language. He then summarised the process of mind-mapping in interpretation and displayed this in a mind-map form in a Microsoft Word document on the

television screen. He explained that mind-mapping can be used to visualise any talk in an organised way. He finally asked the students to revise their mind-maps according to the feedback received and walked around the room and interacted with individual students around this process until the end of the lesson.

7.3.1.2 Discussion of ET01

This critical incident was selected as it showed the teacher electing to use a combination of his own ICT equipment and those provided by the institution and showed a number of characteristics of effective and some elements of flexible integration as highlighted in the literature.

ET01's ICT integration can be described as effective in that was 'planned and purposeful' and appeared a 'routine part' of his classroom practice as indicated by his confidence and competence in using the equipment (Rao, 2013, para. 1) with no technical breakdowns. The teaching material was well-prepared with good audio and video quality. ET01 used more than one (digital) technology and in that he sourced original video and audio clips online, edited and annotated them and supplemented this by his own video recordings. He then edited, added instructions and video-recorded students' interpreting. Finally he incorporated them into his tailor-made video on the topic for teaching purposes. ET01's ICT integration was effective in that it was 'essential to the learning process' of developing interpretation skills helped his students develop 'new thinking processes' and 'build knowledge' (Rao, 2013, para. 1) around mind-mapping in interpretation through the comparison of the two recorded interpretations of the original presentation. This comparison also helped the teacher demonstrate his expectation for 'high standards' (Chickering & Ehrmann, 1997, p. 4). The ICT integration also encouraged 'active learning' (Chickering & Ehrmann, 1996, p. 3) as demonstrated by the students' apparent engagement and active participation in comparison, mind-mapping and discussion with their teacher. The tailor-made video was flexibly used in that he had developed it to reflect different ways of learning and to encourage reflective learning practices as suggested in the R2D2 model (Bonk & Zhang, 2008). However, his integration of ICT did not involve a complete redefinition of learning or teaching (Puentedura, 2006) or other flexible characteristics of flexibility of time, content, place or flexible and collaborative interactions between students and teachers and among students (Collis & Moonen, 2002; Collis, Moonen & Vingerhoets, 1997; Rao, 2013). In addition, the fact that his ICT integration was very teacher-centred prevented his ICT integration from moving from an Education 1.0/2.0 environment to an Education 3.0/4.0 one (Harkins, 2008).

ET01's concern of providing 'vivid' and interesting lessons to his students was transferred into his practice in that he supported learners with visual aids (Macwan, 2015; Mathew & Alidmat, 2013), modelled practice through his comparison of the two interpretations and then provided the learners with individual feedback (Golonka, Bowles, Frank, Richardson, & Freynik, 2014), enhancing each learner's autonomy through careful scaffolding (IlTer, 2009; Lai, Shum, & Tian, 2014). It is interesting to note that although ET01 commented (in his answered questionnaire) that 'converting web-based files into editable formats' was one of the barriers preventing teachers from using ICT in their teaching, ET01 appeared to have mastered this technique as demonstrated by this well-produced combination of edited and original material in the video.

Although the questionnaire results in Chapter 6 revealed that age can be a barrier to the integration of ICT, ET01 was a mature-aged senior teacher who evidenced no difficulties in using ICT. Perhaps this was due to his extensive teaching experience in interpreting and translation – a field where technology integration was common. He was also accustomed to being provided with comparatively technology-rich learning environments by the institution. Thus he merely substituted ICT for older technologies. As an experienced and successful university teacher, ICT integrations was just one aspect of his vast repertoire of pedagogies. However, as noted above, he did not utilise the full affordances of ICT and retained his teacher-centred role limiting his ICT integration to that of Education 1.0/2.0 (Harkins, 2008).

7.3.1.3 Observation 2: ET30

Like observation 1, observation 2 also took place in a language laboratory. The English teacher in this observation was also a senior male lecturer. ET30 was also a translation and interpreting educator working in the T/I Division at CU. ET30 had approximately 15 years of work experience as a higher education EFL teacher. Like ET01, ET30 self-reported that he was a confident and competent user of technology in his questionnaire data.

The class that ET30 taught was interpreting for 18 final-year students. The lesson focussed on consecutive interpreting practice of a single non-government organisation (NGO) speaker talking on a health-related issue. Consecutive interpreting refers to the situation when an interpreter trainee has to interpret (short) chunks often delivered in one or a few sentences by a speaker on a certain topic. The speaker pauses for the interpretation and then continues with a further short chunk of speech. As students were not experienced interpreters, the teacher limited the consecutive interpreting to a few sentences known as 'chunks'. After each chunk was finished, the student-interpreter would start doing the interpretation. The speech can be in either English or Vietnamese. The common practice in teaching consecutive interpreting is for the

teacher to first let students practice with English as the source language and Vietnamese as the target language before letting them interpret the Vietnamese source language into English. The topic often remains the same, which was also the case in this class.

ET30 started the lecture by greeting the class and immediately moved to his master console. He used his iPhone to connect with the language laboratory console and employed his own headphone connected with both devices. He then distributed the same audio file to the whole class. He told the students to start their consecutive interpreting practice and that the file would pause after each chunk. However, within seconds the students reported to him that the volume was too low for them to hear properly. This did not result in technical breakdown as he calmly apologised and explained that on his device the volume was sufficient and deployed a second file also on a health-related topic asking them to check the volume levels. The students reported that the volume was fine and they were then instructed to listen to this file twice. ET30 noted that they should first listen for general understanding and then a second time for consecutive interpreting practice. The health-related sound file was in English, so as usual, they did the interpreting from English into Vietnamese first. During this practice, the teacher listened in on various students and made notes of common errors. He then gave general feedback on three criteria: accuracy, fluency and performance (e.g., speed of delivery and volume) and gave specific examples of common accuracy errors.

For Vietnamese into English interpreting practice, ET30 then distributed another file selected from his iPhone. After around 10 minutes of practice, he asked them to stop and again gave them general feedback on the three criteria. He gave two students for each language the opportunity to interpret individually and the whole class could listen to this through their headphones. ET30 then asked the other students to give peer-feedback on the three criteria individually nominating as many different students as possible.

When the teacher spoke to the whole class through the microphone in the headset of the master console, the majority of the students listened through the headphones in their booth, but about five or six removed their headsets and listened to him speaking directly.

ET30 then distributed a new file on human rights to the students to practice their consecutive interpreting. However, this time, they were only permitted to listen once. He then listened to individual students through the console, interrupted them on occasion and provided feedback when necessary. At the end of the lesson, ET30 asked the students to visit the websites for the following organisations: UN, UNESCO, EU, and ADB for homework. Their task was to check the terminology for the people working in the area of human rights in each of the organisations.

7.3.1.4 Discussion of ET30

Like ET01, ET30 appeared confident and competent in his integration of ICT, despite his minor technical issue as he self-reported in the questionnaire data, perhaps again because the use of technology in the I/T division was common and he was able to transfer his knowledge of previous technologies and substitute these with newer technologies. However, this particular class appeared less successful than that of ET01 in terms of pedagogical practice that engaged students which is surprising as he demonstrated as many or even more of the characteristics of effective and flexible ICT integration as was the case with ET01.

In this case, the critical incident revolved around ET30's use of the language laboratory which, unlike ET01, he used for its traditional CALL purposes, but added his smartphone and earplugs for listening. Like ET01, his integration appeared purposeful and a routine part of the classroom experience (Rao, 2013) and his integration could be said to be effective in that it was used by the students and allowed some teacher-to-student and students to student communication and collaboration (Rao, 2013) and 'prompt feedback' (Chickering & Ehrmann, 1997, p. 3) as the teacher was able to listen in and then provide group feedback on common errors and later individual feedback promptly and effectively. However, his students did not appear engaged during the lessons, sometimes accessing their mobile phones for other purposes or having private discussions; in a couple of cases they expressed their boredom and fatigue verbally when doing their individual interpreting practice in the booths. This situation only changed when the teacher gave whole class feedback after the first listening text or they were receiving individual feedback via the console during their individual work. Perhaps this was because this particular typical form of language laboratory work was so routine and common in interpreting and translation classes that it failed to engage students any more. Another reason for disengagement could be because the collaboration and communicative aspects were limited to teacher-directed and mediated activities and they could not independently collaborate. The fact that the teacher did not move around and remained in his seat, but that some of the students still preferred to listen to the teacher without headphones suggests that in a face to face classroom, students would prefer to interact directly with each other and the teacher. In contrast to the work through the headphones, the students seemed particularly engaged when the teacher related the students' interpretations and their interpreting performance to real-world interpreting situations. Unlike ET01, when providing feedback to his students, ET30 did not move around the classroom, partly because he might feel that the class setting was fixed and not comfortable for him to get close to students, but also perhaps because he wished to use the full functionality of the language laboratory.

Regarding the R2D2 model, ET30 was flexible in providing direct feedback to his students and appeared reflective in that he attempted to address their individual needs and thereby personalise the learning experience. ET30 was also a reflective teacher in addressing the direct needs of his students after listening in and understanding their strengths and weaknesses. He also encouraged his students to be reflective to a certain extent during his individual interactions where a couple of students identified their needs for further background knowledge of the subject matter. Interestingly, in terms of the flexibility dimensions (Collis & Moonen, 2002; Collis et al., 1997), the most prominent instance of demonstrated flexibility was in relation to flexibility of content at the end of the lesson where he recapped his lesson by emphasising the importance of background knowledge on subject matter and terminology related to topical issues such and provided links to a range of websites relevant to the issue of human rights to prepare the terminology for the next lesson for their homework assignments and for self-practice.

Moving the routine interpretation practice online with the teacher preparing by listening to the students' work beforehand could have assisted him to more fully use the affordances of more recent developments in ICT and still ensure that he could address his central concern of 'quality control' as facilitated by ICT. However, perhaps he made this decision because of the lack of infrastructure on campus for students to record themselves and sufficient bandwidth and/or Wi-Fi stability to facilitate this and/or many students lacked the mobile devices or data on their devices to do this. ET30's major concern about lack of infrastructure as reported in his questionnaire data did not prevent him from addressing his major concern of quality control nor appearing confident and competent in his integration of ICT. However, his specific practices were limited to traditional CALL functionality in a language laboratory and he could therefore not achieve a fully effective and flexible integration of technology and remained bound to Education 1.0 practices with limited Education 2.0 and even more limited attempts at Education 3.0 (Harkins, 2008).

In a technology-rich context, the two EFL teachers observed above used the same technology provided by the institution (e.g., console). However, they used different ICT tools equipped by themselves. For example, ET01 used his own edited video clips

However, the way they used institution's ICT facilities was different from each other, as were their ICT devices. Specifically, ET30 preferred to use his own mobile devices (e.g., smartphone and personal earphones) and his own digital audio files to deliver teaching; in contrast, ET01 used his tailor-made teaching materials delivered via the institution's ICT system. Table 1 refers to different types of ICT employed by classroom teachers through observation conducted in a

technology-rich setting. Table 7.2 summarises specific ICT tools used by ET01 and ET30 in a technology-rich setting.

Table 7.2 ICT Tools Used in a Language Lab

	In a language lab	
ICT tools employed	ET01 (NQT)	ET30 (DNT)
Console	√	√
TV	√	
Laptop	√	
Video clip	√	
MS Word	√	
PowerPoint		
Internet ref	√	√
Smartphone		√
Personal earphones		√
Digital audio file		√

In brief, these EFL teachers used a variety of ICT tools drawing on the institutional infrastructure, but supplementing it with their own devices. However, they did not utilise the full affordances of these devices and their flexibility of integration was limited.

7.3.2   ICT-poor learning environment

Two observations (ET26 and ET32) were conducted in the traditional classroom setting as described in detail above. ET26 presented a speaking skill practice class and ET32 taught translation and interpreting skill training.

7.3.2.1 Observation 3: ET26

ET26 had worked for CU since 2003. ET26 first worked for the ED and then transferred to the Foundation Studies Department (FSD) in the same institution and officially became a full-time teacher for the FSD in 2005. The FSD had the function of providing English training for students who pursued majors other than English. For examples, English education was provided by the FSD for students major in information technology, business administration, tourism among other disciplines. The objective of the FSD was to help these students to gain sufficient knowledge of English to pursue their majors through an English medium of instruction. In the FSD, ET26 mainly taught skill-based English focussing on the four major skills of speaking, listening, reading and writing. ET26 taught several online English courses and language skills related to the International English Language Testing System (IELTS) courses. ET26 had been an active member of the Technology Team (teachers who gave up some of their time to assist

colleagues with technology and pedagogy) at CU since 2005. ET26 was also a member of the team who produced the Vietnamese TESOL Standards (PT6) at a national level as described in chapter 5. Probably as a consequence of this extensive experience with ICT, ET026 self-reported as confident and competent in ICT integration and even referred to himself as 'tech-savvy' in the questionnaire.

The class ET26 instructed consisted of twenty-two students with a focus on speaking skill practice. The room was a traditional classroom with a blackboard as described above and although the whole institution was Wi-Fi connected, this functionality was limited in the particular room.

ET26 first introduced the class the focus of the lesson, which was on speaking skills. He then elaborated different types of speaking such as presentation, debate, conversation or group discussion. ET26 used the blackboard and chalk to draw a mind-map as illustrated in Figure 7.3.
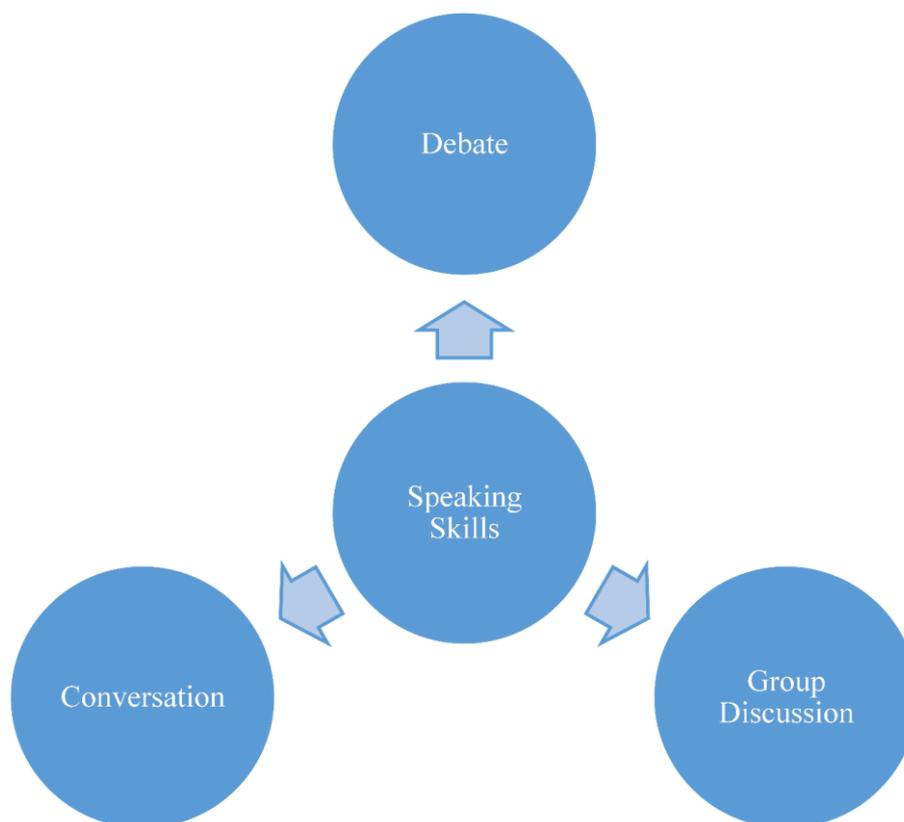
Figure 7.3 Different types of speaking in an English class

ET26 emphasised that researching and refining a speaking topic was of importance for speaking practice as it helped guide the direction of the talk or discussion. To help students find a variety of topics for speaking preparation, ET26 referred to different search engines of which Google was introduced as the major one. He told the students to use their mobile phones searching for ideas through Google search engine. A few students did not have Wi-Fi capability on their

phones and reported this to the teacher, who directed them to work in pairs with others that had this capability. Before the class started searching the internet, specifically using google.com websites to look for relevant topics, ET26 gave specific guidance on how to use Google with basic steps to make the searching effective. ET26 showed them how to type key words into the search engine box by drawing the Google Logo and search box on the blackboard and writing in an example search term 'education' and assisted the students to refine their searches from their initial search term as they found websites and information of interest.

After approximately 15 minutes of searching individually with guidance, ET26 asked his students to work in groups and share their notes of the ideas they had found using the Google site and to negotiate a more specific group topic that included the group ideas. While students were working individually, ET26 had set up the teaching devices including a laptop (an Apple Mac book), a digital cassette player and a smartphone. The laptop was connected via cable to the digital cassette player so that digital files from the laptop could be played using the cassette player speakers. The teacher occasionally checked his smartphone at times he appeared to be checking messages and at others checking the Wi-Fi system. At this point it was not really clear what the function of the smartphone was except for the teacher's personal purposes.

However, after a few minutes of group work, students reported difficulties accessing the Wi-Fi since the Wi-Fi provided by the institution was not stable. ET26 had already set up his smartphone as a hub to provide 3G Wi-Fi coverage from his own account and Internet provider for the whole class to use and gave his students with his username and password which were particularly appropriate for this lesson since they were both, appropriately this particular lesson '*speakingskills'.* They were then able to continue working in their groups.

ET26 kept moving around and facilitated the group discussion. He went to each group and helped them find the topics and refine topics of their interest. ET26 stressed that one of the priorities was to use their devices and the web to search for the information and vocabulary required. ET26 sometimes used the Vietnamese language to make sure that his students understood the requirements probably because they were first-year students at the beginning of the semester and would have experienced an English speaking environment for the first time at university.

Then ET26 raised questions concerning the topic, such as: 'what is the difference between the terms school and education?' and 'can we become educated without receiving schooling?' He provided the students with time to search for answers to his questions on the web using the Google site. Throughout the group work, the students actively engaged with their teacher and

with each other. A lot of talking occurred, but the students appeared to remain on task debating their various view. Then ET26 told them to use their notes prepared in the group and their individual research to prepare oral reports on education for the next class.

ET26 then gave the students advice on resources to draw upon in their preparation for their oral reports. He referred to some online tools and sources such as hocmai.vn. He also elaborated by writing on the blackboard some technological terms, for instance 'open courseware' and explained to the students that they could use this courseware to develop their speaking skills through material available on this skill through free open courseware. ET26 specifically referred to the Massachusetts Institute of Technology (MIT) material that provided a great deal of learning content on its open courseware free of charge. For examples of speaking topics and inspiring presentations, ET26 mentioned the website https://www.ted.com/ which offers talks with a wide range of topics He also referred to other websites and social networks sites such as Blogosphere, Facebook, Podcast and Youtube. ET26 demonstrated how the students could benefit from presentations on websites and social network sites by playing an audio file (Open Forum 2 with transcript provided on the website). He then showed them how to access the sample handout and briefly instructed his students to work out for-and-against argument in the sample handout. He advised them to use this material as a supplementary resource when they were at home.

After providing and discussing these resources, ET26 summarized the search output and elaborated search skills once more time and reminded the students about their oral presentation homework and the assessment criteria for this task.

7.3.2.2 Discussion of ET26

This critical incident was selected because it demonstrates a task-based approach commonly used in ELT supported by ICT and students actively using ICT. A task-based approach in learning and teaching supported by CALL in ELT has long been employed and reported in the literature (e.g., Ellis, 2003; Lai & Li, 2013). However, in this class it was used with mobile learning. The teacher's integration of ICT could be seen as effective by the fact that like with ET30 it is used by students as part of active learning and is a routine part of classroom activity as well as creating and developing new and critical thinking skills and developing new knowledge (Ng, 2013; Rao, 2013). However, unlike ET32, the focus is on mobile learning following the Bring Your of Device (BYOD) worldwide trend (e.g., Cochrane, Antonczak, Keegan, & Narayan, 2014; Lennon, 2012) rather than fixed computers and the students are collaborating face to face and using the web to support their discussions rather than using ICT

to listen to each other and provide feedback as was the case with ET30. Perhaps it was this face to face interaction between teacher and students and student to student in the group work that facilitated the active learning and engagement evident during this observation. This ICT integration can also be viewed as effective in that the students received prompt feedback (Chickering & Ehrmann, 1996), however, this feedback was given face to face and is not facilitated by ICT.

Based on the flexibility dimensions (Collis et al., 1997), ET26's integration of ICT was flexible in terms of 'course content' since he assisted students to gain ICT knowledge of diverse topics depending on their choice in the search activity in class and also for their homework assignment. This flexibility was evidenced in the way he provided additional resource links with specific guidance on how to use these resources for learning. Another flexibility dimension is associated with 'instructional approach and resources' evidenced in the resources provided during lecture and in his 'pedagogic approach' responding to the students' needs during the class.

Based on integration aspects from the SAMR model, ET26 was adaptive and innovative in transforming the learning setting from being traditional and low-tech to a technology-rich learning environment by employing his own resources. ET26 modified technology to make it compatible to assign tasks to his students, which means he was focusing on the 'modification component' rather than the 'substitution component' in this model. This teacher partly obtained the 'redefinition component' as he used ICT in an attempt to change pedagogy.

A key way in which ET26 showed his effective integration of ICT is through his explicit teaching of the students how integrate ICT into their learning. He did not assume that his students knew how to take advantage of search engines or make the best use of Internet sources for educational purposes. The scaffolding techniques were illustrated in the way the teacher summarized how searching skills could be acquired step by step.

In this observation, although technical breakdown did not occur, technical limitations were clearly identified. The institution's weak Internet provision seemed to be a factor discouraging students rather than the classroom teacher in exploring ICT application potential. This might be explained by the fact that the teacher often has more resources than students in general in a developing context such as Vietnam. In addition, this limitation also reflects ET26's self-reported concerns over a lack of computers and internet access offered by the institution and for students' use, as noted in Table 7.1 in this chapter. ET26 overcame this technical limitation with his own resources and therefore transferred his concerns into practices to overcome the limitations. It does however seem an extreme solution that the teacher would need to use his

own Wi-Fi to fulfil the responsibility of the institution, but ET26 persisted in order to achieve his concerns of assisting students to 'share thoughts' and have 'fun' and develop 'more ideas' through the medium of ICT.

7.3.2.3 Observation 4: ET32

ET32 was a male teacher and he had been in the EFL field since 1997. He taught translation and interpreting to the 4th-year and final-year students at CU. In the past, he had also taught the four macro skills like ET26. ET32 was very well-known for being an experienced conference simultaneous interpreter. Like the teachers described above, ET32 viewed himself as confident and competent in ICT integration. In this class, ET32 taught translation and consecutive interpreting. The translation session was conducted in the first half of the lesson from 12:30 to 2:00 pm. The class then had 30 minutes for break. Then the second half of the lesson from 2:30-4:30 pm was for interpreting practice. The term 'translation' refers to how an original document in a source language (in this case the English language) is rendered in a target language (in this case the Vietnamese language). Translation refers only to work with written texts. For translation, ET32 instructed his students in how to use different functions of MS Word to edit a translated version. The definition of consecutive interpreting provided above is applicable to this class. For consecutive interpreting, he used MS Word and PowerPoint to support his lecture delivery.

Although this lesson was in traditional classroom setting, it was a little different from ET26 because ET32 combined two classes. The lecture was delivered in a double room which could host around 40 students. In this observation, ET26 was working with 35 students combined from two classes. Therefore slightly more space was available to him than in ET26's class. The room was supplied with an overhead projector, but no built-in computer or screen, so ET32 had to use his own laptop and projected the material on the whiteboard. In this case, the whiteboard was used as an alternative for the screen. Figure 7.4 shows the setting of this traditional class.

Figure 7.4 EFL delivery in a traditional classroom

The first half of the lesson focussed on translation, specifically how to edit a translated document in this case, the original source document was a report in English. ET32 showed his students how to edit the target document (in Vietnamese) using MS Word.

First, ET32 checked how many students had gone online to research content related to the translation topic (the electricity situation in Vietnam) that they would address in the class. He asked them about the range of resources/ websites they had visited and what they had found about the vocabulary and style related to the content. He also went online and showed them some of the sites he had viewed to assist him with researching the content. Before coming to the class students had been given an original translated version of a report about electricity. They had been asked to edit this translated version (called version A) as homework and to send it to the class email (G-mail system) visible to both ET32 and the students. ET32 then opened the original translation (version A) which was projected on the screen, next opened the class email and showed student completed homework in several windows to compare different students' corrected versions. Some students also attempted to check the class email account at this point using the institutional Wi-Fi, but failed due to the institution's weak Wi-Fi connection. In response to this technological limitation, ET32 used his smartphone with the hotspot function turned on. He could then go online as usual with Internet provided via his smartphone. However, the class remained teacher fronted with the focus of attention the translations on the screen.

In this comparison of the original and the edited versions, ET32 elicited from the students the reasons for their choices and then color-coded the various errors made in the different edited versions (e.g., green for preposition errors and yellow for spelling errors). The errors with colour coded helped students easily identify what type of errors made from different edited version.

In this activity, ET32 both highlighted errors for his students and modelled feedback pedagogy for the future English teachers and a way of labelling and keeping track of errors in a document. ET32 explicitly informed his students that this was how he commonly checked his own translations and consistency.

Afterwards, as each choice was consolidated, ET32 showed the students how to use MS Word 'Track Changes', 'Grammar' and 'Spelling Check' functions and the 'Find and Replace' function. He noted to the students that this had two functions: showing them how to compare their errors AND how to quickly and effectively correct their own translations in future and to share and compare with other translators.

When ET32 showed the students how to use the Grammar and Spelling functions for the editing task, he emphasized the importance of using this functionality carefully and warned them against the use of this function because if improperly used, students might correct 'what was definitely already correct' [ET32's words], and not correct the real errors. ET32 took the term 'MEET-Bis' for illustration of this point. MEET-Bis though a correct industry term was wrongly identified as an error by MS Word. Some students had, by mistake, corrected this technical term into MEET-BIS which was factually incorrect. Finally, ET32 showed a PowerPoint slide of version A with all the errors highlighted. Specific guidelines on how they could develop their own improved version were given to the whole class.

In the second half of the lesson, students were required to do interpreting practice in pairs. One worked as a speaker and the other as an (student) interpreter. The student interpreter had to interpret English into Vietnamese. The content shown on the PowerPoint screen was in Vietnamese. The interpreter could use the PowerPoint slides as supporting tools because s/he could see all the terms for interpretation on the screen. Both speaker and interpreter had English hardcopies in their hand for this task.

During student interpreter' performance, ET32 provided prompt feedback and raised awareness of the need to be careful in using ICT tools for professional practice. He mentioned that it was not only the content that was of concern to English teachers during their lecture; technical set up and arrangement also mattered. ET32 even predicted the worst case scenario that might

during real-world interpreting where there might be an incorrect technical set up or there is no power, thus making the interpreter fail to perform his/her interpretation of the talk. He therefore reminded students to carefully check the technology beforehand. Although the lesson was mainly teacher-fronted except for the pair interpreting work, the students seemed engaged and on task throughout as evidenced by active listening and questions asked of the teacher.

7.3.2.4   Discussion of ET32

These two observations of ET 32 were selected as critical incidents for this participant as they demonstrated use of simple widely available technology and fully integrated into learning and teaching. In addition, both these incidents demonstrate how the teacher developed student autonomy in the professional context.

ET26's integration of ICT was effective as it reflected a deliberate, well-planned and curriculum embedded use of technology in language teaching. Although ET32 employed several ICT tools (e.g., mobile devices and presentation software), he knew how to take advantage of the most popular and accessible ones for the sake of his learner. In of the first part of the lesson, he used MS Word to instruct students how to use the technology tool to do translation editing, while in the second part of the lesson he demonstrated how PowerPoint was commonly used in real-world consecutive interpreting. ET32 planned carefully regarding using specific functions of simple technologies. He instructed students how to master the use of technology so as to maximize the learning outcomes. Whenever technology was employed, he referred to the potential benefits of this technology for the benefit of the students. ET32 engaged the students through his careful scaffolding and modelling of the professional processes of editing and consecutive interpreting using simple technology that could be applied for future similar tasks. The most pertinent element of enhancing learner autonomy by increasing motivation and sense of technology use (IlTer, 2009; Lai et al., 2014), and supporting learners with visual aids (Macwan, 2015). His effective integration of ICT is also in agreement with findings from other mobile-related studies in regard to improving language learning skills (Bahrani, 2011; Farangi et al., 2015). In this observation, effective integration of technology is identified in the teacher's use of technology as coping tactics (Al-Munawwarah, 2015).

ET32 showed a flexibility primarily in course content, and instructional approach and resources in that students selected their own material and used ICT for learning outside of the classroom and he selected resources based on the needs of the students (Collis et al., 1997). Viewed from the perspective of the SAMR model, ET32 made use of 'modification' in terms of using old technology (MS Word) in a new way (editing instruction offered to students) and moved closer

to the 'transformation component' of creating changes to pedagogy. Based on the R2D2 model, he was also a reflexive teacher in addressing the direct needs of students. However, the most prominent feature identified in his integration of ICT in relation to R2D2 was that he integrated a variety of technology tools with traditional ways of teaching (the Display component).

In response to his self-reported concern over the institution's lack of ICT facilities and infrastructure, ET32's response to the ICT-related shortcomings in the institution was similar to what was observed in ET26: he switched to the use of a personal ICT tool (smartphone) to increase Internet access for the whole class due to institution's weak Wi-Fi signal. Like ET26, ET32 did not take his students' knowledge of ICT for granted. This was evidenced by how cautious he was when he raised students' awareness in terms of the automated functionality of the technology, in this case the MS Word software. He pointed out that total dependence on technology was not a good choice in terms of producing good editing. ET32 overcame technological challenges and used simple technology in order to act on his concern of making his classes 'appealing' to his students and to maintain his students' 'motivation', chiefly through his modelling of professional practice. Like ET01, ET32 was an experienced mature-age teacher for whom technology integration was common practice in both his teaching and professional practice. He therefore adapted as new technologies appeared and used older technologies for new purposes.

7.3.2.5   Brief summary of ET26 and ET32

With regard to the observations conducted in the technology-poor environment, both ET26 and ET32 built a vivid lesson by making the learning experience as authentic as possible and by fully using the affordances of face to face interaction in combination with ICT integration. Kramsch (2009, p. 194) cited in (Kern, 2014, p. 352) illustrates this by stating that:

> The more real world communication takes place in the virtual world of networked computers, the more crucial it becomes for instructional environment not to emulate the computer, but to offer precisely what the computer cannot do, namely, reflect critically on its own symbolic and virtual realities.

These two observations reflect the issue that even when institutions have ICT resources, these are often unequally distributed among courses and programmes. The technologies employed by ET26 and ET32 were provided through their own devices and Wi-Fi. They both used their own laptop, smartphones, Internet access plan, MS Word and PowerPoint. Both teachers created a high-tech learning environment from a low-tech setting reflecting their concerns of overcoming technical barriers and poor ICT infrastructure provided by the institution to achieve effective

teaching. Table 7.3 indicates the diversity in the use of ICT by classroom EFL teachers in a traditional classroom. Table 7.3 summarises ICT employed by ET26 and ET32 in EFL teaching.

Table 7.3 ICT Tools Used in a Traditional Classroom

In a traditional classroom		
ICT tools employed	ET26 (PTH)	ET32 (NDK)
Teacher's own Internet coverage plan	√	√
Internet ref	√	√
Search engine	√	
Laptop	√	√
MS Word		√
Smartphone	√	√
PowerPoint		√
Social network	√	

7.3.3 Technical breakdown setting

Technical breakdowns were identified in both the technology-rich setting and the technology-poor setting. The following section offers description and discussion of two EFL classes (ET07 and ET29) where technical breakdown occurred, hereafter called observation 5 and observation 6, respectively. In both cases, the technical breakdowns occurred in a lecture environment: ET07 delivered a lecture on interpreting theory in an ICT-rich setting in a large lecture hall; in contrast, ET29 delivered a lecture on lexicology and phonetics in an ICT-poor setting to a smaller group of students.

7.3.3.1 Observation 5: ET07

ET07 was a senior female teacher who had taught translation and interpreting for the T/I Division since 2002. Like ET32, ET07 worked as a freelance translator and simultaneous interpreter in addition to her CU role. As reported in the questionnaire data, she viewed herself as competence and confident in integrating ICT. In this observation, ET07 taught interpreting theory for third-year students from five afternoon classes. The total number of students attending was 125 out of a possible 150 on the class roll. The class started late because it took nearly 10 minutes for the teacher to set up the built-in projector with assistance from one of the students. The classroom teacher failed to connect the laptop with the projector. The student kept checking and tried in vain to fix the technical problem.

While waiting for the problem to be solved, ET07 began to talk about the differences between translation and interpreting as this lecture's focus was on interpreting theories and asked the

students to identify all the differences they could think of. After the student and teacher failed to get the in-built equipment working, the teacher asked me for help to help her connect her laptop with the projector so that her lecture prepared in PowerPoint format could be used. This was because I had also been a teacher at CU and knew the technical staff in the university. I first looked at the instructions from the manual, but despite following the instructions, the screen was blank and the content in the PowerPoint in the laptop was not shown on the screen.

During the interactions between the teacher and myself, the students opened the translation theory text book and searched for the answer. Some students found the answers to the questions by locating information from textbook, while others used their smartphones to search for the answer connecting to the institutional Wi-Fi which seemed to work more effectively in the lecture hall than it had in the traditional small classrooms described in the observations above.

After failing to connect the laptop and projector, I located the technical support number in the manual and phoned the technician. He informed me that I could connect the laptop to the screen by turning on a button inside the technical box. The technical box was just next to the table where the classroom teacher stood to deliver her lecture. This box was a new one just installed by the Equipment Department of CU. I then managed to connect the teacher's laptop with the projector and informed the teacher who declared 'You've saved my life!'

ET07 then started content on the theory of liaison interpreting by showing a short video clip on the criteria for this kind of interpreting on the PowerPoint. However, the sound system of the meeting hall system failed to connect with her laptop and she could only show the audio. At this point, the teacher quickly coped with the challenge by placing her voice microphone near to the laptop's built-in speaker to amplify the sound as per Figure 7.5. However, at one point of teaching, the microphone battery became low and she had to stop for a while to change the battery before resuming the lesson. Coping with all these technical problems appeared to be common practice for this teacher.
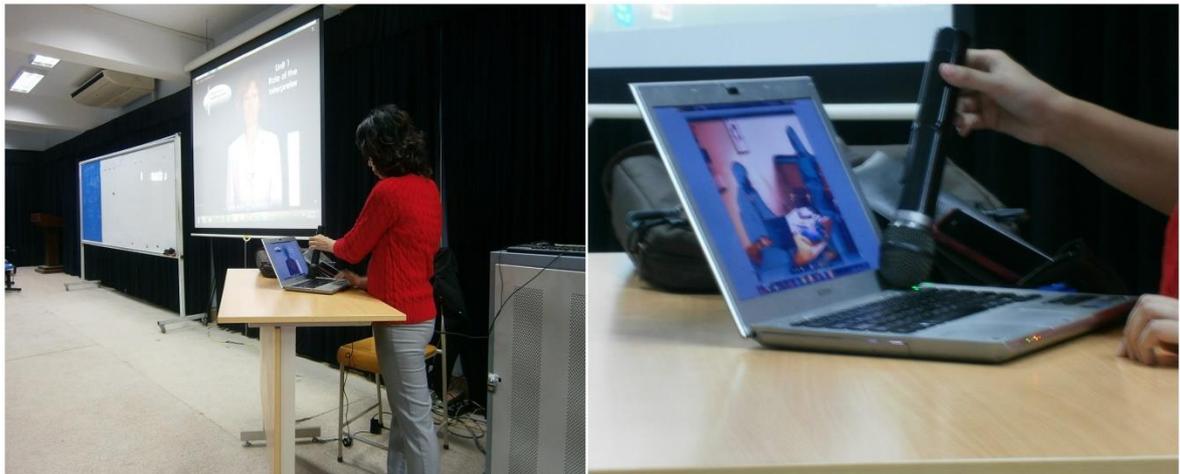
Figure 7.5 Coping with technical breakdown in an ICT-rich setting

I did not intervene and contact technical support again as ET07 quickly addressed the challenges described above and I did not want to further disrupt the lesson. After showing and discussing the video clip, ET07 engaged the students in a role-play applying the principles described in the video-clip and provided the students with feedback based on the criteria given.

7.3.3.2   Discussion of ET07

This critical incident was selected as it revealed ET07's strengths and weaknesses in ICT integration in language teaching. ET07 was adaptive to technological breakdown in terms of using alternative teaching tools available to her and innovatively using the microphone to help deliver sound from her laptop to the whole class in order that the students could listen to the video clip. However, although the video clip was 'planned and purposeful' and 'supported the curriculum goals and learning objectives' (Rao, 2013, para. 1), it was not an integral part of the lesson and could have been substituted by direct teaching. In addition, the teacher could have referred the students to the clip as a consolidation of the learning in their own time either before or after the lesson. Perhaps she chose this option to achieve her concern of making the lecture more 'vivid' and perhaps she was concerned that not all the students would be able to access the video at the university due to the poor 'infrastructure' (her other concern) and lack of equal access at home. Based on the SAMR model, ET07 substituted and augmented the textbook and her direct instruction with the video clip, but did not redefine her teaching with this technology which just delayed the class and was used merely for content delivery rather than enhancing student autonomy or assisting them to create and develop new thinking processes or critical thinking (Ng, 2013; Rao, 2013). The integration of ICT also did not enhance communication between the students and the teacher or among the students, but rather hampered this communication by distracting the teacher and students.

In practice, ET07 created greater interactions between herself and the students by engaging them in a role-play activity and providing the students with feedback based on the criteria presented in the Powerpoint and video clip. The students appeared engaged during this activity. Figure 7.6 shows the role-play activity used in ET07's class.

Figure 7.6 Engaging students through role-play activity

ET07's concern about lack of infrastructure was belied by the fact that she had access to a high-tech environment, but was not able to make use of it without taking extreme measures such as using the microphone to amplify the sound. However, her difficulties reveal two institutional challenges: the need to provide teaching staff with training and information on new equipment and not just assuming that they would be able to use it, as well as the lack of communication between teaching and technical staff and a lack of willingness among teachers to contact the technical staff. Perhaps ET07's reluctance to contact technical staff arose from her self-identified confidence and competence in using ICT and a fear of 'losing face' if she asked for help outside of her class, or perhaps she was not entirely clear about the role of the technical staff. Perhaps this worry also arose from her concern that as a female lecturer, she would be exposed as non-tech savvy to male colleagues. This suggests that the institutional culture needed to be changed to one of continuous professional development and rewards for participating and delivering professional development in both technical requirements and ICT-enhanced

pedagogy for all staff. Another issue was the lecture format where teachers did not have time to check equipment before class as one class followed another and because of the large class did not have time to give individual feedback online or in class. These problems were reflected in ET07's concerns about the 'large classes', 'insufficient time' and 'curriculum schedule' as reflected in the questionnaire data.

Although ET07 managed to make her lesson 'more vivid' by introducing the video clip as reflected in her concerns, rather than 'saving' time, time was actually wasted by ICT integration. This suggests that institutions and teachers need to be sure that the ICT they use is fully integrated and facilitates rather than hampering a flexible learning environment.

7.3.3.3 Observation 6: ET29

ET29 was also a female teacher of English at CU. She had seven years' experience of teaching English at CU. For the first six years of her career, she taught the four macro skills like other teachers mentioned above. Then, she moved to teach Language Theory for about a year. In this observation, ET29 delivered a lecture on Lexicology for 23 third-year students. Unlike the other teachers discussed above, ET29 reflected that she not a confident or competent ICT user in her questionnaire data.

ET29 delivered her teaching in a room similar to that of ET26 but without any renovations using a portable projector and her own laptop. She only realised that the room did not have a projector on arrival before the class and asked one of her students who had arrived early to carry a portable projector from her department to the classroom. When the student brought the project to the class, ET29 found out that it was not supplied with a portable screen and therefore decided to use the wall for projection. The room was small and with the heat of the projector would have been stuffy in the summer. However, it was autumn during the observation time, so the heat did not impact negatively on the learning during the one and a half hour class.

ET29 turned on her laptop and connected the Mac laptop with the Projector herself using her own special adaptor/connector before the lesson started. ET29 had prepared PowerPoint slides for her lecture. ET29 began by introducing the main focus of the lecture, which was 'word formation'. After that, she proceeded to deliver her lecture while her students mainly listened to the lecture and took notes. ET29's instruction was mainly in English. She only used Vietnamese when she felt the need to give some translation for subject-related terms such as 'morpheme' and/or 'derivative'. After a few seconds, ET29 realised that the lights in the room seemed to prevent students from seeing clearly what was shown on the wall. She then turned off the lights so that students could see the PowerPoint slides more clearly. The wall screen was not moveable,

therefore, the teacher chose the wall that was very close to her teaching table. ET29 referred to the slides even while she was sitting in her chair.

After delivering her first section of content, ET29 asked her students to do some practice. Students were asked to do 'Exercise 1' as displayed on the PowerPoint slides. The text on the Powerpoint exercise read as follows: 'Analyse the following words into their constituent morphemes: readiness; deactivators; forbearingly; half-deafened; left-handedness; non-combatant; readability; temporarily; weedkiller'. After approximately eight minutes, ET29 called one of the students to go to the front and write down her answer on the blackboard. She then asked other students to give peer feedback on this answer and followed up with other students writing down their answers and receiving peer feedback. Interestingly, one of the students used a portable, small-sized electronic dictionary to do the exercise. Most of the responses from this student were correct, but the teacher did not acknowledge the source of the student's responses.

About half-way through the lecture, a technical breakdown occurred. The projector, for unknown reasons, stopped working. ET29 tried her best to fix it, yet it did not work. ET29 quickly used her prepared hard-copy handouts as a replacement for PowerPoint slides. The handouts were printed version of the PowerPoint slides. ET29 sat in her chair and looked at her laptop in reference to the content mentioned in the handouts. From that point till the end of the lesson, the class relied entirely on the handouts provided by the teacher. She concluded the lecture by informing her students that the homework would be sent to them via e-mail. Figure 7.7 shows the teacher's own ICT devices and how she coped with the technical breakdown during her lecture.
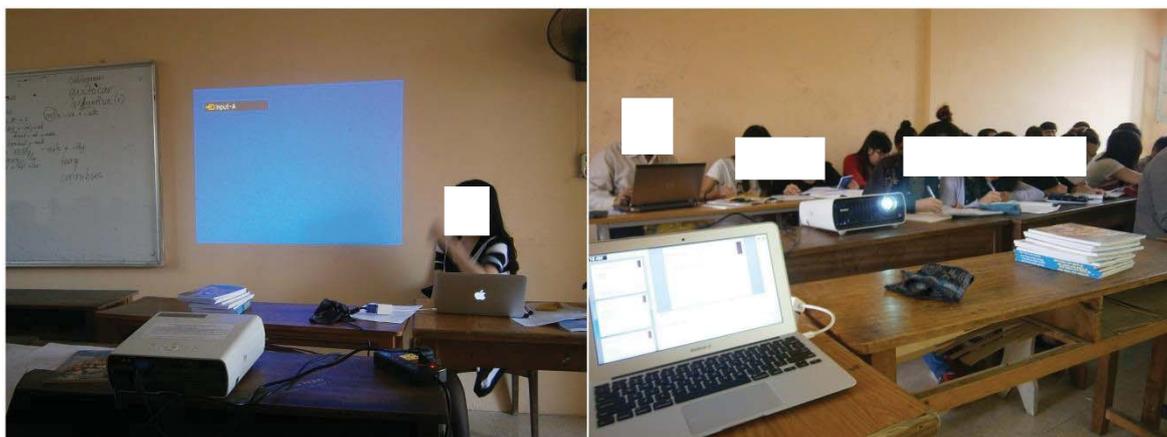
Figure 7.7 Coping with technical breakdown in an ICT-poor setting

7.3.3.4 Discussion of ET29

The critical incident in this observation was selected as it demonstrated ET29 using ICT purely for display purposes as 'Powerpoint and talk' rather than 'chalk and talk' and when technological breakdown occurred, the teacher was able to simply substitute ICT for a paper-based lecture. Therefore, in terms of the SAMR model, this lesson used merely direct substitution with a slight augmentation in terms of visual enhancement of the lecture with the Powerpoint slides. The ICT use was planned and purposeful, however, the class was entirely teacher-centred with no communication/collaboration, knowledge-building or student use of ICT occurring (Rao, 2013). Consequently, ET29's lesson remained at the level of ICT use and Education 1.0 (Harkins, 2008; Rao, 2013).

ET29's lesson was flexible in two ways: finding an alternative and creating some modifications when necessary. However, she failed to remedy her the technical breakdown due to constraints in facilities provided by the institution. ET29's concern of ICT as a 'convenient' medium for the 'delivery of content' was realised in this lesson in that she used Powerpoint purely as a content delivery mechanism. However, it was not 'convenient' due to her other concern of poor 'facilities'. The constraints of the ICT poor environment and ET29'other concern that there were no tangible 'rewards' for ICT integration within the institution resulted in her using ICT merely as an add-on when possible, but not allowing it to affect her delivery of content.

7.4   Overall findings and discussion

The goal of the observations conducted was to 'collect information about social behaviors, especially at a microscopic level, and to use interpretive strategies to capture their meaning' (Raufelder, Bukowski, & Mohr, 2013, p. 5). Warschauer (1998) stresses that one of the best ways to understand ICT integration was to examine it in a specific socio-cultural context. In this study, the social behaviours were reflected through teachers' use of ICT and how interaction between teachers and students was shaped. EFL teachers' socially ICT-integrated behaviours revealed their habitual use of ICT, flexible and effective integration of ICT in terms of coping-tactic adoption, and limitations constraining their ICT flexibility.

7.4.1   Teachers' habitual use of ICT

In all the observations it was clear that the EFL teachers commonly used ICT as part of their everyday teaching routine and appeared driven to use ICT despite considerable difficulties. Most of the participants met several of the criteria for effective integration of ICT as described by Rao (2013) and others. However, none of the participants met all of the criteria for flexible integration of ICT as described in the literature.

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In the ICT-rich environment, the EFL teachers completely mastered the teaching equipment and infrastructure (e.g., laptop, earphone, external hard disk drive etc.,) provided to them by the institution. However, these facilities were outdated and were supplemented by the teachers with their own equipment.

In the ICT poor learning environment, the teachers relied on their own equipment supplemented by portable projectors provided by the institution and even took the extreme measure of providing Wi-Fi for the students via their smartphones rather than relying on the institutional Wi-Fi which was prone to breakdowns. This behaviour was deemed appropriate by the teachers perhaps because Wi-Fi packages for mobile devices are comparatively cheap in Vietnam (World Economic Forum, 2015), especially for university teachers and are charged at a relatively low cost of less than 100,000 VND per month (US$5). However, they would be aware that many of their students would not have access outside of the class due to connectivity issues in many areas and financial constraints. Secondly, teachers were well aware of the security issues and ensured that the connection could only be made when the students were present in class.

ICT can be integrated at all stages of instructional decision making: 'planning, implementing and evaluating' (Cooper, 2013, p. 17). In the observations described in this chapter, ICT was found present in all these three steps. The EFL teachers mainly used MS Word and online resources for lesson planning, PowerPoint, Word, Projectors, the language laboratory and online search engines and resources for lecture delivery (the implementing) and PowerPoint and e-mail for feedback (evaluating).

On the one hand, the use of ICT by teachers was merely a replacement of the chalk and blackboard approach by 'Powerpoint and talk' without taking advantage of the 'added value' (Bax & Field, 2000, p. 200) of ICT. In some cases, on the other hand, the growth of digital technologies and requirement of a proper pedagogy in ICT integration had driven EFL teachers to move towards a more student-centered approach with the EFL teachers employing whatever ICT tools were available to them in a well-prepared, well-planned and intentionally designed ICT integrated lessons. ET32, for example, used MS Word to create changes in students' perception of how to edit a translated version as well as how to read and give response to feedback provided by both teachers and their peers.

Two of the participants (ET26 and ET32) moved from just using ICT tools to integrating them for the enhancement of learner autonomy (T. T. Dang, 2010b; T. T. Dang & Robertson, 2010). This was achieved through careful scaffolding of ICT integration even for advanced students. However, the teachers remained limited to Education 1.0/Education 2.0 approaches with only a

nod towards an Education 3.0/Education 4.0 learning environment in the case of ET26, ET30 and ET32. To ensure more systematic change, institutional support of flexible learning approaches and professional development of ICT and pedagogy are required.

7.4.2 Teachers' adoption of coping-tactics

When technical breakdown occurred, the EFL teachers demonstrated flexibility in their ICT integration, but purely as a coping tactic. For example, in the case of ET30 in a language lab, an alternative audio file was used to replace the inaudible files. In a traditional classroom, ET29 used handouts to replace the PowerPoint when her laptop stopped working.

7.4.3 Limitations on flexible implementation of ICT

In this study, the teachers observed were mainly faced with a lack of institutional support and Internet provision by the institution (Salehi & Salehi, 2012). On the one hand, insufficient institutional support could spark teacher's flexibility in coping with the challenges by themselves. On the other hand, they could easily reject ICT as not worth the effort, particularly if there are no tangible rewards for ICT integration (Sachs, 2014). The observations also demonstrated the uneven distribution of ICT both within the university and in society in general that is common in developing contexts. Though self-equipped with the state-of-the-art mobile technologies, the EFL teachers experienced outdated or no technology available in the class and lacked a stable Internet connection offered by the institution. Even in the case where the technology was appeared to be in working order (ET07), the teacher had not received training in the use of the technology and the manual was for the previous technology. Flexible integration in terms of 'anytime', 'anywhere' (Tucker & Morris, 2011, p. 904), 'just-in-time'(Rosenberg, 2001, p. 30 & 105) and 'just for me' (Peters, 2007, p. 15) delivery outside of the class and even in the class was also limited because not all the students had access to devices, data and stable connections at home. This is especially in alignment with the findings of Chinn and Fairlie (2010) who stated that, in developing countries, the Internet adoption rate has been rapidly increasing, yet the penetration rate which refer to the actual access to the Internet remains very modest. Therefore, it is the teachers who take advantage of BYOD initiatives rather than the students.

7.5 Concluding remarks

Pressured by a variety of standards and technological trends described in the previous chapters, these EFL university teachers felt the need to use technology, but employed a pedagogy-before-technology approach (Watson, 2001). This approach, in Watson's words, reflects the paradox regarding the teacher's ICT integration. On the one hand, teachers tend to perceive ICT as a

driver for change in both 'teaching style' and 'learning approaches' (Watson, 2001, p. 251). On the other hand, the teachers could be 'threatened' (p. 251) by technological change. This resistance arises from the teacher's anxieties in finding appropriate ways to employ the right pedagogy prior to the use of technology. This approach also requires the teachers to have certain, if not sound, knowledge of how to use technology in their specific teaching and learning contexts.

Flexibility in ICT integration in the classroom, to some extent, depends on varied factors including an the ICT plan, support and training (Tondeur, Van Keer, van Braak, & Valcke, 2008) provided by the higher education institution in which the EFL teachers are employed. Unfortunately, sometimes the institutional conditions do not precisely reflect the rhetoric in the ICT policy and this can limit the teachers' effective and flexible integration of ICT which remains 'potential' rather than actual practice despite the teachers' concerns. In addition, the teachers may be limited by their individual limitations of TPACK and motivation so remain limited to modification of technological devices or adaptability to the learning environment. Regardless of whether it is high-tech or low-tech environment, the teachers need to move towards a full integration of ICT and pedagogy where they make use of all the affordances of 'English language classes' and ICT and use 'technology in all of its forms' with a wide range of technology devices fully embedded into teaching (Ene & Connor, 2014, p. 4).

As I adopt a critical realist approach, I find it incumbent on me to not reduce the reality to what can be empirically observed or experienced. Seeing what technologies teachers integrated into their teaching does not suffice as it did not comprehensively identify the underlying mechanisms driving their successful integration or ineffective integration of ICT into actual EFL teaching. For example, a naïve realists may see the fact that teachers use a whiteboard instead of a portable screen as a good coping tactic when technological breakdown occurred. However, this could be a normal practice conducted by teachers in the institution and even recommended by the institution.

As it is impossible to observe every aspects of teachers' integration of ICT in their teaching and to observe unactualised potential and the mechanisms underlying the empirical and the actual, there is a need to examine teachers' concerns, their training needs and what actually conditions their effective integration of ICT. These ethnographic observations were designed to capture the meanings arising from 'naturally occurring' settings of selected cases (ICT-rich and ICT-poor) learning environments (Yin, 2003), there is a need to explore further the concept of flexible and effective integration of ICT by other English teachers in the institution as well as the

explanations that the observed teachers provided for their actions. Therefore, it is necessary to listen to teachers' opinions on what shaped their flexibility in ICT integration. These individuals should be viewed through the factor of potential agency as Horrocks (2009, p. 41) emphasises that 'agency is not static – people in different settings have different emergent properties'. The subsequent chapter (Chapter 8) offers insights into these properties based on one-on-one interviews with the EFL teachers in the CU.

CHAPTER 8

UNPACKING EFL TEACHERS' DIVERSE PERSPECTIVES ON FLEXIBLE AND EFFECTIVE INTEGRATION OF ICT THROUGH ORAL INTERVIEWS

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8.1   Introduction

The preceding chapter (Observation data) provides an account of EFL teachers' ICT integration in action. Chapter 7 indicated that the EFL teachers used various ICT tools in their different teaching contexts and some had challenges integrating ICT. In addition, none of the observed teachers were able to achieve fully effective and flexible ICT integration as described in the literature. However, 'there is no possibility of understanding the EFL teachers' actions without understanding how people [EFL teachers] conceive [and/or perceive] their situation' (Fleetwood & Ackroyd, 2004, p. 133). It was crucial, therefore, to conduct face-to-face interviews with the key participants as identified via the questionnaire for three main reasons. First, it is 'impossible to observe everything' (Dickson, 2008, p. 119) in any research site. Second, only key participants were interviewed because it is also 'impossible to collect perspectives [of all EFL teachers being studied] with all [their] viewpoints' (Sikes & Potts, 2008, p. 178). Third, as this study is conducted with ethnography as an overarching methodology, I am following the common practice of relying 'heavily on interviews' (Woods, 1986, p. 62), in this case to unpack not only underlying mechanisms driving EFL teacher's flexible integration of ICT, but also the diverse discourses and perspectives in terms of ICT integration in an EFL setting. Out of the 43 EFL teachers who indicated in the questionnaire that they agreed to be interviewed, 31 were selected as a representative sample of the five cohorts. Also, as with the observation chapter, the selected participants represented both those who extensively integrated ICT and those who integrated ICT to a lesser extent. All six of the observed participants are included in this sample. In addition to the EFL teachers, one senior leader (the Vice President of the CU) and two Vice Directors of an IT centre were interviewed.

Although Chapter 7 provided insight into what the participants did in their classrooms, their knowledge of ICT integration could not be accessed directly. Equally, it remains unexplored how their 'values and preferences' in employing certain types of ICT tools was shaped by

structural factors (such as policy and facilities), as well as cultural factors (such as their interactions with colleagues), and, most importantly, what the EFL teachers thought (Cohen, Manion, & Morrison, 2013, p. 411) about the factors conditioning their '[ICT] Concerns, Projects and Practices' (Archer, 2007, p. 42). A semi-structured interview approach (Bryman, 2012, p. 469) was used to collect the data. These semi-structured interviews were undertaken to ensure the 'trust, curiosity and unaffectedness' required of an ethnographer (Woods, 1986, p. 62). The interview questions were designed with a view to obtaining a comprehensive understanding of how ICT tools were flexibly used and/or integrated effectively by EFL teachers. These interview questions also aim to identify whether or not and how their ICT projects were shaped and transformed into effective practices. The eight main interview questions were as follows:

1. What ICT tools do you and other English teachers use most frequently at CU and why? Has this changed from your previous practices?
2. What are practical benefits in integrating ICT into EFL teaching? Do you believe that ICT integration is beneficial to EFL teaching? If so, what benefits do you see it bringing?
3. What are the most common challenges facing you and your colleagues in using these ICT tools in ELT?
4. To what extent has ICT integration affected your pedagogy?
5. Is there any change in teaching style and pedagogy via ICT integration?
6. To what extent is ICT used for networking and in a student-centred manner?
7. What encourages you and other teachers to integrate ICT into their teaching?
8. What discourages you and other teachers from integrating ICT into EFL teaching?
9. What do you think makes ICT integration flexible and effective?

In addition to these questions, the five key participants interviewed who were also observed were also asked follow up post-observation questions based on issues arising from the observations. These were mainly asked in order to access the concerns underlying their practices and projects.

8.2   Analysis of oral interviews

8.2.1   Diverse use of ICT tools in EFL teaching

In the observation and survey data, it was noted that the EFL teachers used a wide range of technology devices and that this was possibly due to the institution's provision of ICT equipment and tools. It was also noted that the technology-rich environments included outdated

technologies such as cassette players and recorders at the teacher's console and in each booth. I wanted to determine what the teacher's perspective on these technologies was and whether their practices had changed due to the newer technologies also available in the language laboratory. I also wished to determine the reasons behind the teacher's technology selections as per the observations. Therefore, the teachers were first asked what kind of ICT tools they used in the past and whether they continued to use these tools in their teaching or not. The main goal was to see if they completely replaced the old technology with the digital ones.

The teachers reported using technologies ranging from the most primitive ones such as VHS tapes and reel to reel tape (ET01) to state-of-the-art technologies such as iPhone, iPad, Dropbox and Google search engine (e.g., ET01, ET6, ET10, E28, ET32). It is important to note that ET26 took part in both post-questionnaire and post-observation interviews and this individual teacher had experience in using a variety of ICT tools mentioned earlier.

Almost all of the teachers reported using technologies in the past that they no longer used such as cassette tapes, floppy discs, and Overhead Projectors (OHP). For them, these technologies had provided a rich source for teaching language skills, but they were able to replace them with modern alternatives. For example, ET10 and ET12 recalled the following in relation to cassette tapes.

> I keep in my storage many [cassette tapes], hundreds of cassette tapes since I was a student and I reused them for teaching in my first years of teaching career (ET10).

> In the 1990s, we mainly used [for teaching] cassette players and cassette tapes (ET12).

While ET09 reported the following in relation to floppy discs:

> In the past many teachers used floppy discs… but now it has been replaced by external hard-disc drives and USBs and now it is known as portable drives (ET09)

And ET08 and ET28 among others refer to OHPs as follows:

> In the past, teachers could only access the OHP. That machine was very cumbersome and the preparation of transparency sheets was pedantic (ET08).

> In the past we had to use an OHP that required a transparency sheet which is now no longer used. Now I use PowerPoint for the same purpose (ET28).

The main reasons given for moving away from outdated technologies were pragmatic. For example, ET05 noted in relation to using the technologies in the classroom:

> I took a lot of time using cassette tapes or even CDs as I had to rewind, but when I changed to use e-book and mp3 files and video-files stored on the computer [laptop] I find it very convenient and I am very confident when giving lectures (ET05).

In the same vein, ET06 moved to cassette tapes with digital technologies due to the weather conditions affecting the quality of the cassette tapes and the convenience of digital technologies. ET02 said:

> Now it is so convenient to move to digital technologies as I can become very adaptive [to teaching situations]. For example, I can quickly find a new learning material if the learning material has been used by another teacher because everything is stored on my computer (ET06).

Thus ICT actually enabled flexibility in instructional approaches and resources, (Collis, Vingerhoets & Moonen, 1997; Collis & van der Wende, 2002). Others also reported that the new technologies made preparation for lessons easier. For example, ET06 reported having to climb up to the roof top of her apartment in search for the right short-wave Voice of America (VOA) radio station that offered an English learning programme before the advent of the Internet. Then, she recorded that audio programme onto tape, transcribed it and brought that tape to teach in class. This process was time consuming and took a lot of energy for lesson planning and preparation. Now, thanks to advancement in technology, ET06 could use the Internet to download VOA programmes with a transcript provided or ET16 could download audio files which were once stored in cassette tapes. They note:

> …now the website of VOA is available with transcript fully provided…and it is very useful for students to learn from it. I feel that students stay motivated and my lecture is more interesting. The VOA website provides daily updated information of interest to students (ET06).

> …now I can completely download such listening materials directly from Internet and students could listen via my laptop, which is extremely convenient (ET16).

However, a number of the teachers reported wanting to retain and even currently using outdated technologies such as cassette tapes (e.g., ET16) and CDs (e.g., ET05) in conjunction with state-of-the-art technologies such as mp3, Media Player, iPhone, iPad, Dropbox, Google search engine (e.g. ET01, E5, ET6, ET10, E28, ET32). Thus while many of them had moved to integrate the latest ICT tools into their teaching, this does not imply that they got rid of the old

technologies which they retained as a backup plan or because they wished to retain previous good quality resources to enrich their repertoire as reflected in the following quotes:

> I dare not throw them [cassette tapes] away, just in case I might need them one day…we [the EFL teachers] regard it as research and back-up technologies in future, although now no one returns to cassette technology (ET16).

> …I am still a very traditional [teacher] and often search for materials in books and textbooks. Now, online resources are available, yet they add to teaching resources, not to replace (ET02).

> I do not replace the cassette technology with online resources, instead I use both (ET28).

This is probably one reason why outdated technologies were still observed even in the technology-rich setting. Teachers could potentially use their old resources and even use the old technology as a backup when technology failure occurred. However, the outdated technologies were also probably as a result of a lack of funding and resources. Alternatively, this could be because of an institutional view that some courses required more technology than others as reflected in the observations where certain courses were scheduled in technology-rich and others in ICT-poor environments.

Table 8.1 below summarises the movement of all the teachers from more primitive technologies to the more updated technologies. It is interesting to note that all of the interviewees reported integrating technologies into their EFL teaching from the very beginning. This is in line with the literature (e.g., Connor & Ene, 2014), which shows a long history of technology integration in EFL teaching. However, which technologies were considered as 'primitive' depended on the age and length of experience of the participants. For example, ET01 and ET05 with 30 and 20 years' experience respectively reported that they viewed cassette tapes as outdated technologies, yet ET05 viewed CDs as current technologies. On the other hand, ET13 and ET14 viewed CDs as outdated and only focussed on the latest available ICT. Yet despite still using the earlier technologies, many of the more experienced teachers, reported fully integrating the latest technologies in their teaching. This full integration of the latest technologies was also observed in ET01's ICT-rich classroom as well as ET32's ICT-poor classroom. Therefore, it appears that they have continued in their tradition of using technology in their English teaching, just updating their toolbox as technologies become available. Table 8.1 provides some examples of specific tools used by EFL teachers who taught different EFL subjects.

Table 8.1 Overview of Specific ICT Tools Reported by EFL Teachers

No.	ICT tools used in the past	Most frequently used ICT tools so far (as of 2013)	Subject taught
ET01	Reel-to-reel tape Audio cassette tapes; Video tape VHS (challenges: cant intervene the content) Desktop	PowerDirector SoundForge Window Media Player	Translation & interpreting
ET02	Cassette tapes	MS Word, PowerPoint	Phonetics
ET03	Cassette tapes Blackboard and chalk	MS Word, PowerPoint Camera	4 general skills: Listening, Speaking, Reading & Writing; IELTS
ET05	Cassette tapes	MS Word; PowerPoint CD; mp3 file	4 general skills: Listening, Speaking, Reading & Writing
ET07	Cassette tapes	PowerPoint; Online resources	Translation & Interpreting
ID20	Cassette player	PowerPoint; MS Word Hand-out, Flip Chart Projector Laptop (MacBook)	Presentation skill
ET21	Cassette tapes	Laptop; Digital technologies PowerPoint; Word smartphone	Writing & EDO
ET22	Cassette tapes	Word; PowerPoint CD & USB; Laptop Digital technologies	4 general skills
ET25	Cassette tapes CD	Software; Laptop Internet	IELTS
ET26	Cassette tapes	Google search engine Facebook	IELTS, EDO & 4 general skills
ET28	Cassette tapes OHP	Google search engine Internet Laptop Personal hot pot	Syntax (post-observation)

It is important to know that, although a variety of ICT tools can be used for teaching, the interviewed teachers were aware that ICT tools should be used on purpose and with caution. For example, in a post-observation interview when asked why he chose to display MS Word with track changes to demonstrate editing and use PowerPoint to replicate an interpreting situation, ET32 stated that ICT tools should be used to create better student engagement:

> I adopt the teaching philosophy of 'seeing is believing'. It means I want to create a memory – back up effect on students. Interaction with such visual

aids would make students feel more interested in the lesson. Students would have to employ all their senses to remain focused on the lesson (ET32).

ET32's use of ICT tools was very student-centred. He reportedly warned students that:

> When you are up in the front for an interpreting job, besides paying attention to the PowerPoint slides, it is necessary to keep an eye on the surrounding equipment. You are provided with a wide range of equipment, in case you step on one of them, thus leading to the power cut. You might have nothing to interpret and it is very dangerous (ET32).

8.2.2 Practical benefits in ICT integration in EFL teaching

Several studies have indicated the powerful benefits brought about thought the use of ICT to support the learning and teaching process (Annapurna, 2012; Hughes & Tulimirovic, 2015; Livingstone, 2011), as detailed in the Literature Review Chapter. In this study, integrating ICT tools into teaching was perceived by the teachers as serving their daily needs and even helping teachers relieve their stress in lesson preparation as highlighted in the following quotes:

> Without knowledge of technology or being blind in ICT, I cannot survive in such a [digital learning] environment (ET02)

> Thanks to mp3 technology and e-books, I am no longer worried about what book to select (ET0)

With regard to ICT benefits, the major advantage most teachers referred to was the time factor. For these EFL teachers, use of ICT helped save time for lesson planning/preparation, resource search and sharing, and workload reduction. The following quotes highlighted these benefits:

> Using ICT saves a lot of time in the class. Time is for teaching, not only for setting up the [technical] facilities (ET02).
> Time is most important. Time for lesson preparation has been now shortened at a great deal compared to the past (ET27).
> Multi-tasking to a greater extent for the same amount of time (ET24)

However, saving time can be more complex than it is first perceived because some of the EFL teachers interviewed needed first to spend time familiarising themselves with ICT before being able to teach with ICT or teach their students how to use ICT for learning purposes. For example, ET11 elaborated on this issue as follows:

> Saving times requires a lot of 'do-it-yourself' efforts. For example, assisting students how to make a table of contents takes some time for recall of how this can be done. Then I need to practise it perfectly before showing students how to do so. This takes a lot of time (ET11).

8.2.3   Challenges in ICT integration

EFL teachers often have certain challenges in integrating ICT in their classes (Rahimi & Yadollahi, 2011). The EFL teachers in this study had numerous difficulties in integrating ICT in their teaching and research. The challenges could range from a lack of adequate infrastructure, and limited access to language laboratories, to the issues of institutional support.

Major challenges were identified in terms of the department and institutions ICT infrastructure, technical assistance and individual teachers' knowledge of ICT.

In terms of infrastructure, most teachers complained that the biggest hurdle was the unstable Internet connection offered by the institution:

> Although we have the optical cable. It is not always fast as expected. It is mostly slow and we cannot achieve what we want (ET16).

> I believe there is certain technological limitation, for example the Internet cable connection was not stable, thus leading to failure in the use of online tools such as the Google search engine (ET18).

> …the institution does not provide good Wi-Fi connection. Teachers need Internet connection which is important in this age. Teachers overcome this shortcoming by themselves (ET28)

Limited access to ICT facilities also emerged as a key factor discouraging teachers to integrate technology in their teaching. The most frequently complained about ICT tool was a lack of projector provided for teachers by the institution. Unequal access for teachers of different courses was also a concern as well as outdated equipment as in the following complaints:

> Only when I teach speaking skill could I borrow the projector from the department. It is difficult because for speaking skill, only when I teach presentation could I officially get the projector. It is extremely challenging to access this technology (ET09).

> Lack of infrastructure and training for teacher. Not enough or available but it is no longer useable because it is too out of date. (ET13).

However, while many teachers agreed that the institution should have better provision of ICT equipment for classroom teachers, some of the participants interviewed felt that individual teachers could get access to all types of technologies themselves. For example, ET02 noted:

> Everyone [EFL teachers] has access to all technologies. It is not a challenge but it is a matter of selection because people do have time to cover all technologies they need (ET02).

Compatibility between the ICT tools owned by the teacher and the institution's infrastructure was also a matter of great concern to teachers. One of the teachers (ET30) observed using ICT in the language laboratory commented on this challenge:

> The difficulty is always related to the capability to connect a mobile device with the facilities available in the language laboratory. During lecture delivery, this is very much likely to happen.

However, technical breakdowns do not always cause stress to the teachers. For example, when ET29 had a technical breakdown during her lecture delivery, she did not attempt to remedy the situation and merely swopped to traditional delivery using paper handouts for the students. When queried on this issue in the interview, she said:

> I haven't seen any disadvantages in integrating ICT into teaching. In case of a technical breakdown, it is just a small job to deal with (ET29).

In reality, ET29 used PowerPoint as a mere replacement for a blackboard/whiteboard. ET29's passive response in dealing with a technical breakdown occurring during her teaching was probably due to the fact that ICT was not integral to her teaching and merely served as an add on that she could take or leave. Another possibility was that due to the constant technical breakdowns she had experienced, she no longer relied on ICT, but always had a low-tech alternative available. The problem with this focus on coping techniques was that ET29 (and very likely many other ESL teachers in this context was unable to make full use of the affordances of ICT.

When technical breakdowns occurred, the interviewed teachers reflected that they expected easily accessible technical assistance so that they could overcome unexpected technical breakdowns. Support from technical staff was considered important because sometimes EFL teachers might not know how to operate a newly installed system or they might need on-the-spot assistance so that the lecture could be successfully delivered. ET01 and ET02 shared their thoughts as follows:

> For example, as we [the English teachers] come to use a new language lab, we'll surely notice that it is not similar to us...being faced with such digital difficulties, I believe it is on-duty technical officer's responsibility to address these challenges (ET01).

> Many a time have I been in technical trouble, for instance a film was shown in a language lab. The accessories were complex that I had no idea of what to connect with what. In that case, I had to call technical staff for help (ET02).

However, as described in the observation chapter, although the institution had technical staff available, some teachers did not make use of this support. For example, ET07 relied on students or me for help rather than contacting the technical staff. Perhaps this was because she did not want to appear incompetent when she was a self-identified confident and competent integrator of ICT. However, she was not alone in this regard, ET29 as discussed above did not even try to solve her technical breakdown and certainly did not contact the technical staff. Perhaps the reason was previous negative experiences. As one of the teachers interviewed (ET28) explained:

> However, at present, technical staff are not adequate to support us [the English teachers] (ET28).

Teachers' knowledge of ICT remained a serious challenge to a number of respondents' effective integration of ICT. From perspective of individual teachers, lack of training emerged as a key factor hampering them from using technology in teaching.

> I believe the first challenge is concerned with training. Not all teachers receive official training. Second, it is about the compatibility among ICT tools, say Mac Book and Windows. Generally speaking, it is very confusing (ET09).

> I have lots of trouble in operating a new language lab because I was not trained how to use the software. In short, I see a lack of continued training (ET13).

Other teachers admitted that limited knowledge of ICT was a barrier in their teaching

> …in class, many times I have found it very confusing of what to use, for instance how to display a movie in the language laboratory (ET02).

> …it is not easy to obtain technical skills to cope with any technical breakdown that might occur during teaching process (ET09).

> …my knowledge of ICT is little and limited. I have little access [to ICT] and few colleagues share [ICT knowledge] with me (ET10).

Those teachers who considered themselves as tech-savvy educators reported that they believed in their ability to cope with unexpected situations or technical breakdowns and therefore did not require any additional help or knowledge. In other words, they did not see any challenges in ICT integration in teaching. The following quotes highlighted this:

> So, there is no limitation [in ICT integration] because once we integrate technologies in teaching, we are seeking ways to reduce limitations from other technologies which are no longer suitable to date (ET01).

I feel I can take control [in the use of ICT] in all circumstances (ET07).

A teacher might also not see view the lack of a stable Internet connection provided by the institution as particularly problematic. ET07 commented:

I think that shortcoming [lack of stable Internet connection] is acceptable because it does not matter to me and it is not that urgent and necessary (ET07).

ET07's statement above in response to questions in the post-observation interview about the technical breakdown she experienced was particularly ironic since in the lesson itself she told me that I had 'saved her life' when I solved her initial technical problems. Perhaps this teacher and others' confidence and competence in integrating ICT is not always actualised due to the fact that training is viewed as a once off development within the institution and a culture of ongoing professional development is required. New technology requires new and ongoing training, as noted by one teacher:

I have to get familiarised with a new software or a new machine system that I have not mastered yet (ET01).

8.2.4   Change in teaching style & pedagogy

Whether ICT brings about real changes in teaching style and/or pedagogy remains a heated debate (Somekh, 2008; Watson, 2001). However, in this study, most classroom teachers interviewed commented that their teaching style and pedagogy had changed due to the integration of ICT into their teaching for a wide range of reasons.

 ET02 revealed that the use of ICT had changed her teaching style a great deal because in the past she had not paid due attention to technology integration:

 I believe I have changed a lot because in the past I was a very low-tech [teacher] (ET02).

In her words, low-tech does not simply imply having little knowledge of ICT, but it has a broader sense in terms of ICT literacy and a teacher's identity. ET02 says:

First, I have little knowledge of technology. Second, I always think that I am a traditional teacher who only sticks to [traditional] teaching methods and work with traditional teaching materials…I myself resist all types of accessing technology. When I am offered a certain technology, I hen thought it was not compatible to my teaching style (ET02).

ET31 and ET32 both affirmed that ICT integration in EFL teaching had changed their teaching methodology to a great extent as disclosed in the following quotations:

> Yes, it does change [my teaching style], particularly under the emergence of Internet (ET31).

> Change a lot. The biggest change is that it does not take too much of my time to design learning or instructional tools (ET32).

The EFL teachers interviewed reflected that ICT brought about this change in teaching style because it stimulated learning or modified their teaching methodology. Most EFL teachers commented that the ICT diversified their teaching resources, their ICT skills and their pedagogy, helping them better meet students' expectations as the following quotations highlight:

> Thanks to ICT tools, my teaching resources become diversified, thus making students feel more motivated (ET3).

> Teaching style changes because learner's demand changes. I can provide feedback [on writing] right on e-mail (ET05).

> It's true in terms of teaching pedagogy. I feel that I have changed a lot …over time, especially major change felt when I access modern technology (ET28).

> The teacher himself/herself improved a great deal. First, their software use skill is improved and second the teacher becomes more proactive during teaching process (ET11).

> …via sharing experience with foreign experts and from training programmes [with these experts] has completely created my new teaching style (ET23).

And some just found it natural to adapt to the use of ICT tools for teaching, as one teacher noted:

> I think I have to change because if I do not change, my teaching session would be very boring (ET8).

However, not all teachers believe that ICT integration can change their teaching style. For example, ET29, as mentioned earlier, felt that ICT was merely a replacement for traditional 'chalk and talk'. She noted:

> I think, basically, the teaching style does not change much. Teachers just need to update ICT knowledge so that s/he can help students learn better (ET29).

For many of the EFL teachers interviewed, a change in teaching style was closely associated with resource based learning pedagogy (Butler, 2012; Oliver, 2002) because ICT could help them diversify their teaching and learning resources or different resources were drawn upon to

assist learners. In the resource based learning approach, teachers help their students 'learn by using [a wide range of] resources' (Butler, 2012, p. 221). ICT, from EFL teachers' perspective, could yield an abundance of learning resources that benefit both teachers and learners. In that sense, resource based learning/teaching has become pedagogy which provides learners with varied 'learning resources rather than from class exposition' (Greene & Land, 2000, p. 152). ET05 and ET28 highlighted this by saying that

> Thanks to the [ICT] tool, I could convert text to pdf, insert or 'pick up' things of the same topic. I could consult different resources for my students for their reference and printing out (ET05).

> I, now often share learning resources, any interesting web can be shared and I always provide this web link for students (ET28).

However, some teachers appeared to be cautious (ET09) when advising students to use resource based learning aimed at improving learner autonomy as ET13 stresses that:

> The use of Internet only plays a supporting role in assisting students to find materials, self-reading and self-study at home for a better lesson in class.

Most importantly, some teachers were concerned about the safe use of ICT in teaching (Shin, 2015). Classroom teachers are cautious in selecting what websites or online resources they recommend for their students to work with or for reference.

ET13 raised a very interesting point in indicating that being too dependent on ICT was not a good idea as it could actually hamper good teaching and learning. ET13 regarded this way of learning and teaching as being enslaved to technology. She said:

> If we [the English teachers] do not know how to use [technology], we'll become slave and it turns out to be that we are having troubles coming from the abuse of technology (ET13).

In the same vein, ET07 also commented that an over dependence on ICT could 'blunt' [ET07's words] student's thinking skills. As ET07 was a translator/interpreter trainer who taught third-year students, she believed that students over relied on online [machine] translation

> …for example, I ask them to do homework. Most students rely on online translation and then have their translations edited a bit. After that, it's obvious that this undermine their thinking skills (ET07).

In this case, technology was abused by students who did not want to think of how to use technology to enhance their learning, rather they relied too much on the solution brought about by technology. Using technology in such a way could result in what Bastos and Ramos (2012,

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p. 7) call 'superficial learning': instead of using technology as a supporting tool and one that actually enhances critical and creative thinking (Chickering & Ehrmann, 1996; Ng, 2013; Rao, 2013), students let technology think for them.

The availability of resources via ICT tools also supported teachers in terms of having an always-ready back-up plan in case something went wrong in class. ET07 explains:

> I feel very proactive in any case. For example, one day I might be running out of time or for unexpected incidents that prevent me from lesson planning, thanks to available resources, I could download them via on-the-spot 3G coverage…uhm…via iPhone. I then throw [ET07's language] them up to the folder in Yahoo [mail] or Gmail. Then I could use USB [with downloaded materials] to link with [digital] cassette player (ET07).

In her response above, ET07 expresses her confidence in using and working with technology. The literature suggests that when a teacher is very confident in ICT integration, they are perceived as tech-savvy teachers and this ICT expertise helps them conquer 'a fear of failure in using technology in front of increasingly tech-savvy students' (Schrum, Shelly, & Miller, 2008, p. 7). In their study, Schrum et al., (2008) comment that tech-savvy teachers might express themselves as being 'fearless' (p. 7) in terms of ICT use. ET07 seems to have a similarly fearless attitude although this was belied to some extent by the events in her observed class.

The interviewed teachers reported that the changes towards ICT-facilitated teaching and consequently their teaching style arose from various sources. The most important factor could be overseas learning experiences that helped teachers become more autonomous or more efficient users of time. Experience gained from working with overseas experts also contributed to their change in pedagogy as revealed in the following quotations:

> Studying abroad makes me independent because nobody helps me [in terms of ICT use]. I had to be independent in searching for or sharing information with others. I had come to understand that it would be time saving and easier if I knew how to explore technology (ET02).

> There was one semester that I worked with a colleague of mine who originally obtained overseas training. I found out that two of us figured out an approach helping students and helping us make the best use of our time (ET11).

The option of ICT use depended on a teacher's expertise, for example, the area they majored in. For instance, translator and interpreter training teachers preferred using video and audio software for lecture preparation or teaching delivery. When asked about this, ET01 revealed that:

> That's PowerDirector. This software is, in my opinion, the most important to process images. For sound treatment, the most important tool for me to use is SoundForge which has many different versions. However, I just use the version which is appropriate to my work and that version should be enough (ET01).

ET01 was a translator and interpreter trainer working in the institution for more than 20 years. PowerDirector is video editing software allowing a user to work with audio and video files easily. It also allows the user to make any intervention into the files to tailor-make content to suit student needs.

ET01 explained how technology has evolved from the first day of his teaching career:

> 28 years ago I first used the reel-to-reel tape which was a very large-sized tapes. Then these tapes were gradually replaced with audio cassette tapes because they were more flexible. The teacher could take the tapes to any classes s/he wished to. The use of Video-tape in VHS format provided students with materials compiled by foreign teachers, which later showed its downsides. However, the content was too Westernised. Then comes the digital age which allows teachers to intervene in the content, such as cut, copy or paste so that the intended message could be delivered. Now, one iPad is more than enough. However, I think it is impossible to ignore the role of a computer whether it is a desktop or a laptop as it allows the teacher to do editing tasks compare to iPad or smartphones which only serve as display tools (ET01).

All these events have emerged to condition the roles played by the English teachers and have become easier to recognise as predicted by Warschauer (2000, p. 512) more than a decade ago:

> In the 21st century, three consequences of informationalism are likely to affect ELT: (a) the growth of global Englishes, (b) changing employment patterns, and (c) the development and spread of technology.

These interviews demonstrated that not only change in their teaching style was identified, but also changes in their concept of a tech-savvy teacher. Indicators of changes are important in this attempt to unpack flexible integration of ICT by these EFL teachers.

8.2.5   Networking & student-centred approach

This section examines whether or not a teacher's 'changed teaching style' reflected student-centred integration of technology.

The development of online technologies helped EFL teachers in terms of staying in touch with their students almost 24/7 (Dawson, Heathcote, & Poole, 2010). Integration of ICT exerts

different influences on the way a teacher communicates with his/her students. This influence depends on the specific subject taught by the EFL teacher (Hennessy, Ruthven, & Brindley, 2005). The impact imposed by ICT creates a learning environment in which EFL teachers could provide instant feedback, especially in case of emergency, as elucidated by ET16:

> In the case of emergency, if not very urgent, for instance student academic research to be due for submission…both teacher and student might have to stay up very late spending weeks for going online for editing the writing (ET10).

ET10 had a background of teaching EFL writing for first and second year students at CU. She also believed that working online helped solve problem of time management. She found it convenient to provide online feedback at a very late hour because she could also finish other tasks during the working day.

However, the EFL teachers interviewed were aware of the important role played by students in the integration of ICT into learning and teaching. How students received ICT enabled feedback and comprehended their teacher's ICT-enhanced lecture or made use of collaborative and communication tools depended on the students' ICT knowledge and access the Internet and data as well as their attitude to ICT as ET16 revealed:

> The learner's role depends on the diversity in their ICT levels regarding use of ICT tools. Some are very good at ICT, even better than the teacher. Some come from remote areas or countryside and are weak [in ICT use]. This is a big challenge in class…Many of them are female students and very often they are reluctant to use technology. When technical breakdown occurs, they fail to cope with (ET16).

8.2.6 Factors encouraging flexible integration of ICT

According to teachers interviewed in this study, the factors that encouraged teachers to flexibly integrate ICT into their teaching were varied.

> I think it [flexible integration of ICT] depends on preparation and experience (ET2).

> It is very convenient, time saving and has a variety of applications (ET02, ET04).

> …the factors concerning convenience and time saving. Convenient because it is not cumbersome, everything can be stored in the laptop. Time saving because PowerPoint slides can replace hardcopies delivered to students (ET04).

For some teachers, the use of ICT must be first for the sake of the learners. This student-centred approach was what drove their flexible integration of ICT:

> The predominant factor concerning ICT use is, in my opinion, students will be able to acquire the lecture in an easy-to-understand manner (ET01).

8.2.7 Factors discouraging flexible integration of ICT

Lack of infrastructure and limited finance are two majors influencing teacher's flexible integration of ICT:

> Facilities are not available here [the institution] (ET6).
>
> First it is equipment which is not always available and second it is very time consuming in search of [teaching] resources (ET12).
>
> The factor inhibiting such flexibility, in my opinion, mainly depends on technical facilities and infrastructure for teaching…and another factor is concerned with finance (ET19).

However, an individual teacher (ET31) who was working as Vice Dean of one of the cohorts believed that cultural factors including a teacher's inadequate perception and lack of institutional policy and leadership led to ineffective integration of ICT:

> The inhibiting factor, in my opinion, depends on each teacher himself/herself and each student if they do not have a perception of change. The second barrier is related to policy, physical infrastructure and the leadership within the institution (ET31).

8.2.8 Conditions for flexible and effective integration of ICT

The concept of flexibility [see Chapter 3 for full description and interpretation] is often linked with the 'ability to adapt to change' (Fleming, 1978, p. 111). In this study, EFL teachers provided their wide-ranging perspectives of how they perceive flexibility in ICT integration. EFT teachers offered different insights into how the concept of flexibility in ICT integration is defined.

First, flexible integration of ICT does not mean that the teacher must equip themselves with the latest technologies, as one teacher noted:

> We should not consider the so-called ICT, say today I must have a computer, tomorrow I must have a laptop…It is not necessary to own a certain ICT tool to mean ICT application (ET22).

Second, some noted that flexibility in ICT integration meant being focussed on teaching and learning goals and should not be viewed as an unnecessary burden. For example, ET24 noted:

> The flexibility in the use of ICT is the ability that teachers like us could use ICT tools to serve teaching purposes, making it appropriate and convenient rather than being a burden (ET24).

Third, in the teacher's eyes, flexibility arise from the use of a specific online tool, piece of equipment or resource. For example, the implementation of English Discovery Online (EDO) was considered flexible because it partly met students' requirements. ET24 who was in charge of this programme elaborated:

> It [EDO] partly met students' need in using computer for doing their assignments and to understand what was required of them. For instance, they could use computer for practice of listening, speaking, reading and writing, or grammar and vocabulary check (ET24).

Fourth, flexibility could depends on different phases in teaching and how adaptive the teacher could be. For example, ET20 emphasised that flexibility was most important in the lesson/lecture preparation and presentation phases. She commented:

> Teacher's flexibility in the use of ICT first refers to flexibility in lesson planning preparation. I'll be flexible in choosing some teaching resources for myself. Besides, flexibility is shown during lecture presentation if I have a back-up plan (ET20).

The final and most important source of flexibility in the integration of ICT according to the interviewed teachers was the teachers themselves. In other words, it is the teacher who determines and creates flexible integration of ICT tools, not just a simple ownership of ICT equipment. ET19, the Dean of the In-Service Department which provided English programmes to those who had obtained a high school diploma, college and/or university degree, shared her opinion about the concept of flexibility in technology integration. ET19 offered her insights in what determined such flexibility by claiming three factors helped shape a teacher's flexible integration of ICT. These were creativeness, proactiveness and personality:

> I first think that to obtain flexibility [in ICT integration], teacher's creativeness and proactiveness are of prime importance. Teacher's personality also influences this flexibility (ET19).

ET19 stressed that a teacher's personality is closely associated with their positive attitude towards addressing difficulties arising in their teaching situations. She claimed that the teacher's personality means:

> …the teachers must always hold a positive attitude to any problem and any difficulty. This means the teacher must first come up with a solution to coping with unexpected challenges. Second, the teacher must equip himself/herself a well-prepared work psychology (ET19).

Also important is teaching passion, which is perceived as a driver for the enactment of an effective and flexible integration of ICT:

> I believe that the teaching passion determines the flexible integration of ICT. It means I do not surrender the infrastructure constraints or financial limitations. I do it [ICT integration] in a student-centred manner (ET32).

ET29, though, self-reported as a low-tech teacher in the questionnaire, believed that developing an ability to adapt to different teaching situations was necessary when using ICT:

> Flexible integration of ICT comes from many sides, from the tools we use to the so-called ability to adapt to teaching situations.

The difference in teaching phases reflect different teacher's properties that might emerge during their integration of ICT (Archer, 1995). As discussed in Chapter 4, these properties might or not be actualised depending on the related factors (e.g., structural, cultural and agential).

8.3 Discussion

Although ICT was extensively and intensively employed by the teachers interviewed in this study, it seems that these particular EFL teacher's tended more towards 'ICT use' although many showed signs of being on the way towards 'ICT integration' as elaborated in the previous data chapters (Chapter 6 and 7).

8.3.1 Diverse perspectives in ICT integration

Despite the vital role played by university teachers, effective and flexible ICT integration within a higher education institution does not simply rely on the classroom teachers' will and expectations. The integration is influenced by varied perspectives from concerned stakeholders, including the teachers, the leaders and technical staff in the institution.

8.3.1.1 Individual classroom teacher's perspective

The first impression obtained from these interviews is that EFL teachers (in this study) were quite confident in expressing their ICT expertise. Teachers were aware of the need to use ICT

to support student's learning, yet they did not have a clear roadmap for how to make an effective use of ICT tools in EFL teaching and struggled to overcome institutional and individual barriers. Some were even resistant to ICT integration feeling that teachers should not 'be a slave to ICT' (ET10).

8.3.1.2 Institutional perspective

Besides interviews conducted with English teachers, I undertook face-to-face interviews with the Vice President (VP) of the institution, two Vice Directors of the Information Technology Centre (VD1 and VD2) and one librarian (Lib) to obtain further understanding of how ICT integration is viewed and exercised. These in-depth interviews offered insights into two major areas. First, these interviews outlined the use of ICT in the institution in general. Second, the interviews offered better understanding of how other academics (the leader, the IT experts and the supporting staff) perceived the way in which EFL teachers within the institution integrated ICT in their teaching.

With regard to ICT use/integration in the institution, the institutional leaders reflected the view that the institutional policies of the institution and expectations of teachers in relation to ICT integration were easy to follow as noted by VD1:

> …specifically the applications [of ICT] can be seen in administration, academic research management, and teaching and learning support in the university. These are three main areas covered by ICT application (VD1).

This seems to be in line with the trend of an ICT-based higher education (Fallows & Bhanot, 2005) that has permeated every sphere of higher education and the positive view of this trend by administrators and support staff. For example, Dang, Nicholas and Lewis (2012) argue that the use of ICT reduced the workload of admin jobs.

VD1 provided further clarification that there were specific ICT programmes supporting the learning and teaching of foreign languages, namely, ELT. He said:

> We have software supporting English learning, namely the English Discovery Online, the Moodle and …the virtual class system (VD1).

ICT had been applied in this institution for more than a decade as noted by one of the leaders:

> The implementation of ICT has been put into practice for approximately 10 years now and has proved to be effective over the past five years (VD1).

However, VD1 acknowledged that teachers remained concerned about the efficiency of the implementation. In addressing this challenge, VD2 believed that two major things needed to be taken into consideration regarding the effective implementation of ICT within the institution:

> We must take into account two aspects with regard to the effectiveness of ICT use. First, it is related with the policy and programme of the institution in which leaders encourage teachers to integrate technology in learning and teaching. Second, it is associated with the human factor. This factor implies two main subjects: the learners being known as beneficiaries and the teachers being known as direct trainers (VD2).

The leaders acknowledged that the teachers had made considerable efforts and accepted that one of the obstacles confronting EFL teachers was a lack of a clear ICT policy or rewards encouraging ICT use initiatives launched by teachers. The Vice President of the CU expressed her concern over this challenge as follows:

> …actually foreign language teachers are very dynamic, innovative as they themselves are updated with technologies. The problem to our teachers is that we [the CU] does not have a clear information technology policy (VP).

This finding is not unique to the Vietnamese ELT context, international scholars have expressed similar concerns over the integration of ICT in higher education. Kirkwood (2013, p. 6) notes:

> University policy makers need to be clear about the aims and purposes of using ICT in support of teaching and learning.

ICT policy is generally an issue since policies are often vague and internally inconsistent (Winley & Lau, 2012). In addition, university teachers might not be well aware of the existence of such a policy (Peeraer & Van Petegem, 2011). These common problems also appeared to be one of the mechanisms preventing positive change towards effective and flexible ICT integration. Even the senior leader, the VP, pointed out that unclear ICT policy led to a lack of a reward scheme encouraging teachers to integrate technology more in both teaching and research. This might demotivate teachers, as they often integrated ICT just out of their passion. She stated:

> There is no specific scheme or reward…due to lack of policy, right? Therefore, all what they [EFL teachers] do, they do it silently and for their passion (VP).

However, an even more serious challenge arose when ICT policy [at a department level] was enacted. Originally, the VP was a senior lecturer in the French Department. She was Head of this Department before being promoted to work as VP for the institution. VP offered further insights into the ICT policy issue by analysing the case of the French Department when she was the Head of this department. The French Department then launched an ICT policy that asked classroom teachers to provide online feedback on students' writing assignments. The number of writing assignments accumulated could be dizzying to teachers. Each teacher was in charge of five classes with 20 students on average per class. Each student was asked to complete at least 5 essays per semester. As a result, each classroom teacher needed to provide online feedback for approximately 500 writing assignments. Consequently, teachers became fed up with giving online feedback and tried avoiding teaching writing skills. The VP commented:

> That [ICT policy] was encountered by teachers' negative response…For each semester, as teachers struggled to provide online feedback up to 500 or 600 writings, they found it too tiring to do so and this job is not paid at all. Obviously, giving online feedback is more energy consuming than paper feedback (VP).

This case signals the reality that teachers might have a negative response to a policy if the policy was not well planned during its implementation phase.

The VDs reflected that their technical staff were always willing to help EFL teachers if they happened to have any technical trouble during their teaching. However, both classroom observations and interviews revealed that the staff had a more negative perspective of the availability and assistance provided by the technical staff.

8.3.2 ICT challenges remain unsolved

Several challenges have been identified regarding teachers' integration of ICT in an EFL setting. One of the most easily-recognised facts refers to inadequate ICT infrastructure needed for delivery of daily teaching tasks. The second challenge refers to a lack of support from technical staff. Although technical staff were willing to provide support any time teaching took place in the institution, teachers did not see that just-in-time help was offered to them. Finally, although teachers noted their need for ICT use training, it seems that their practical needs were not adequately and fully addressed by the institution.

8.3.3 Continued pressure due to teachers' changing role

Findings from interviews indicate that the teachers had developed a natural inclination to integrate ICT into the teaching and learning process. What is more important is that the teachers

were well aware of the need to acquire good ICT skills if they wished to become tech-savvy teachers. Fullan (2007, p. 38), in his book entitled *The New Meaning of Educational Change*, argues that

> Teachers need to increase their capacity for dealing with change because if they don't, they are going to continue to become victimized by the relentless intrusion of external change forces.

Failing to use ICT or having a lack of ICT knowledge might result in a teacher feeling insecure and unwilling to integrate ICT into their teaching (Mac Callum & Jeffrey, 2014; Rahimi & Yadollahi, 2011). This anxiety is also known to arise from new expectations from today's students (Johnson, Becker, Estrada, & Freeman, 2015). In meeting these new expectations, teachers find it necessary to have continued training provided either by the institution or just by themselves to cope with potential changes.

Two out of three external forces directly affect today's EFL teacher: 'the growth of global Englishes' and 'the development and spread of technology' (Warschauer, 2000, p. 512). Therefore, in an attempt to avoid being 'victimized' by today's changes, as Fullan (2007) warns, the teachers examined in this study were mindful of staying updated with the latest technologies so as to keep abreast of the exponential growth of technology and to meet new expectations from today's learners (Glušac, Makitan, Karuović, Radosav, & Milanov, 2015; Littlejohn, Margaryan, & Vojt, 2010). EFL teachers expressed their attitude towards this as follows:

> Today's teacher cannot live without ICT…to stay updated (ET01).
>
> The teaching equipment must be updated (ET17).

This comment is true in the sense that ICT use has become ubiquitous and appears to be a daily integral part for exercising a certain task.

Underlying EFL teacher's use or application of certain types of ICT was their need to offer effective deliver of teaching content and the need to make their teaching more authentic and closer to life situations. The EFL teachers believed that ICT resources helped provide students with different perspectives. As ET01 argued, resources are essential as it was difficult to take real scholars physically into classroom:

> We [EFL teachers] need to do a lot of citation from other teachers and experienced researchers on specific issues. It is very hard to take them to class (ET01).

8.4 Concluding remarks

The findings of this chapter highlight the importance of understanding the specific context in which the teacher works when looking at the way they integrate ICT with their students. ICT integration has a close connection with student engagement (Dogoriti, 2015). Regardless of what ICT tools are used, teachers in this study revealed that even the simplest technologies, such as cassette tapes, could motivate learners, if properly used. What is important is to integrate ICT in an appropriate way for the context and to meet the student needs.

As mentioned in the context chapter (Chapter 2), politicians, academics and educators believe that the swift changes in technology development have transformed the language teacher's pedagogy and that the roles of learners and teachers have transformed (Fullan (2007). EFL teachers experience pressure to integrate technology into their teaching regardless of what technologies will come into play. The development of technology, to some extent, even surpasses teachers' imaginations for using technology in the EFL class. For instance, the teacher might not have thought that they could intervene or edit listening/audio files, as in the past the availability of such audio resources was scarce, but this is currently common practice. Similarly mobile technologies are making learning available anytime and anywhere (Tucker & Morris, 2011).

The push to integrate new technologies comes from a variety of pressure sources, such as EFL students' new expectations or changes in the ICT policy enacted by both MOET and their institution. However, the mechanisms underlying ICT integration are far more complex than suggested by policy or rhetoric. For example, unequal access to technology can hamper ICT integration despite the institution as a whole having advanced technology available.

Both the teacher and leadership interviews revealed that teaching passion including a desire to meet the needs of students and a wish/expectation for continued professional development were important enablers for effective integration of ICT. Teachers in this study expressed their serious concerns for continued training, either formally or informally, so as to enhance the quality of teaching and learning. In addition, teachers' ICT expertise, not just in general, but also in relation to specific tools can potentially influence integration. Equally, a lack of availability of resources can discourage or make teachers indifferent to ICT integration.

For many teachers interviewed, the use of ICT in teaching was taken for granted; it was not a question of why to use, but what to use, how to use and for what purposes. However, the teaching environment, teacher's personality and institutional culture all had 'emergent properties' (Archer, 1995) that impacted on the effective and flexible integration of ICT in using a certain type of technology.

The interviews revealed that conditions for effective and flexible ICT integration involved the interplay of enabling factors arising from the teacher, leadership and support staff. Prominent teacher-related conditions for flexibility in ICT integration depended on the following indicators: time, convenience, motivation, preparation, teaching personality and passion as well as the teacher's preferred pedagogy and their networking with colleagues both internal and external to the institution. These teacher-related conditions are summarised in Figure 8.1 below.
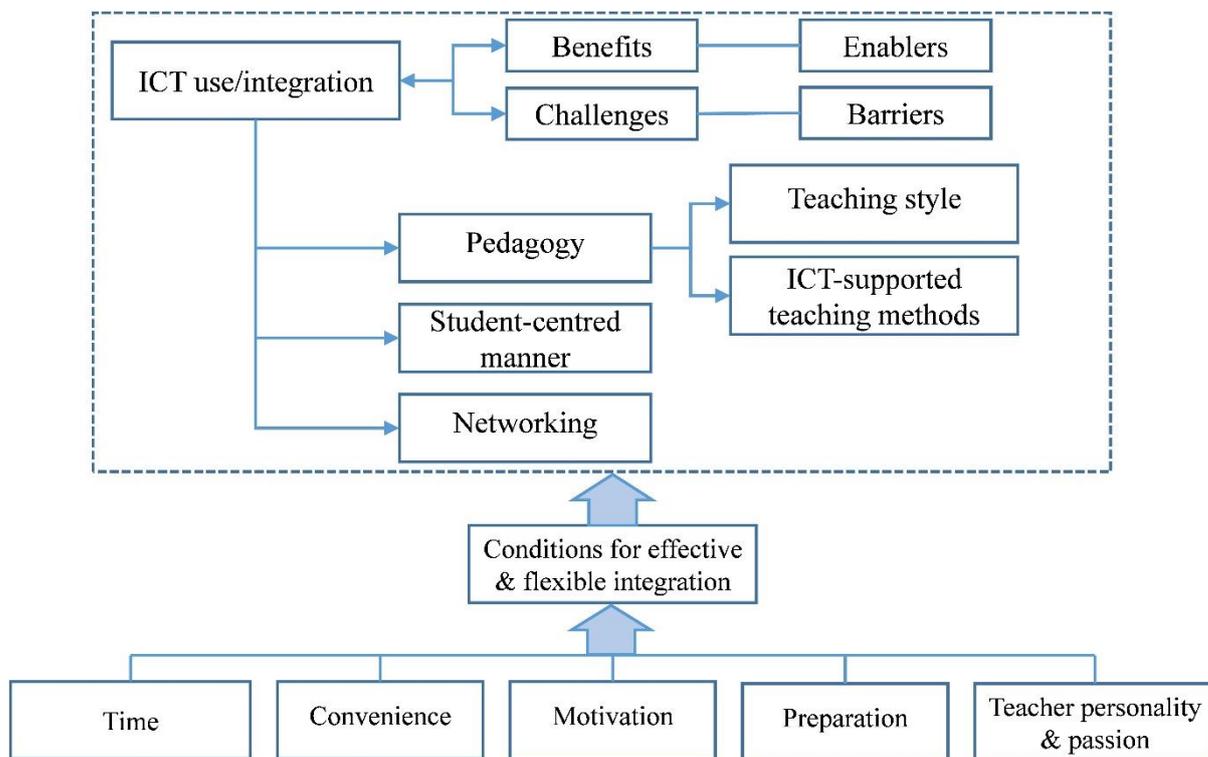
Figure 8.1 Conditions for Effective and Flexible Integration of ICT

The concluding chapter (Chapter 9) offers further insights into the structural, cultural and agential conditions impacting EFL teachers' effective and flexible integration of ICT and the interplay among these conditions.

CHAPTER 9
CONCLUSION

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9.1   Overview

The first aim of this concluding chapter is to revisit the research questions first introduced in Chapter 1. Second, the chapter aims to address the research questions in terms of structural, cultural and agential morphogenesis and morphostasis (Archer, 1995). The structural and cultural conditions/mechanisms enabling and preventing the movement from concerns via projects to established practices are explored. In addition, the interaction between individual and group agency and this structural and cultural conditioning is examined. This is achieved through a layered analysis of stratified reality (Bhaskar, 1978) and the social domains (Archer, 1995) of the phenomenon of ICT integration in ELT in this developing context. Next, a model developed from this analysis which provides an understanding of the conditions enabling teachers to become effective and flexible integrators of ICT is detailed. Finally, the contribution and limitations of this thesis are discussed and recommendations for further ICT research in EFL contexts in developing countries are provided.

9.2   Research questions revisited

The answers to the central research questions of the study are difficult to unpack separately in that the *experiences* of the teachers impacted on their *practices* and vice versa. In the following sections, the contextual factors as explained in the first three chapters are explored, the way in which the theoretical framework and methodology assist in the answering of the questions is revisited and a summary of the findings of the study in relation to structural, cultural and agential morphogenesis and morphostasis is discussed.

9.2.1   Contextual factors impacting on the research questions

The introduction, context and literature review chapters detailed the pressures placed on Vietnamese ELT teachers from international, national and institutional sources that would affect their experiences and potentially shape their practices. Firstly, internationally, there was an increasing expectation that ICT should be fully integrated into higher education and provide students with Education 3.0 or even Education 4.0 (Harkins et al. 2006) environments where they could receive 'anywhere', 'any time', ' just in time' and ' just for me' (Peters, 2007; Rosenberg, 2001; Tucker & Morris, 2011) interactive and innovative learning opportunities and support. In such an environment, teachers are expected to not only assist students in receiving knowledge, but also in becoming co-creators of knowledge (Johnson, Becker, Estrada, & Freeman, 2015).

Secondly, teachers were faced with dual national pressures. Not only were they expected to fulfill the vision of the *Doi Moi* in producing a reformed and internationally credible higher education sector with excellent pedagogy, but also to be able to effectively use ICT in order to keep abreast with global trends and improve Vietnam's digital and networked readiness. However, the literature review in Chapter 3 reveals that these demands require teachers to move from mere 'use' to 'integration' and to have the capacity to teach students how to flexibly integrate ICT to facilitate their own learning needs – a huge challenge when the teachers are often less able to use technology in their daily life than the students. Chapter 3 also demonstrates that teachers require institutional support in order to accept and use technology although their acceptance and use is also modified by individual factors. The literature review provides models to assist teachers to move from enhancement of pedagogy through ICT to pedagogical transformation (Puentedura, 2006), fully meet the learning needs of different types of students and enhance different learning styles in all students (Bonk & Zhang, 2006). In addition, in order to respond to the constantly increasing student demands for flexibility and innovation, the literature review indicates that teachers require flexibility in terms of time, course content, entry requirements, instructional approaches and resources, course delivery and logistics, teacher and student roles (Collis, Moonen, & Vingerhoets, 1997; Collis, Peters, & Pals, 2001).

Changes in response to these increasing demands on teachers are particularly challenging to achieve in developing contexts as shown in Chapters 2 and 3. Although developing countries like Vietnam often have policies that encourage the development of ICT-enhanced pedagogy (John & Sutherland, 2004; Jung, 2005; Sharma, 2015; Tri & Nguyen, 2014) and in the case of Vietnam the internet affordability rate is comparatively good (World Economic Forum, 2015), the overall impact of ICT remains low in Vietnam and other countries due to unequal access to infrastructure, Internet coverage and bandwidth and even the political and regulatory

environment (World Economic Forum, 2015). The literature also reveals that although transformation in ICT integration is expected from teachers globally in both developed and developing countries, they complain of a lack of time to implement changes, as well as a lack of support and tangible rewards from their institutions (Cochrane, 2014; Cox, Cox, & Preston, 2000).

Besides these institutional barriers, the literature reveals there are also tangible and intangible individual barriers to teachers integrating ICT in an effective and flexible manner. The Vietnamese literature shows that many teachers lack a full commitment to integrating ICT, although they might acknowledge the potential benefits of ICT to the students and the learning environment in general (Nguyen, 2013; Giang & Van Minh, 2014; Pham, 2014). The reasons provided for this lack of commitment are complaints about a lack of tangible institutional support particularly in relation to providing training opportunities, facilities and equal access (Pham, 2014). Teachers also report that students want ICT merely to provide content and are less willing to interact, collaborate and co-create online (Dinh, 2015). Consequently, even when teachers do integrate ICT, this is primarily for content delivery and administrative communication rather than innovative or flexible pedagogically focussed integration. Equally, although students are often competent users of mobile technologies in particular, they do not necessarily have the technical, socio-emotional, cognitive and above all critical literacies to ensure that they can use these technologies to learn the skills, competencies and attitudes necessary to access information effectively, and use mobile technologies for effective Education 3.0/Education 4.0 learning (Harkins, 2008; Ng, 2013; Ngo & Picard, 2012; Watson, Watson, & Reigeluth, 2015).

9.2.2   Theoretical framework and methodology retraced

In order to unpack both experiences and practices, a layered ontology based on Bhaskar's (1978) domains of reality was employed. Empirical data was collected in relation to the stated policies of international, national and institutional bodies that could potentially influence the EFL university teacher experiences and practices, observations of teachers in the classroom setting and the stated experiences and perceptions of teachers in questionnaire and interview data. To move beyond the empirical, the interview and questionnaire data was re-explored in relation to the 'events' as captured in the classroom observations so as to identify both 'exercised and unexercised mechanisms' (Zachariadis, Scott, & Barrett, 2013, p. 857). Thus the 'actual', which includes potentiality as well as empirically observed experiences, is explored in this thesis (Bhaskar, 1978). However, because ICT integration is a socially shaped behaviour (Zachariadis et al., 2013), it is also important to unpack the domain of the 'real'; i.e 'why and under what

conditions this [behaviour] is shaped' (Bhaskar, 1978, p.13) in relation to the socially generated mechanisms that underlie this behaviour. Consequently, Archer's (1995) morphogenetic approach was employed as epistemology in this thesis.

Archer's (2007) trajectory of 'concerns, projects and practices' (p.41) occurs over time. A cycle usually commences with a major event labeled as T1 which in the case of this thesis is the MOET Directive and Guideline policy texts (PT1 and PT3) of 2008 to 2009. Sociocultural interaction occurs which is labeled T2 – T3, and which, in the case of this thesis, consists of: the interactions of the teachers with the policy texts, their institution's management and their available resources, as well as their interactions with each other within the institution, and both formal and informal interactions with organizations and individuals at a national and international level taking place over the period of 2009 to 2015. The impact of T2 to T3 which could constrain or enable ICT integration is finally analysed at the end of the morphogenetic cycle (2015) which is labeled T4 in order to ascertain whether structural and cultural reproduction or elaboration has taken place and possible mechanisms underlying these changes or lack thereof. However, because of the complexity of the phenomenon of integration of ICT in teaching a foreign language, morphostasis or mophogenesis are impacted by the actions and reactions of individual agents and groups of agents. Thus the perceptions of both those who claim themselves as tech-savvy teachers and those feeling marginalized in their institution and in their department are examined in the questionnaire, observation and interview data and compared to the stated international, national and institutional policies. Bhaskar's final and deepest domain of reality is 'the real' which includes the 'realms of objects, structures and powers' (Sayer, 2000, p.11). This domain is explored in this final chapter by bringing together the domains of reality and the social domains which have been separated for 'analytical convenience' (Archer, 1995, p. 370) in order to explicate the mechanisms underlying the transformation or reproduction of ICT integration practices of EFL teachers. The aim of identifying these mechanisms is to identify factors conditioning an effective and flexible integration of technology.

9.2.3 Structural conditions underlying effective and flexible ICT integration

9.2.3.1 Policy texts and structural conditions underlying effective and flexible ICT integration

From an international perspective, the Horizon Reports of 2014 and 2015 (PT9 & 10) as well as the TESOL Technology Standards Framework (PT2) show that the implementation of ICT as a central part of university pedagogy is inevitable. This will result in more mobilization of international resources on the Internet including social media, open education resources and

cross-institutional collaboration. All three documents therefore suggest that institutions should set up systems where these resources can be easily accessed and made part of everyday learning and teaching and where blended learning is made possible. To facilitate this change, learning spaces need to be redesigned (PT10). Another structural change is that student learning is increasingly measured through data-driven approaches from a central institutional level. The two Horizon documents acknowledge that though the structural changes can provide greater access, there can also be the problem of competing models of education brought about through open-educational resources and the possible lack of quality of unverified Internet sources. Equally, PT9 and PT10 acknowledge that the relative lack of rewards for staff to integrate ICT into their teaching remains a problematic structural issue as highlighted by the move of this challenge from being characterized as 'solvable' in the 2014 Horizon Report to a 'wicked challenge' that is 'too complex to define' and 'much less address' in 2015 (PT10, p. 35). Although PT2 mainly focuses on its audience of English teachers worldwide, the need for structural change at a national and institutional level including more quality assurance systems, better access to all English teachers and the provision of additional training opportunities are also highlighted.

From a national perspective, several policy texts are concerned with structural conditions influencing effective and flexible integration of ICT in Vietnam. PT3 and PT4 provide guidelines on how ICT can be implemented using a task-based approach. PT3 emphasises that higher education sector needs to make a greater investment in ICT infrastructure and resources in parallel with capacity building of staff. However, this investment is encouraged to be expanded not only in terms of size but also in terms of having quality guaranteed. PT4 focuses on electronic management of all education systems including administrative and pedagogical tasks that are particularly required of higher education institutions. PT7 highlights the need for provision of training and rewards for ICT initiatives to be conducted by classroom teachers. PT7 also indicates that state budget resources should be allocated to higher education institutions to promote ICT application in learning and teaching. PT8 offers insights into the need for development of blended and E-learning platforms including international resources and open-code software. Practical provision of workshops through the central government is raised in PT8. One important document at national level is PT6, which is Vietnam TESOL. PT6 highlights the need for more quality assurance systems, better access to all English teachers and the provision of additional training opportunities as in the international TESOL document (PT2). However, the fact that the local TESOL document has been developed also links with

the capacity standards and the drawing on developed self-study ability and international standards highlighted in the other national documents.

From an institutional perspective, the Draft Report (PT5) of CU provides some evidence of structural elaboration since PT5 takes up the national challenge of quality assurance and hence self-reports against national guidelines in terms of short-run and long-run goals, and capacity development for the staff. PT5 reports that the institution has sufficient infrastructure albeit limitedby a need for constant upgrading. The institution refers to the need to quickly respond to infrastructure requirements, for instance, renovating facilities in association with international call for 'agile' approaches. The report, however, focuses on the institution in general and does not report about infrastructure provision in different departments/centres, so there is no way of knowing whether this structural elaboration is uniform across the institution, or merely in some areas. PT5 particularly mentions the need for teachers to have professional development in order to keep abreast with international trends; however, no details of how the institution would facilitate this are provided. The fact that the call for more training has been made, suggests a movement towards structural elaboration. This is confirmed by the fact that also at institutional level, an ICT training manual (PT11) has been developed based on the TPACK model. This shows the institutions' response to national and international calls for ICT integration training. However, this training is at its infant stage of introducing the model to small groups of teachers within CU. Although some morphogenesis due to access of international texts and models and national pressure has occurred in that training is provided, only limited morphogenesis from T1 to T4 can be identified. In addition, since the training appears to merely reproduce TPACK training provided in developed contexts, this manual seems to be just a reproduction of ICT practices rather than of elaboration or adaptation of a technology model appropriate to a developing context such as Vietnam.

9.2.3.2 Teacher's perceptions of structural conditions and underlying effective and flexible ICT integration and observed structural conditions

Findings from the questionnaire and interview data reveal the major structural conditions necessary for an effective and to a much lesser extent flexible integration of ICT in ELT. These conditions are also revealed by a description of infrastructure and resources observed during the class observations.

The questionnaire data revealed that although many of the participants reported using a wide range of ICT especially mobile technologies in their daily lives, far fewer actually integrated the various ICTs in their teaching and even fewer felt confident to teach students how to use

them. Despite a generally high percentage stating that they encouraged students to develop their language skills outside of the class, and referred students to online resources and taught students to use ICT to enhance collaborative learning, the fact that, in the individual, ICT tools receive lower reported integration in teaching activities and far lower reported ability to teach students, suggests that the *teaching* referred to above was merely *telling* students to use the resources and perhaps where to find them. This characteristic of teaching the students using ICT can be seen in the observation data where several of the observed teachers referred students to resources on the Internet and on the institutional Moodle that they had created themselves for work outside of the class, enabling some flexibility of course content in that students could choose their own example texts and materials to practice skills.

In relation to the other characteristics of effective and flexible integration of ICT as defined in the literature, there were even fewer respondents reporting that they met these conditions, namely of diversifying their teaching using ICT and thus demonstrating flexibility of instructional approaches and resources (Collis et al., 1997), providing feedback using ICT (Lee & Schaefer, 2014; Nguyen, 2012) and generally being flexible in terms of time and place as facilitated through ICT communication functionality (De Hei, Strijbos, Sjoer, & Admiraal, 2015). However, the use of flexibility of instructional approaches and resources to meet the needs of the students and the demands of specific content was an often mentioned issue by the interviewed teachers, many of whom regarded themselves as 'tech-savvy'. A few of the interviewed teachers also focussed on flexibility of time in relation to providing feedback to students and interacting with them in their descriptions of how they utilised the affordances of ICT. This aspect is explored in more detail under the agential conditions. No mention of flexibility related to the flexibility dimension groups of entry requirements, course delivery and logistics and the roles of students and teachers was made in any of the questionnaire or even the interview data and there was little mention of flexibility in course content.

Morphogenesis from T1 to T4 in terms of increased use of ICT is clearly revealed in the questionnaire and interview data and certainly an enhanced awareness of 'performance and effort expectancy' (Venkatesh et al., 2003, p. 446) for the use of ICT as promoted by government and institutional sources as well as global pressures as can be seen. This is indicated by the fact that several respondents mention the availability of administrative, academic research management and teaching and learning support in relation to ICT available at the institution, and the fact that ICT integration had been an important policy at the institution for some time. In addition, some effective practices that demonstrate true integration rather than

use were observed in the classroom observations. However, as outlined above, there appeared to be only a foundational understanding of what fully effective and flexible ICT integration entails, focussing on only a few flexibility dimensions within dimension groups and only a few aspects of effective integration. In addition, despite the calls for enhanced infrastructure and Wi-Fi capability in the international and national document described above, the classroom observations reflect traditional classrooms supplemented by the teachers bringing in portable projectors and their own laptops or devices or CALL centres which are fully equipped, but resemble the CALL technology of 20 years ago, rather than flexible learning centres heralded in the literature (e.g., Jamieson et al, 2000; Jamieson, 2003).

The participants reflect concerns regarding a lack of resources, infrastructure, institutional support and rewards for ICT integration in both the questionnaire and interview data. Although some participants were content with the infrastructure provided by the institution, most notably the translation/interpreting teachers, most of them felt that the facilities for learning and teaching were not adequate and failed to meet their expectations and needs. Therefore, the structural conditions can be regarded as being at a reproduction rather than elaboration phase. For ELT teachers, there was limited structural morphogenesis perhaps because of the limited ICT infrastructure development for language teaching and perhaps due to unequal distribution and limited access to resources and facilities for this specific cohort. Another issue, as identified by the Vice President of the institution was that there was a lack of a clear institutional policy in relation to 'actual richer [pedagogical] use of ICT' (Collis & van der Wende, 2002, pp. 7-8) and perhaps a lack of communication of available resources and policy between the institution and its staff and between the MOET and the institution. Despite the rhetoric in the policy documentation at all levels described in this thesis, the EFL university teachers experience challenges in integrating ICT effectively and flexibly and are not even fully aware of the implications of the policies and the new educational environment at all levels and generally reproduce old tried and tested patterns of teaching or integrate ICT at the level of substitution (whiteboards replaced by Microsoft Word projected on monitors or projectors). Perhaps this is because there is limited 'strategic implementation' of ICT at government or institutional level (Collis & van der Wende, 2002, pp. 7-8).

9.2.4 Cultural Conditions underlying effective and flexible ICT integration

9.2.4.1 Policy texts and cultural conditions underlying effective and flexible ICT integration

At an international level, the policy texts all refer to a need for a 'culture of change and innovation' (PT10) that encourages more 'agile' (PT9) approaches, and greater collaboration, particularly 'cross-institutional collaboration' (PT2; PT10) among higher education institutions. However, these changes are expected to take place in the long-term rather than in the short-term since groups and individuals within institutions need to come to understand the 'potential benefits of technology' and build an 'ELT community' (PT2) around the development of ICT and ELT (TPACK), as well as realise that change is likely to continue as 'emerging technologies or practices enter the mainstream' (PT9).

All the PTs at an international level state that 'critical' and 'innovative' thinking is necessary and that integrating ICT should 'transform' teacher's experiences and practices. This seems to imply the full gamut of Education 3.0/ 4.0 changes highlighted by Harkins (2008) and others and the 'mlearning' described by Ng (2013; 2014). All three international texts place the higher education institution at the centre of this cultural change admonishing them to have 'agile' approaches to change (PT9 & 10) and take practical structural steps (such as taking advantage of the affordances of online and blended learning, making use of the 'proliferation of open educational resources' (PT10) and provide systematic training). However, the PTs suggest that the impetus behind these structural changes is a cultural shift within institutions where students are viewed as 'creators' rather than consumers (PT9) and universities relinquish some of their insular interests to work cross-institutionally within countries and even cross-nationally in order to make efficient use of resources and save costs.

At a national level, the policy texts (PT 3, 4, 6, 7 & 8) also address the need for cultural change in line with international standards and even pressures admonishing institutions and teachers to reject 'old thinking about technology' (PT7, p.2) and 'enhance their awareness' (PT6, p.4) of innovative learning and teaching practices enhanced by ICT. There is strong language used including imperatives such as 'will' and 'should' across the documents almost dictating a change of culture and reproducing discourse related to flexible integration and innovation used in the international documents (e.g., 'technology anytime and anywhere' (PT4, p.3)). Although these documents put pressure on teachers and institutions to change, they are encouraged to do so through the mobilization of 'central state sources' (PT8, p.2) and 'in line with the ways of thinking and doing of the Vietnamese people' (PT6, p.48). The national PTs deliver a strong message that integrating ICT in teaching and learning is inevitable and that higher education

institutions and teachers should be at the forefront of such a change with the support of the state. This is reflected in the fact that the taking up of the international TESOL standards in PT6 is part of the National Foreign Language Project 2020, and thus government is actively involving itself in driving cultural change and integrating stakeholders from Vietnamese universities into a purposeful project providing standards for effective ICT integration pedagogies in ELT. Cultural elaboration is being driven at a national level. However, despite the rhetoric regarding the importance of local context, there is little evidence in the documents of cultural elaboration in this regard. Instead, there appears to be a drive towards direct cultural reproduction of international perspectives in the policy texts.

At an institutional level, the Draft Report (PT5) also pushes collaborative learning and teaching within and beyond CU admonishing teaching and technical staff to 'exchange and update their technology skills' (PT5, p.82), while the interrogatives in the ICT Training Material (PT11) promote teaching staff to question their teaching practices and attempt to find effective ICT solutions that integrate content, pedagogical and ICT knowledge. Flexibility in ICT integration beyond selecting instructional approaches and resources (Collis, Vingerhoets & Moonen, 1997; Collis & van der Wende, 2002) appropriate to the content and student needs are not addressed in either of the documents. There seems an emphasis on cultural elaboration in terms of understanding the need for more ICT integration in ELT in both these documents and some recognition of pedagogical approaches and effective integration of ICT in PT11. However, as in the national documents, there is little elaboration with regards to the local context with PT5 focussing on reporting against structural mandates from a national level and PT11 merely reproducing the approaches taken in TPACK workshops globally.

9.2.4.2 Teacher's perceptions of cultural conditions underlying effective and flexible ICT integration and observed cultural conditions

Although PT5 indicates the need for sharing and collaboration among staff, between staff and leadership and with the technical support team and PT11 provides an opportunity for collaboration and sharing in the workshop based on the training material, there was little tangible evidence of collaboration and support evident in the actual observation of the EFL teachers with each of the observed teachers appearing to struggle on by themselves even in the case of technological breakdown without calling on technology support staff or colleagues. The only observed teacher who obtained support drew upon me, perhaps because in my 'inside outsider' role' I was viewed as less threatening than the technology supports staff who were not English teacher.

In contrast to the observations, the questionnaire data revealed a fairly high level of collegial support with well over half of respondents agreeing or strongly agreeing that their colleagues assisted them in the use of ICT tools available at the institution, helped them to be more efficient in their teaching using ICT, facilitated communication between colleagues using ICT and were willing to share teaching and learning materials. Conversely, over half of the participants reported that they supported their colleagues by sharing ICT skills with them. In addition, one participant mentioned 'motivation from colleagues' as an enabling factor in the open-ended questions. However, only just over a third felt that colleagues kept them updated with policies, perhaps because their colleagues were not aware of the policies themselves. This also links with the participants' more negative perspective of the institution in providing the conditions enabling ICT integration.

Although the questionnaire and interview data focuses on structural conditions (i.e. lack of facilities, training and a reward scheme and outdated infrastructure), staff concerns expressed in the open-ended questions and in the interview data also show that these structural conditions had a deleterious impact on cultural conditions. A high number of respondents complained about ICT infrastructure and Internet connections in particular and several focussed on technological breakdowns again in the open-ended questions, but a lack of institutional support and facilitation of ICT integration was also the concern of a reasonable number of respondents. Thus the perception that structural issues were not addressed impacted on the cultural elaboration of collaboration and intra-institutional communication and promotion of effective ICT integration.

In addition, although there were high numbers who perceived they received collegial support, a fairly large number disagreed or even strongly disagreed that they received this support. As noted in Chapter 6, perhaps the more positive view of collegial support and the anomalies in the data lie in the fact that individual teachers took it upon themselves to support colleagues outside of class time on an individual basis, despite not receiving any rewards or tangible support for collaborating or participating in formal training, or being aware of or drawing on support from technological staff. Because of the lack of a systematic program and established culture of collegial support, some teachers may not feel comfortable in asking individual colleagues for help and may even feel they are 'losing face' if they have to ask more junior colleagues.

Despite many participants perceiving a lack of institutional support, two participants mentioned the institutions' ICT policies as an enabling factor. Perhaps this is because the culture in the different departments and centres varied as seen in the observations and interviews and even within departments/centres the culture varied depending on the subjects taught. This was

revealed, for example, in the observations where the translation/interpretation teachers within the English department appeared to have more access to technology and more confidence in integrating the available technologies in their teaching, even in the case of technological breakdown, than the other English Department teacher observed or the teacher from the Foundation Department. This is probably because there was a long-standing tradition among interpreting/translation teachers of using technology as reflected in the fact that they talked of replacing earlier technologies such as OHPs and tapes first with CDs and then later MP3 and online files or of using all technologies including the earlier ones. Perhaps this is because, as noted in the observations, the earlier technologies were still available in the language laboratories and the learning spaces had not been updated to the flexible modern environments described in the literature. However, irrespective of available technologies, the culture of technology as an integral part of learning and teaching among interpreting/translating staff seemed to facilitate more effective ICT integration and even the beginning of flexible integration. Therefore, cultural elaboration of ICT occurred with these teachers despite a perception that the institution did not support such a culture. Equally, the interview data revealed that limitations of when and for which purposes (e.g., speaking) technology infrastructure could be accessed limited the integration of this technology.

The questionnaire data also showed that a high percentage of teachers reported using ICT for providing feedback to their students with a lower, but still reasonably high percentage reporting using it to enable collaboration and communication between teacher and students and students to students. However, very limited ICT facilitated collaboration and communication was observed in the classes with only one observed teacher (ET32) using the feedback functionality of ICT with student completing translations before class that were visible to both teacher and students, yet even this teacher did not extend the activity to collaborative work. Perhaps this is due to a lack of culture supporting this use with the other teachers only recommending Internet resources for individual use.

Despite national documents calling for research and conferences on ICT enabled pedagogy as one of the 'tasks' mentioned in the various guidelines (PT4 & 8), research culture in the institution as enabled by ICT appears limited. Although, as discussed in the questionnaire data, a large percentage of respondents made use of the Google search engine for general teaching purpose such as teaching students to search for learning materials, far fewer used Google Scholar for academic searches. This might hamper the teachers from accessing ICT resources needed for their professional development. Interestingly, the teachers believed that software safety and expensiveness did not matter in terms of ICT integration. This might be due to the

fact that in developing countries, the issue of copyrights is often not respected (The Guardian, 2013).

One cultural aspect that is promoted in the international, particularly PT2 and national documents, that appears elaborated in the questionnaire data and the interview data, is that the teachers appear to be focussed on specific tools rather than just acquiring expensive ICT devices. Their self-reported use of a variety of specific resources to teach specific content is confirmed in the observation data where a wide range of materials are used in the class. However, flexible integration of ICT outside the classroom enabling Education 3.0 and Education 4.0 learning seems less common. The few isolated cases where this occurs seem due to individual agency as is discussed below.

9.2.5   Agency underlying effective and flexible ICT integration
9.2.5.1 Policy texts and agency underlying effective and flexible ICT integration
The two Horizon Reports (2014; 2015) have a more structural and cultural focus rather than focussing on the role of individual agency. However, the one specific instruction to teachers is that they should personalize the learning experience so as to ensure the ICT is integrated in an effective and flexible way. These two international PTs suggest that this can only be achieved through leadership and that this task remains a challenge and cannot be fulfilled 'overnight' (PT10, p. 20). Both PTs 9 and 10 show that the core idea influencing flexible integration of ICT lies in how timely leaders, educators and instructors are in their response to meet student's needs, thus emphasizing the agency of all of these stakeholders. It is important to note that these PTs indicate the need to not only rely on the current technology, but also to customize ICT tools and platforms so that personalizing learning experience can be achieved. The TESOL Standards (PT2), in contrast, focus on achieving this goal as well as generally providing a more effective ICT integration through the strong agency of the individual teacher. Not only do they need to take responsibility for their own ICT capacity building, particularly to move from 'drill and practice' (PT2, p.17) to more collaborative and innovative learning practices, and collaboration with others, they are also admonished to build the capacity of students to use ICT effectively and flexibly for their own learning needs.

The national policy documents like the Horizon Reports tend to focus more at a systems and institutional level with few specific instructions for individual teachers. However, the focus on capacity building of both educational leaders and teachers in all four MOET documents, suggests that individual agency is vitally important to drive change. Likewise, the Vietnamese TESOL Standards (PT6) reflects the individual focus on teachers derived from the international

TESOL Standards document (PT2) to integrate ICT effectively and flexibly and to be 'aware of the limitations and difficulties' of ICT (PT6, p. 7.) and overcome these with effective coping strategies.

PT5 like the MOET documents operates more at an institutional structural and cultural level with less emphasis on individual teachers, with only limited input to individual teachers and technical staff to keep up to date (PT5, p. 82) and to 'strongly integrate information technology into [their] teaching' (PT5, p. 51). However, PT5 notes the importance of effective ICT integration into all aspects of learning and teaching and this implies a strong role by individual leaders, technology support staff and teachers.

9.2.5.2 Teacher's perceptions of agential conditions underlying effective and flexible ICT integration and observed agential conditions

Despite the lack of focus on individual agency, the questionnaire, interview and observation data reveals that individual agency plays the most important role in enabling and disabling effective and flexible integration of ICT.

Individual demographics have a limited impact on agential factors. For example, although the majority of the participants were female and gender did not seem to impact on their responses in the questionnaire with regards to taking an agential role in ICT integration, interestingly, more male respondents than females were willing to be observed. Perhaps this is because of a lack of confidence as evidenced by the observations of both ET07 and ET29 who experienced technological breakdown and appeared to feel the need to use ICT despite the fact that their lessons were more effective without it. Older respondents in the questionnaire in general reported themselves as less tech-savvy, yet this is in contrast with ET01 and ET30, both senior mature male teachers who both used ICT confidently as reflected in the observations despite reflecting difficulties in using some ICT in their questionnaires and interview data. This contrast was most likely due both to the fact that their disciplinary culture (interpreting/translation) encouraged technology use, but also to strong individual agency.

The questionnaire data reflects that teachers had both teacher-focussed and student-focussed reasons for integrating ICT for the benefit of enhancing the student experience. In addition, a high percentage of them reported views on effective ICT integration that was 'planned and purposeful', included collaboration' and the 'building [of] knowledge' (Chickering and Ehrmann; 1996, pp. 3 – 6). This is also reflected in the interview data where the teachers discuss their personal decisions to select resources based on student needs and 'substitution' and 'augmentation' of more traditional methods (Puentedura, 2006). The observation data also

shows teachers taking extreme measures and even bringing their own devices and using their own Wi-Fi in order to achieve flexibility in 'instructional approaches and resources' (Collis et al, 1997; 2001); however, the use of ICT actually appeared as a distraction in several observations with the teachers achieving more effective pedagogy with traditional teaching methods or simpler technologies.

Only some of the observed teachers made tentative moves towards 'modification and redefinition' (Puentedura, 2006) and had ICT integration focussed on the students using ICT and participating in active learning as recommended in the literature (e.g., Chickering and Ehrmann; 1996; Rao, 2013). This occurred in the case of ET01 and ET30 using a combination of outdated and more modern technologies and also with ET26 and ET32 despite ET26 experiencing technological difficulties and ET32 being constrained by teaching a combined class. All four of the abovementioned teachers encouraged their students to do individualized tasks outside of the classroom, drawing on resources of their choice and therefore including some flexibility of time and course content (Collis et al, 1997; 2001) and taking cognizance of individual learning preferences (Bonk & Zhang, 2006). ET32 also made use of some out of classroom pre-work and limited interaction with students outside of the classroom. Thus elaboration in terms of flexibility as well as effective integration has occurred to some extent. However, there appeared to be only reproduction of previous practices in course delivery and logistics (Collis et al, 1997; 2001).

The questionnaire and interview data showed that teachers felt their individual agency constrained as well as enabled by structural conditions. Some of the participants reported resisting ICT integration despite institutional policy due to the high level of work required, out of date technologies or technological breakdowns or even because it was not compatible with their teaching style. Yet, when they did integrate ICT, the participants reported that it was due to personal qualities such as innovation, personally developed expertise and personal circumstances and an individual act of will. For example, in the interviews the teachers reported actively seeking out international collaboration and information on effective ICT integration, using ICT to provide feedback to students and proactively enhancing their own skills, perhaps by drawing on willing colleagues as discussed above.

Effective and flexible integration of ICT was thus elaborated through strong individual agency despite the availability or otherwise of ICT. However, elaboration of flexibility in the fullest sense of the word was limited due to the structural and cultural conditions affecting individuals.

9.2.6 Structure, culture and agency in relation to a single participant

ET26 was one individual who managed to take agency beyond his individual circumstances and play a strong leadership role as recommended in international and national policy texts. ET26 assisted in the development of the TESOL technology standards for Vietnamese EFL teachers (PT6) and an ICT training manual for EFL teachers within CU (PT11) because of his involvement in the National Foreign Language Project (NFLP) 2020 and attendance at TESOL International events. His access to knowledge of structural and cultural affordances at an international and national level enabled him to assist in cultural elaboration at a national and institutional level and in turn impacted on his confidence in integrating ICT and ability to integrate ICT flexibly in terms of course content, instructional approaches and to some extent time (Collis et al, 1997; 2001) as reflected in all the stages of data collection.

ET26 was involved in transferring the international text (PT2) into the local context (PT6) by mapping the standards and adding details of local challenges. Further, ET26 also played an indirect role in producing an ICT-supported training manual (PT11). The observation also revealed ET26's focus on teaching students how to use ICTs and to be actively involved in their own learning. However, perhaps because of his knowledge of national and international discourses and his passion to integrate ICT, ET26 pushes forward with ICT integration in his own class despite technological challenges and he along with the other PT6 authors did not adjust the international TESOL standards in any major way for the local context. ET26 and other tech-savvy colleagues have definitely facilitated cultural elaboration of new ways of more effective ICT integration at their institution. However, their influence over other teachers is limited by structural issues and their achievement of flexible and locally relevant ICT integration is also limited. Although as noted by the Vice President of CU, although the ESL teachers are 'dynamic' and 'innovative', they require 'clear information policy' at the institutional level as well as other structural support such as infrastructure, programme structure, formal training and rewards and support for their agency to achieve greater cultural elaboration and have an influence at a structural level. Institutional rewards and support for agency could also potentially draw together more likeminded individual agents within the institution and assist in the development of more locally relevant ICT integration through the medium of group agency.

9.2.7 Summary in response to questions

In terms of the experiences of Vietnamese EFL teachers in relation to ICT policy and student demands, there was a strong desire to integrate ICT fully into their teaching and to respond to student, institutional, national and international demands in an effective and flexible fashion.

However, they felt constrained by individual factors, and the cultural and structural conditions. The teachers as observed, self-reported and interviewed, revealed that they all attempted to integrate ICT into their teaching with varying levels of success. However, when successful ICT integration was achieved, it was due self-study, sharing knowledge with their local and international peers and learning through experience rather than from formal training or support offered by the institution.

In terms of practices, when the teachers integrated technology, this was often an add-on or mere replacement of traditional teaching. Full and flexible integration only occured when teachers were accustomed to using other technology in a planned and purposeful manner as part of their everyday teaching. The move towards fully flexible ICT integration that enables Education 3.0 or 4.0 teaching is still a distant dream and will not be realised without systematic planning at individual, institutional and national level and a focus on professional development in relation to pedagogy as part of ICT integration.

9.3   A new model for flexible and effective integration of ICT in Vietnamese Higher Education

In order to facilitate this systematic planning, I propose a model for effective and flexible integration of ICT in developing contexts such as Vietnam based on the findings of this study and the literature. The model comprises three facets required of ELT university teachers and their institutions. They are required to be: Responsive, Adaptive and Timely, hereafter referred to as the RAT model, in order to ensure that the pre-service teacher learns to effectively integrate technology in their teaching.

The RAT model posits that a teacher's flexible integration of ICT is shaped by the three elements mentioned above. Flexible integration of ICT requires teachers to be responsive to students' needs including assisting them to develop critical and innovative thinking. Teachers also need to be responsive to the changing ICT conditions in Vietnam and take advantage of the affordances of new emerging technologies as well as what they learn as part of professional development, and change their teaching practices accordingly in a way appropriate to the local context. Teachers also need to be responsive to the requirements of the content, moving beyond coping strategies to actually responding to pedagogy before ICT, since as seen in the observations and interviews, simple technologies can be as effective if pedagogy and content are considered as paramount. In order to translate this flexible integration into an effective practice of ICT integration, the teachers should know how to become adaptive not only to the ICT-related policies, but also specifically to the learning environments they are involved in and

the ICT tools available to them. In addition, their response is expected to take place in a timely manner when students need it as individuals both in and outside of the class and at an appropriate stage of their learning process.

The RAT model also provides insights for institutions, particularly in the area of professional development and the provision of infrastructure and support. Institutions need to be responsive to the needs of the teachers and provide them with infrastructure and training appropriate to their course content. Institutions also need to be responsive to teachers' individual learning needs and facilitate different types of ICT professional experience including group and one-on-one sessions which include 'authentic experiences' of integrating ICT and provide them with structured 'feedback' on their integration of ICT, teach them to 'reflect on their use of ICT', about effective 'instructional design' and assist them to collaborate around the integration of ICT (Tondeur et al, 2015, p. 8). They should also have 'role models' in their specific disciplines who can model the integration of ICT. These models should receive tangible rewards for their efforts and support in their leadership efforts. Institutions should be adaptive towards changing trends towards more flexible online and blended learning and provide infrastructure and learning platforms. These should include more flexible learning spaces, flexible enrolment and course structure and opportunities for learners, so as to personalize their learning and collaborate internationally to ensure that they adapt to these trends. Institutions also need to be adaptive in terms of provision of support adapting to the changing learning environment and teachers needs, as well as changing pedagogies and the expectations of Education 3.0/4.0 (Harkins, 2006). Finally, institutions need to be timely, providing support and professional development to teachers when they need it in a timely fashion, suggesting that technical support staff need to be readily available so as to provide 'just-in-time' professional development on specific tools, platforms and pedagogies. The expectations of institutions also need to be timely, not just responding to international or national imperatives, but also realizing the local constraints and having 'performance' and 'effort expectancy' (Venkatesh, 2003, p. 446) appropriate to the capabilities of the teachers. There also needs to be timely provision of resources 'technology planning and leadership' by the institution and communication of these in policies and practice to the teachers (Tondeur et al. 2012, p. 8).

All these institutional and individual efforts described above need to be part of 'systematic and systemic change efforts' (Tondeur et al, 2012, p. 8) at a national level, since in developing countries like Vietnam, efficiencies and cost benefits can be achieved if resources are centrally shared and the powerful state mechanisms can enable structural and cultural elaboration. Figure 9.1 summarises the RAT model in the Vietnamese higher education context.
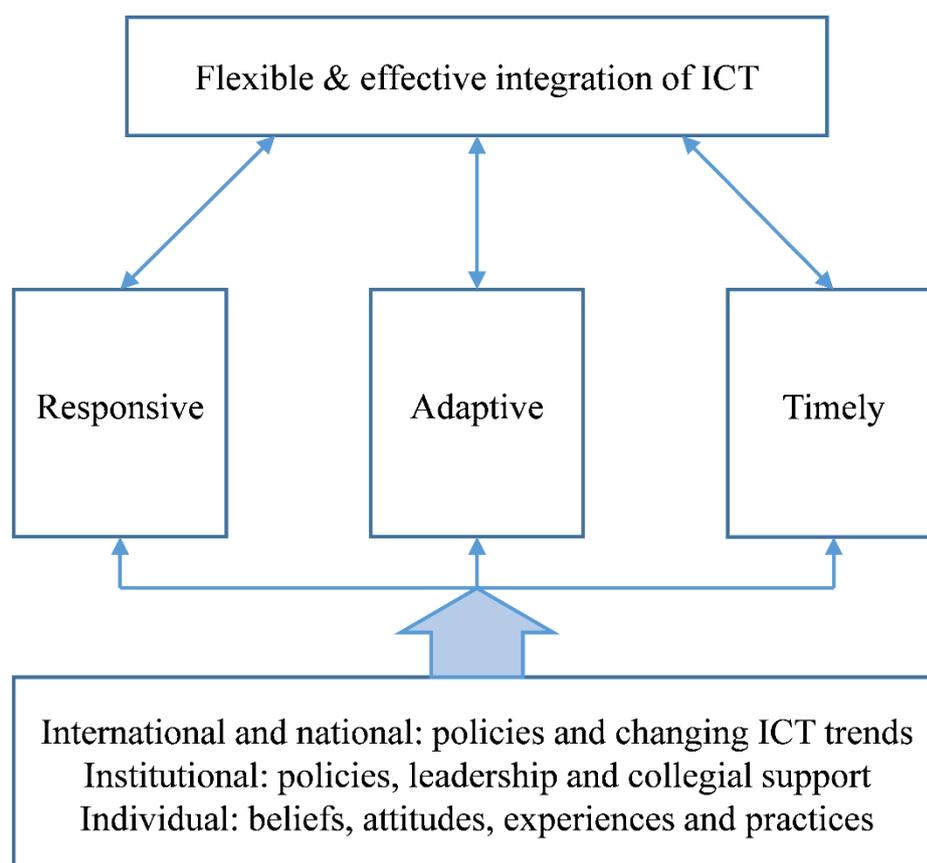
Figure 9.1 The RAT model of ICT integration in an EFL university teaching in Vietnam

9.4   Limitations and recommendations for future research

This study has several limitations during both data collection and data analysis process. Major limitations are concerned with the issue of time constraints, study scale and the research experience.

9.4.1   Limitation in time

Time constraint is one of the first limitations of which the researcher is aware. As I adopted ethnography as an overarching methodology, the tradition of this approach requires long duration spent in the research site. This limitation was overcome using focussed ethnography (Knoblauch, 2005). However, the emphasis on 'critical incidents' (Cohen, Manion, & Morrison, 2013, p. 464) could potentially result in some important elements being missed out which a longitudinal study that tracked 'teachers' ICT] competence development over time' (Røkenes & Krumsvik, 2016, p. 18; Sang, Valcke, van Braak, & Tondeur, 2010) would have addressed. Because of the time constraints, extensive observations and interviews which might have produced richer data were not possible and the limited observations and follow up interviews possible were necessarily limited mainly to participants who viewed themselves as tech-savvy.

9.4.2 Limitation in scale

Also due to the time limitations, the scale of the study is small. With thousands of English teachers currently working in Vietnam, the scale in this study could not cover all aspects related to EFL teachers' integration of ICT. More large scale studies on flexible integration of ICT could further enrich the field.

9.4.3 Role of the researcher

My role as an 'inside outsider' to the research context could also potentially be a limitation in that my perspective could be biased by my extensive experience of the context. However, this limitation is also potentially a strength in that it provided me with greater access and some additional understanding of the research context. Further research from both an inside and more objective perspective could further enrich research on flexible and effective ICT integration in a Vietnamese ELT higher education context.

9.5 Contributions of the study

Despite the limitations described above, my study has three major contributions in terms of theoretical framework, support in ICT policy development, and staff professional development.

In terms of theoretical framework and methodology, this study is the first (in Vietnam) using three core components of related theories including Bhaskar's reality domains, Archer's social domains and Fairclough's three-dimension analytical framework in unpacking the integration of ICT by EFL Vietnamese teachers of English. Specifically, Bhaskar's and Archer's domains are mapped onto each other to explain the underlying mechanisms driving EFL teachers' integration of ICT in ELT. Fairclough's framework was used to explore what goes beyond text. Fairclough's framework helped me identify the movement of international policy texts to Vietnam's national and institutional policy texts. This application is interesting for two main reasons. First, it revealed that Vietnamese leaders or the persons in charge of technological application for development were aware of the international trends, yet they have not fully responded to these trends and expectations of teachers and students. Second, understanding the underlying individual, cultural and structural mechanisms causing morphostasis could potentially provide workable solutions for future implementation of ICT in ELT. This study also offers a theoretical lens for future research. Specifically, it is the first study in Vietnam using critical realism combined with focussed ethnography to conduct an ICT-related study in the realm of ELT. Another important contribution is specifically associated with the use of Archer's trajectory of Concerns, Projects and Practices in analysing flexible and effective integration of ICT by EFL teachers in a developing context such as Vietnam.

The study provides insights to the ICT policy making process revealing the need for more locally relevant elaboration of policy as well as practical support for individual teachers and potential technology leaders from a national and institutional level. The study also reveals the importance of communicating policy.

Regarding staff professional development, this study is particularly useful for EFL university Vietnamese teachers and institutions for three main reasons: it unpacks some of the reasons why university teachers do not take up professional development opportunities, it reveals the importance of individual agency and leaders and it provides the RAT model which could potentially be used by institutions to evaluate their own professional development programmes and by individual staff to evaluate their integration of ICT.

In conclusion, the focus of the thesis was to examine EFL teacher experiences and practices in a developing context such as Vietnam, which could have potentially included a focus on how ICT is integrated into the curriculum. However, the data analysis showed that only the two translation teachers actually integrated ICT into the curriculum. In order to enhance the full and effective integration of ICT in the Vietnamese higher education context and mapping of ICT within the ELT and other curricula is recommended. The Responsive, Adaptive and Timely (RAT) ICT integration model could potentially assist in this mapping process.

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LIST OF APPENDICES

APPENDIX A: Ethics approval

19 June 2013

Dr M Picard
School of Education

Dear Dr Picard

ETHICS APPROVAL No: HP-2013-048
PROJECT TITLE: Unleashing university teacher flexibility in integration of emerging technologies
in an EFL setting

I write to advise that the Low Risk Human Research Ethics Review Group (Faculty of Health Sciences) has
approved the above project. The ethics expiry date for this project is **30 Jun 2016**.

Ethics approval is granted for three years subject to satisfactory annual progress and completion reporting. The
form titled *Project Status Report* is to be used when reporting annual progress and project completion and can be
downloaded at http://www.adelaide.edu.au/ethics/human/guidelines/reporting. On expiry, ethics approval may be
extended for a further period.

Participants in the study are to be given a copy of the Information Sheet and the signed Consent Form to retain. It
is also a condition of approval that you **immediately report** anything which might warrant review of ethical
approval including:

- serious or unexpected adverse effects on participants,
- previously unforseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol; and
- the project is discontinued before the expected date of completion.

Please refer to the following ethics approval document for any additional conditions that may apply to this project.

Yours sincerely

ASSOCIATE PROFESSOR PAUL BABIE
Convenor
Low Risk Human Research Ethics Review Group (Faculty of
Humanities and Social Sciences and Faculty of the Professions)

Applicant: Dr M Picard

School: Education

Application/RM No: 16573

Project Title: **Unleashing university teacher flexibility in integration of emerging technologies in an EFL setting**

Low Risk Human Research Ethics Review Group (Faculty of Health Sciences)

ETHICS APPROVAL No: HP-2013-048

APPROVED for the period: **12 Jun 2013 to 30 Jun 2016**

This study is to be conducted by Mr Van Giang Ngo, PhD Candidate.

ASSOCIATE PROFESSOR PAUL BABIE
Convenor
Low Risk Human Research Ethics Review Group (Faculty of
Humanities and Social Sciences and Faculty of the Professions)

This is to certify that

NGO VAN GIANG

attended the workshop titled

Ethics and Integrity in Research with Humans Workshop

at

The University of Adelaide

on 20 & 21 November, 2012

Michelle A. White
*Manager, Office of Research Ethics,
Compliance and Integrity*

SCHOOL OF EDUCATION

RESEARCH PROJECT INFORMATION SHEET

Dear teachers,

I am Ngo Van Giang, a research scholar (PhD. Student) in the School of Education at the University of Adelaide. I am inviting you to participate in my research project if you wish to. Currently, I am doing a research on teacher's integration of ICT in the EFL setting in Vietnam.

The purpose of the study is to work out what drives the flexibility of university teachers in integrating ICT in an EFL setting. Your participation would enable me to identify of the barriers to and enablers for flexibility and would significantly assist me in the completion of the study.

Participation would involve questionnaire survey, interviews and where possible, observation of and participation in some target classes and institution's activities, events and meetings.

Specifically, you will be invited to complete a questionnaire in 30 minutes or so. More time will be provided to you should you require it. You may have an interview with me under your consent.

Should you have an interview with me, the interview will take around 30 minutes in either face-to-face meeting or online, say through Skype, and I will record your voice using a digital recording device. I wish to ask general, personal and topic-related questions during the interview. However, your answers will be kept strictly confidential and you are entitled to withdraw from the interview any time you feel forced or uncomfortable to do so.

Being well aware of the purpose of the interviews/**observations**, I would like to keep you informed that your participation will be *voluntary*. This means you do not have to answer any question that you don't like. It also means that if you do not participate, it will not affect your progress or your work in the university. Your participation will be completely *confidential*. This means no one will know your answers. Your name and your identity will not be told to anyone.

Your participation will be of great significance to my study and help me gain a better understanding of your institution/community/group, you and your work.

This research has been approved by the University of Adelaide Ethics Committee.

Should you require additional information regarding this study, please contact me by telephone on mobile at (+84) 9048618789 (Vietnam number) and/or at (+61) 435 80 6998 (Australia number) Please contact me through e-mail at gianghanuvn@gmail.com. Should I be unavailable or you wish to communicate with whom it may concern, my supervisor, Dr. Michelle Picard can be contacted at michelle.picard@adelaide.edu.au.

Please see the attached independent complaints procedure form should you have any complaints about this project. You will not have any personal benefit from this study. If you would like to ask me any questions, you can call me on my mobile number 0422547177.

Should you have any complaints about this project, please contact HANU President's Office at Km 9, Nguyen Trai Road, Thanh Xuan District, Hanoi (Tel: (00844) 854 4338; Fax: (00844) 854 4550).

I look forward to hearing from you.

Kind regards

Signed,

NGO VAN GIANG
PhD Candidate

APPENDIX D: Standard consent form for English teachers

Human Research Ethics Committee (HREC)

THE UNIVERSITY
OF ADELAIDE
AUSTRALIA

CONSENT FORM

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title:	**Enabler and barriers of teacher's flexibility in ICT integration in EFL setting**
Ethics Approval Number:	**Researcher to insert this number (allocated once the project has been approved.**

2. I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.

3. Although I understand the purpose of the research project it has also been explained that involvement may not be of any benefit to me.

4. I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.

5. I understand that I am free to withdraw from the project at any time.

6. I agree to the interview being audio/video recorded.　　　Yes ☐　　No ☐

7. I agree to the photographs being taken.　　　Yes ☐　　No ☐

8. I am aware that I should keep a copy of this Consent Form, when completed, and the attached Information Sheet.

Participant to complete:

Name: _____Signature: _____ Date: _____

Researcher/Witness to complete:

I have described the nature of the research to _____

(Print name of participant)

and in my opinion she/he understood the explanation.

Signature: _____Position:_____ Date: _____

APPENDIX E: Teacher survey questionnaire (Vietnamese & English versions)

KHOA GIÁO DỤC

THE UNIVERSITY OF ADELAIDE AUSTRALIA

Tầng 8, Số 10, Phố Pulteney, Đại học Adelaide, Adelaide Nam Úc 5005; Tel: (+618) 8303 5628, Fax: (+618) 8303 3604

Xác định thuận lợi và rào cản đối với sự linh hoạt trong ứng dụng ICT vào môi trường giảng dạy tiếng Anh như là một ngoại ngữ (EFL) ở Đại học Hà Nội (HANU)

BẢNG HỎI DÀNH CHO GIÁO VIÊN

Kính gửi quý thầy cô,

Tên tôi là Ngô Văn Giang, hiện tôi đang thực hiện đề tài nghiên cứu tiến sĩ tại Khoa Giáo dục, trường Đại học Adelaide, Nam Úc. Bảng hỏi này là một phần trong nghiên cứu của tôi liên quan đến tính linh hoạt trong sử dụng Công nghệ Thông tin và Truyền thông (ICT) trong môi trường Giảng dạy tiếng Anh như là một Ngoại ngữ (EFL) tại trường Đại học Hà Nội (HANU). Tất cả thông tin trong bảng hỏi tuyệt đối được giữ kín và chỉ được sử dụng cho mục đích nghiên cứu. Tôi xin chân thành cảm ơn quý thầy cô tham gia trả lời bảng hỏi này. Thời gian để hoàn thành bảng hỏi sẽ **KHÔNG** quá **15** phút. **Ngôn ngữ cho bảng hỏi thể hiện bằng cả tiếng Anh và tiếng Việt. Quý thầy cô có thể chọn ngôn ngữ nào mà quý thầy/cô thấy thuận tiện nhất cho việc hoàn thành bảng hỏi.**

Sau khi hoàn thành, quý thầy cô làm ơn gửi lại cho Giáo vụ tại đơn vị công tác của quý thầy/cô.

Nếu quý thầy cô vui lòng tham gia phỏng vấn, làm ơn liên hệ với tôi qua di động theo số (**+84) 127 627 6869** hoặc theo địa chỉ e-mail: ngogiangict@gmail.com và/hoặc vangiang.ngo@adelaide.edu.au.

Xin chân thành cảm ơn sự giúp đỡ và hợp tác của quý thầy cô!

ICT trong nghiên cứu này đề cập tới phần cứng (computer, laptop...), phần mềm (Word, PowerPoint, Endnote...), thiết bị kỹ thuật số (máy ghi âm/hình kỹ thuật số...), Internet và các thiết bị di động (smart phone, iPad...)

Hãy trả lời các câu hỏi sau bằng cách đánh dấu √ vào hộp kiểm

Q1. Giới	□ Nữ		□ Nam		
Q2. Tuổi	□ 22-30	□ 31-40	□ 41-50	□ > 50	
Q3. Đơn vị công tác	□ Khoa Anh	□ Khoa Đại cương	□ TT GD Quốc tế	□ TT GD từ xa	□ Khoa Tại chức
Q4. Năm công tác	□ <5 years	□ 5-10 years	□ 11-15 years	□ 16-20 years	□ > 20 years
Q5. Trình độ học vấn cao nhất	□ Cử nhân	□ Thạc sĩ	□ Tiến sĩ		

Q6. Trả lời các câu hỏi sau bằng cách đánh dấu √ cho mỗi phát biểu dưới đây
(RKDY: Rất không đồng ý; RDY: Rất đồng ý)

		RKDY				RDY
	TEACHER-CENTERED VIA TECH INTEGRATION					
	PHÁT BIỂU	1	2	3	4	5
1	Tôi **thiết kế** tài liệu giảng dạy sử dụng các chức năng khác nhau của Word *(TD: chèn hình ảnh và biểu tượng).*	☐	☐	☐	☐	☐
2	Tôi **kết hợp** nhiều nguồn ICT để việc giảng dạy tiếng Anh hiệu quả hơn *(TD: kết hợp PowerPoint và video clips tải về từ Youtube).*	☐	☐	☐	☐	☐
3	Tôi **khắc phục** các hạn chế về mặt công nghệ bằng cách sử dụng các giải pháp ICT thay thế khác *(TD: sử dụng các file pdf và/hoặc Word files để thuyết trình nếu như PowerPoint trục trặc).*	☐	☐	☐	☐	☐
4	Tôi **hỗ trợ** đồng nghiệp bằng cách chia sẻ kỹ năng ICT với họ *(TD: kỹ năng sử dụng các công cụ tìm kiếm khác nhau).*	☐	☐	☐	☐	☐
5	Tôi **đa dạng hóa** nội dung giảng dạy bằng cách sử dụng nhiều nguồn trên mạng có sẵn *(TD: website dạy Đọc, blog giảng dạy tiếng Anh).*	☐	☐	☐	☐	☐
6	Tôi **cung cấp** nhiều hình thức phản hồi khác nhau cho sinh viên bằng cách sử dụng khác công cụ ICT khác nhau *(TD: qua e-mail; chèn nhận xét vào Word hoặc PowerPoint).*	☐	☐	☐	☐	☐
	STUDENT-CENTERED VIA TECH INTEGRATION					
7	Tôi **giúp** sinh viên sử dụng các công cụ có sẵn trên mạng để tiếp cận học liệu ở cả trong và ngoài lớp học *(TD: sử dụng Dropbox hay trang web SlideShare).*	☐	☐	☐	☐	☐
8	Tôi **gợi ý** các lựa chọn học tập với sự hộ trợ của công nghệ cho sinh viên nhằm cải thiện kỹ năng thực hành tiếng của các em *(TD: nói chuyện với người bản ngữ qua Skype, học tiếng Anh qua video clip trên Youtube).*	☐	☐	☐	☐	☐
9	Tôi **hướng dẫn** sinh viên sử dụng các công cụ công nghệ thông tin cụ thể để tăng cường sự hợp tác giữa sinh viên với nhau *(TD: sử dụng Skype để thảo luận nhóm, lập tài khoản Google Group để chia sẻ tài liệu).*	☐	☐	☐	☐	☐
10	Tôi **khuyến khích** sinh viên trao đổi thông tin học tập với tôi thông qua các mạng trực tuyến *(TD: qua e-mail, Facebook hay Yahoo Messenger).*	☐	☐	☐	☐	☐
11	Tôi **trợ giúp** sinh viên trong việc sử dụng các công cụ tìm kiếm để có được tài liệu học tập cần thiết *(TD: sử dụng Google để tìm kiếm các bài luyện về phát âm).*	☐	☐	☐	☐	☐
	GROUP IMPACTS ON FLEXIBILITY IMPLEMENTATION					
12	Đồng nghiệp khoa tôi **chỉ** cho tôi cách khai thác các công cụ ICT khác nhau để nâng cao công tác giảng dạy *(e.g. sử dụng phần mềm biên tập âm thanh để luyện dịch nghe).*	☐	☐	☐	☐	☐
13	Đồng nghiệp khoa tôi sẵn sàng **chia sẻ** tài liệu giảng dạy qua mạng Internet để sinh viên có nguồn tài liệu phong phú hơn *(TD: chia sẻ e-book luyện dịch qua danh sách thư điện tử).*	☐	☐	☐	☐	☐
14	Đồng nghiệp khoa tôi **cập nhật** cho tôi về chính sách mới nhất liên quan đến việc ứng dụng ICT tại trường tôi *(TD: lắp đặt mới phòng Lab để luyện dịch song song).*	☐	☐	☐	☐	☐
15	Đồng nghiệp khoa tôi **tạo điều kiện** để tôi giao tiếp với các đồng nghiệp khác bằng việc sử dụng các công cụ trực tuyến *(TD: qua hệ thống Tác nghiệp điện tử của HANU hay qua Facebook).*	☐	☐	☐	☐	☐
16	Đồng nghiệp khoa tôi **trợ giúp** tôi trong việc sử dụng các công cụ ICT có sẵn trong trường *(TD: cách sử dụng phòng Lab để dạy Phát âm).*	☐	☐	☐	☐	☐
	INSTITUTIONAL IMPACTS ON FLEXIBILITY IMPLEMENTATION					
18	Trường tôi **cung cấp** cho giáo viên muốn một phòng được trang bị đầy đủ thiết bị ICT cho các nhiệm vụ giảng dạy đặc biệt *(TD: các thiết bị ghi âm/hình cho Hội thảo mô phỏng).*	☐	☐	☐	☐	☐
19	Trường tôi thường xuyên **tổ chức** các khóa tập huấn ICT để phát triển nghề nghiệp giáo viên *(TD: sử dụng phần mềm Endnote).*	☐	☐	☐	☐	☐
20	Trường tôi **có** chế độ **khen thưởng** đối với các sáng kiến sử dụng ICT trong việc nâng cao chất lượng giảng dạy và học tập *(TD: khen thưởng cho sáng kiến sử dụng video trong dạy kỹ năng Viết).*	☐	☐	☐	☐	☐
	FLEXIBILITY CONCEPT					
21	Tôi cho rằng giáo viên nên **dạy cho sinh viên cách sử dụng ICT** để nâng cao chất lượng học tập *(TD: tổ chức thông tin theo thư mục, tìm kiếm thông tin còn thiếu qua các website tin cậy)*	☐	☐	☐	☐	☐
22	Tôi cho rằng giáo viên nên **đáp ứng** các nhu cầu học tập của sinh viên thông qua việc tích hợp ICT *(TD: sử dụng blog để sinh viên luyện viết tiếng Anh).*	☐	☐	☐	☐	☐
23	Tôi cho rằng giáo viên nên **thúc đẩy** sinh viên tham gia tích cực hơn trong quá trình giảng dạy qua việc tích hợp các công cụ ICT *(TD: sử dụng Facebook để chia sẻ các nguồn học tiếng Anh miễn phí).*	☐	☐	☐	☐	☐
24	Tôi cho rằng giáo viên nên khuyến khích sinh viên **đóng góp** nhiều hơn vào môn học *(TD: yêu cầu sinh viên chia sẻ một đường link hữu ích cho việc luyện phát âm mỗi tuần).*	☐	☐	☐	☐	☐

Q7. Trả lời các câu hỏi sau bằng cách đánh dấu √ vào hộp kiểm

		Không biết sử dụng	Có thể sử dụng với trợ giúp	Có thể sử dụng độc lập	Có thể dạy người khác
	Tôi tích hợp các phần mềm sau vào việc dạy tiếng Anh:	1	2	3	4
	PHẦN MỀM THÔNG DỤNG				
1	Word	☐	☐	☐	☐
2	Excel	☐	☐	☐	☐
3	Adobe reader	☐	☐	☐	☐
4	PowerPoint	☐	☐	☐	☐
5	Prezi	☐	☐	☐	☐
6	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐
	PHẦN MỀM ÂM THANH/HÌNH ẢNH				
7	Window Media Player	☐	☐	☐	☐
8	Quick Time Player	☐	☐	☐	☐
9	Movie Maker	☐	☐	☐	☐
10	Sound Forge	☐	☐	☐	☐
11	CyberLink PowerDirector	☐	☐	☐	☐
12	Gold Wave	☐	☐	☐	☐
13	Jet Audio	☐	☐	☐	☐
14	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐
	PHẦN MỀM BIÊN TẬP HÌNH ẢNH				
15	Photoshop	☐	☐	☐	☐
16	CorelDraw	☐	☐	☐	☐
17	Photo Editor	☐	☐	☐	☐
18	Picasa	☐	☐	☐	☐
19	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐
	PHẦN MỀM GIAO TIẾP				
20	Outlook (e-mail)	☐	☐	☐	☐
21	Skype	☐	☐	☐	☐
22	Yahoo Messenger	☐	☐	☐	☐
23	Viber	☐	☐	☐	☐
24	Facetime	☐	☐	☐	☐
25	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐
	THIẾT BỊ DI ĐỘNG				
26	Smart phone (e.g., iPhone)	☐	☐	☐	☐
27	Tablets (e.g., iPad, Surface)	☐	☐	☐	☐
28	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐
	MẠNG XÃ HỘI				
29	Facebook	☐	☐	☐	☐
30	Flickr	☐	☐	☐	☐
31	Google+	☐	☐	☐	☐
32	LinkedIn	☐	☐	☐	☐
33	twitter	☐	☐	☐	☐
34	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐
	CÔNG CỤ TÌM KIẾM				
35	AltaVista	☐	☐	☐	☐
36	Google	☐	☐	☐	☐
37	Google scholar	☐	☐	☐	☐
38	Youtube	☐	☐	☐	☐
39	Yahoo	☐	☐	☐	☐
40	Khác (làm ơn chỉ rõ:	☐	☐	☐	☐

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Q8. Yếu tố nào KHUYẾN KHÍCH thầy/cô tích hợp ICT vào giảng dạy? Làm ơn viết vào chỗ trống bên dưới:

....

....

....

Q9. Yếu tố nào CẢN TRỞ thầy/cô tích hợp ICT vào giảng dạy? Làm ơn viết vào chỗ trống bên dưới:

....

....

Q10. Tôi muốn mời quý thầy/cô tham gia phỏng vấn trong khoảng thời gian từ ngày 2 tháng 9 đến ngày 3 tháng 10 năm 2013. Làm ơn cho tôi biết quý thầy/cô có thể tham gia được hay không bằng cách đánh dấu √ **vào** hộp kiểm ở bên dưới:

☐ KHÔNG

☐ CÓ
Nếu CÓ, làm ơn cung cấp thông tin để tiện liên lạc:

Tên
E-mail
Địa điểm phỏng vấn
(HANU)

Q11. Lịch phỏng vấn
Làm ơn khoanh tròn ◯ vào ngày mà quý thầy/cô có thể tham gia phỏng vấn:

Thứ hai	Ba	Tư	Năm	Sáu
2/9	3/9	4/9	5/9	6/9
9/9	10/9	11/9	12/9	13/9
16/9	17/9	18/9	19/9	20/9
23/9	24/9	25/9	26/9	27/9
30/9				
	1/10	2/10	3/10	4/10
7/10	8/10	9/10	10/10	11/10
14/10	15/10	16/10	17/10	18/10
21/10	22/10	23/10	24/10	25/10
28/10	29/10	30/10	31/10	

Sau khi hoàn thành, quý thầy cô làm ơn gửi lại cho Giáo vụ tại đơn vị công tác của quý thầy/cô.

XIN CHÂN THÀNH CÁM ƠN SỰ GIÚP ĐỠ VÀ HỢP TÁC CỦA QUÝ THẦY/CÔ!

Identifying barriers and enablers of flexibility in ICT integration in the EFL setting in Hanoi University (HANU)

TEACHER QUESTIONNAIRE SURVEY

Dear teachers,

My name is Ngo Van Giang and currently I am conducting my doctoral research in the School of Education at the University of Adelaide, South Australia. This questionnaire survey is part of my research which is concerned with the flexibility in Information and Communication Technology (ICT) integration in the English as a Foreign Language (EFL) setting at Hanoi University (HANU). All information within this survey will remain completely confidential and can only be employed for research purposes. I would like to express my sincere thanks for your participation in the survey. It should **NOT** take you **MORE THAN 15 minutes** to complete the survey. **The questionnaire survey is provided in both English and Vietnamese versions. You can choose the version that you find convenient most for completion.**

Please send the completed survey to Academic Admin Assistant in your Department.

If you are willing to take part in a follow-up interview, please contact me via mobile at (+84) 127 627 6869 or e-mail at ngogiangict@gmail.com and/or vangiang.ngo@adelaide.edu.au. Thank you very much for your support and cooperation!

ICT in this survey refers to hardware (computer, laptop, etc.,), software (Word, PowerPoint, etc.,), digital devices (audio/video devices), Internet and mobile learning devices (smart phone, iPad, etc.,).

Please answer the following questions by putting a tick √ in the box

Q1. Gender	☐	Female			☐	Male		
Q2. Age	☐	22-30	☐	31-40	☐	41-50	☐	> 50
Q3. Department you are working for	☐	English Dept	☐	Foundation Studies Dept	☐	International Edu Centre	☐ Distance Edu Centre	☐ In-service Dept
Q4. EFL teaching experience	☐	<5 years	☐	5-10 years	☐	11-15 years	☐ 16-20 years	☐ > 20 years
Q5. Highest academic qualifications	☐	Bachelor degree	☐	Master degree	☐	PhD		

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Q6. Please answer by ticking √ the box for each of the following statements:

		Strongly disagree				Strongly agree
		1	2	3	4	5
TEACHER-CENTERED VIA TECH INTEGRATION						
	STATEMENTS	1	2	3	4	5
1	I *design* instructional materials using different functions of Word (e.g., insert picture & symbols).	☐	☐	☐	☐	☐
2	I *combine* various ICT resources to make English language teaching more effective (e.g., PowerPoint & video clips from Youtube).	☐	☐	☐	☐	☐
3	I *deal with* technology limitations by using other ICT alternatives (e.g., use pdf or Word files for presentation if PowerPoint is not working).	☐	☐	☐	☐	☐
4	I *support* my colleagues by sharing my ICT skills with them (e.g., skills in using different search engines).	☐	☐	☐	☐	☐
5	I *diversify* my teaching content by drawing on a variety of available online sources (e.g., teaching reading websites, English teaching blogs).	☐	☐	☐	☐	☐
6	I *provide* my students with different forms of feedback by using different ICT tools (e.g., e-mail, insert comments on Word or PowerPoint).	☐	☐	☐	☐	☐
STUDENT-CENTERED VIA TECH INTEGRATION						
7	I *help* my students use available online tools to access learning materials both inside and outside class (eg. use of Dropbox or SlideShare web page).	☐	☐	☐	☐	☐
8	I *refer* students to a variety of technology-supported learning options to improve their language practice skills outside classroom (e.g., talking with native speakers via Skype, learning from English video clips on Youtube).	☐	☐	☐	☐	☐
9	I *train* students how to use specific technology tools to increase collaboration among them (e.g., use of Skype for group discussion or set up a Google group account for sharing materials).	☐	☐	☐	☐	☐
10	I *encourage* my students to communicate with me via online networks (e.g., e-mail, Facebook or Yahoo Messenger).	☐	☐	☐	☐	☐
11	I *assist* my students in using search engines to find various learning materials (e.g., use of Google to search for pronunication drills).	☐	☐	☐	☐	☐
GROUP IMPACTS ON FLEXIBILITY IMPLEMENTATION						
12	Teachers in my department **show** me how to explore different ICT tools to improve my teaching (e.g., using audio-editing software for interpreting practice).	☐	☐	☐	☐	☐
13	Teachers in my department are willing to **share** teaching & learning materials via Internet so that students have a richer study source (eg. sharing translation e-books via mailing list).	☐	☐	☐	☐	☐
14	Teachers in my department **keep** me **updated** with the latest policies concerning ICT application within my university (e.g., installation of a new Lab for simultaneous interpreting practice).	☐	☐	☐	☐	☐
15	Teachers in my department **facilitate** my communication with other colleagues by using online tools (e.g., via e-admin system of HANU called Tac nghiep or Facebook).	☐	☐	☐	☐	☐
16	Teachers in my department **assist** me in using the ICT tools available in my university (e.g., how to use the Lab for pronunciation teaching).	☐	☐	☐	☐	☐
INSTITUTIONAL IMPACTS ON FLEXIBILITY IMPLEMENTATION						
18	My university **provides** teachers with a well-equipped ICT room for organising special teaching events (e.g., audio/video devices for a simulation workshop).	☐	☐	☐	☐	☐
19	My university **provides** teachers with regular ICT training for their professional development (e.g., Endnote training).	☐	☐	☐	☐	☐
20	My university **has** reward scheme for ICT initiatives to improve both teaching and learning (e.g., reward for using Video to teach Writing skills).	☐	☐	☐	☐	☐
FLEXIBILITY CONCEPT						
21	I believe teachers should teach students **how to use** ICT to improve their learning quality (e.g., organising folder-based information, searching for missing information via reliable sites).	☐	☐	☐	☐	☐
22	I believe that teachers should **respond** to students' learning needs through ICT use (e.g., use blog to practise writing in English).	☐	☐	☐	☐	☐
23	I believe that teachers should **engage** students more in the teaching & learning process through ICT use (e.g., use Facebook to share free English learning sources).	☐	☐	☐	☐	☐
24	I believe that teachers should encourage students **contribute** more to enrich learning resources (e.g., asking students to share a useful link for pronunciation practice weekly).	☐	☐	☐	☐	☐

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Q7. Please answer by ticking √ the box for your options:

		Can't use this	Can use with assistance	Can use independently	Can teach others
	I integrate the following ICT tools into teaching EFL classes:	1	2	3	4
	GENERAL SOFTWARE				
1	Word	☐	☐	☐	☐
2	Excel	☐	☐	☐	☐
3	Adobe reader	☐	☐	☐	☐
4	PowerPoint	☐	☐	☐	☐
5	Prezi	☐	☐	☐	☐
6	Other (please specify:	☐	☐	☐	☐
	AUDIO-VIDEO SOFTWARE				
7	Window Media Player	☐	☐	☐	☐
8	Quick Time Player	☐	☐	☐	☐
9	Movie Maker	☐	☐	☐	☐
10	Sound Forge	☐	☐	☐	☐
11	CyberLink PowerDirector	☐	☐	☐	☐
12	Gold Wave	☐	☐	☐	☐
13	Jet Audio	☐	☐	☐	☐
14	Other (please specify:	☐	☐	☐	☐
	IMAGE-EDITING SOFTWARE				
15	Photoshop	☐	☐	☐	☐
16	CorelDraw	☐	☐	☐	☐
17	Photo Editor	☐	☐	☐	☐
18	Picasa	☐	☐	☐	☐
19	Other (please specify:	☐	☐	☐	☐
	COMMUNICATION SOFTWARE				
20	Outlook (e-mail)	☐	☐	☐	☐
21	Skype	☐	☐	☐	☐
22	Yahoo Messenger	☐	☐	☐	☐
23	Viber	☐	☐	☐	☐
24	Facetime	☐	☐	☐	☐
25	Other (please specify:	☐	☐	☐	☐
	MOBILE DEVICES				
26	Smart phone (e.g., iPhone)	☐	☐	☐	☐
27	Tablets (e.g., iPad, Surface)	☐	☐	☐	☐
28	Other (please specify:	☐	☐	☐	☐
	SOCIAL NETWORKS				
29	Facebook	☐	☐	☐	☐
30	Flickr	☐	☐	☐	☐
31	Google+	☐	☐	☐	☐
32	LinkedIn	☐	☐	☐	☐
33	twitter	☐	☐	☐	☐
34	Other (please specify:	☐	☐	☐	☐
	SEARCH ENGINES				
35	AltaVista	☐	☐	☐	☐
36	Bing	☐	☐	☐	☐
37	Google	☐	☐	☐	☐
38	Google scholar	☐	☐	☐	☐
39	Youtube	☐	☐	☐	☐
40	Yahoo	☐	☐	☐	☐
41	Other (please specify:	☐	☐	☐	☐

Q8. What factors ENCOURAGE you to integrate ICT in your teaching? Please write in the space below

....
....
....

Q9. What factors PREVENT you from integrating ICT in your teaching? Please write in the space below

....
....
....

Q10. I would like to invite you for a follow-up interview between 2nd Sep 2013 and 31st October 2013. Please let me know if you could join the interview by putting a tick √ in the box below:

☐ NO

☐ YES
If yes, please provide contact information:

Name ....

e-mail ....
Interview venue
(HANU) ....

Q11. Interview Schedule:

Please circle ◯ the date that is most convenient for you to join the interview:

Mon	Tue	Wed	Thu	Fri
2/9	3/9	4/9	5/9	6/9
9/9	10/9	11/9	12/9	13/9
16/9	17/9	18/9	19/9	20/9
23/9	24/9	25/9	26/9	27/9
30/9				
	1/10	2/10	3/10	4/10
7/10	8/10	9/10	10/10	11/10
14/10	15/10	16/10	17/10	18/10
21/10	22/10	23/10	24/10	25/10
28/10	29/10	30/10	31/10	

Please return the completed survey to the Academic Admin Assistant in your Department

THANK YOU VERY MUCH FOR YOUR SUPPORT AND COOPERATION!

FOLLOW-UP INTERVIEWS
(POST-QUESTIONNAIRE)

INTERVIEW BACKGROUND

I have received your agreement for the follow-up interview after the questionnaire is answered. During this interview, I wish to know further of how ICT can be flexibly integrated in your teaching. ICT refers to hardware, software and/or any digital and mobile learning/teaching devices employed in and outside the classroom. For instance, the use of laptop, iPad, Word or Powerpoint can all be regarded as ICT tools. The interview may take **30** minutes.

I have some major questions and I may wish to ask sub-questions for further clarification if possible as we proceed through the interview.

Are you ready?

Excellent! Let's begin the interview.

INTERVIEW QUESTIONS

	QUESTIONS	INFORMATION NEEDED
I	**Personal and educational background** *Objective: collect background information about participants including their education and ICT expertise and experience*	
1	Could you please tell me the department that you are working for and why did you become a teacher?	Identify teacher's cohort Serving as warm-up question
2	How long have you been in the profession?	Teaching experience as a uni teacher
3	Could you describe your EFL teaching experience? What do you teach specifically: say, language practice, theory or translation and interpreting?	Teaching experience in EFL The specific areas of EFL (as some teachers might teach 2 skills at the same time)
4	What are the primary things you do with ICT? What do you use computer for on a daily basis?	Initial use of ICT in teaching
5	Have you ever used ICT tools to teach EFL? If so, could you describe this experience?	Initial use of ICT in EFL teaching
	How often do use these ICT tools to support your teaching and in what way?	Specific tools in EFL teaching
II	**ICT infrastructure**	
	Objective: Questions in this section seek information about whether ICT resources help teachers unleash their flexibility	
10	How do you make the best use of teaching facilities available in your institution/department?	Make use of ICT facilities
	How would you deal with the situation where the ICT you need to teach is not available, say the Projector for ppt presentation?	Coping with lack of facilities
III	**Teachers' practices in using ICT/** Objective: These questions seek information about whether teachers use ICT tools in teaching in a flexible way.	
12	How do you use ICT tools to prepare your lecture?	ICT preparation (pre-teaching)
13	How do you use ICT to present your lecture?	ICT delivery (during)
14	In terms of teaching in general, do you use only one type of technology or different types of technologies combined?	ICT integration

15	Besides face-to-face communication with your students, have you used any other means to stay in touch with them (outside classroom)?	ICT communication (post)
16	How do you integrate your class with the school as a whole? Putting them in the mailing list, using Facebook?	ICT-based communication
IV	**Teachers' ICT skills acquisition in relation with Flexibility** Objective: *Questions in this group seek information about how teachers apply their ICT skills at different level: institutional, group and individual regarding their flexibility*	
17	Do you believe that the ICT training provided by the Uni help you a lot in integrating ICT into EFL teaching?	ICT training at institutional level
18	Have you learned any ICT skills from tech-savvy teachers? How about from IT experts in the Uni?	ICT training/coaching at group level
19	Have you received any other informal training/coaching or sharing of ICT expertise from others, say your colleagues, friends and students? How do you use such expertise to deliver your teaching?	Training received from networking
20	To what extent do you believe that teachers' ICT skills can enhance the flexibility in ICT integration?	ICT trainning significance to the teachers
V	**Teachers' perception of flexibility in ICT integration** Objective: *These questions are designed to provide information about how teachers think of the concept of flexibility. Specifically, it explores the role of ICT, functions of ICT, institution's role and teachers' role in terms of ICT integration*	
21	In your own experience, what do you think 'flexibility' in ICT integration in EFL teaching implies?	General perception on flexibility
22	Have your students been provided a wider choice of resources and modalities to meet their learning needs through ICT use?	If yes → Flexibility *in study materials*
23	Are there any choices offered for students to complete their assignment/homework through ICT support? Can it be both F2F combined with online mode?	If yes → flexibility in *types of interaction* within a course
24	Have your students had any relevant previous experience? If yes, are there any subgroup of courses offered to them through ICT assistance?	If yes → flexibility *in programme*
25	Where can students carry out different learning activities associated with the course, inside and outside class? Say using Skype to communicate with teachers or peers.	If yes → flexibility *in location*
VI	**Institutional, group and individual factors influencing flexible integration of ICT** Objective: *these questions seek information about what are the main enablers and barriers regarding teacher's flexibility in ICT integration.*	
26	Have the University had any impacts on your use of ICT?	Institutional factor
27	Are you influenced by any tech-savvy group within your institution/department? If so, could you elaborate on the potential impacts?	Group factor
28	Can you tell me about a particular person whose ICT knowledge/competency has had great impacts on your use of ICT? Can you describe the impacts?	Individual factor
29	Can you tell me what factors encourage you to integrate ICT into EFL teaching?	
30	Can you tell me what factors prevent you from integrating ICT into EFL teaching?	
31	Do you have any frustration in terms of ICT use?	
VII	**Closing questions**	
	What are the questions you expected me to ask you but I did not?	Make sure missing info can be obtained
32	What are the questions you wondered why I did ask you?	Elaboration of questions asked
33	Is there anything esle you would like to tell me more?	Further info possible

APPENDIX G: Pre-observation form

Pre - Observation Form

Purpose:

This pre-observation form is designed to gather general information of the class to be observed concerning the topic covered. The topic is about how teacher flexibly uses ICT in and beyond his/her classroom. In this study, the ICT refers to hardware, software and/or any digital and mobile learning/teaching devices employed in the classroom. For instance, the use of laptop, iPad, Word or Powerpoint can all be regarded as ICT devices.

Key words: ICT and flexibility
If possible, please attach your lesson plan and/or course materials information when you return this form.
Please fill in the form and return it at gianghanuvn@gmail.com . Thank you!

Date	Teacher:	Class :	Venue:
		Subject:	
Number of students		Years of teaching	
Regular classroom or a lab?			
If you agree to let the researcher conduct the follow-up interview with you after the observation session, please tick the box on the right hand side. The interview might last for 30 minutes maximum.		☐	

Please provide answers to the following questions:

No.	Questions	Answers
1	What types of ICT will you use in your class? To what extent do you think ICT support your teaching as well as meet students' learning needs?	
2	Do you intend to use one particular type of technology for your class or combine different technologies for teaching? If so, what technologies will be combined?	
3	What types of communication will you have with your students through the use of ICT?	
4	What ICT tools do you prefer to use the most? Why?	

5	What factors support or prevent you from using ICT inside your classroom?	
6	Share with us any ideas you have concerning the flexible use of ICT in teaching:	

Thank you for your cooperation and contribution!

OBSERVATION LOG

Focus area: flexible integration of technology

SETTING

Date		School:	
Class		Teacher's name:	
Venue		Observer's name:	
		Type of observation:	Complete observer and/or participant observer & overt
Number of students			
Observation time	Start time:	End time:	

CLASSROOM DESCRIPTION:

IT facilities:

Learners' charactistics (year, programme, level, major, assumed knowledge…)

Stated learning outcomes:

TEACHER'S USE OF TECHNOLOGY

Types of technology used in class	Presenting information	Purposes of Tech use			Note
		Accessing information (input)	Processing info (process)	Producing/presenting/communicating info (output)	
HARDWARE					
Desktop Computer		√			
Handheld Computer					
Interactive whiteboard					
CD-ROMS					
Laptop					
Calculator					
Projector					
Tablet computer					
Mobile devices					
Learning lab					
Language lab					
Others					
SOFTWARE					
Photoshop					
Library Database					
Podcast					
Powerpoint					
Word processing					
Excel					
Blackboard Collaborate					E.g. virtual office
others					
PRESENTATION SOFTWARES/TOOLS					
Word processing software					
Powerpoint					
Slideshare					
Prezi					
Uni-supported software, e.g. MyUni					
others					
DIGITAL SOURCES					
Internet databases: websites, audio/video links					
Database					
search engines: e.g. Google					
e-books					
Digital Camera					
Video clip					
E-mail					
SOCIAL NETWORKS					
Blogs					
Wikis					
Facebook					
Twitter					
others					

Comments:

Teacher's use of technology:		**Teacher's roles**	
To present information	√	Lecturing	
To model a skill		Interactive direction	
To check attendance		Coaching/facilitating	
For grading		modeling	
For material preparation			
To retrieve information			
To provide immediate feedback			
To correct erros made by students			

TEACHER'S FLEXIBLE INTEGRATION OF TECHNOLOGY based on **20 DIMENSIONS (Betty Collis, Moonen, and Vingerhoets, 1997)**

(Note: this table can be used for document analysis)

DIMENSION GROUP					
TIME (4)	time of starting and finishing a course/lesson, other than	time expectations within a course/lesson	tempo of studying	timing of assessments	
COURSE CONTENT (5)	flexibility related to the topics covered	the sequence in which topics are covered	the amount and scope of the content,	the level: not fixed as basic, intermediate or advanced	the assessment criteria
ENTRY REQUIREMENTS(1)	Conditions for participation				
	Pretest	Predetermined certificates	Usefullness of the course		
INSTRUCTIONAL APPROACH AND RESOURCES (4)	social or individual learning activities	language used by teacher/chosen by learners	study materials	pedagogic approach	
COURSE DELIVERY AND LOGISTICS (5)	time and place where help can be obtained	way of obtaining help	types of help	locations for participating in the course	delivery channels including face-to-face and technology-mediated varieties
IMPLICIT DIMENSIONS (1)	underlying philosophy of the course (instructivist or participative)				
	the expected role of the instructor	the expected role of a student	the role of the course in a larger context (ie, part of a degree programme, required by employer, informal learning)		

Comments:

Time

Course content

Expected prerequisites

Instructional approach & resources

Course delivery and logistics

Implicit dimensions: teacher a tech leader/supporter/facilitator; role of teacher and students

TEACHER'S FLEXIBLE INTEGRATION OF TECHNOLOGY (based on SAMR and R2D2 model)

Number		**Substitute** Replace traditional teaching tools with tech	**Augment** Add to pedagogy with technological innovation	**Modify** old tech used in new way	**Transform** Change pedagogy with alternate technology
I	Adaptive/innovative SAMR				
		Read (audio) Deal with student behaviours	Reflect (reflexive) Address direct needs in class	Display (visual) R2D2: Read-Reflect-Display-Do (type of learners)	Do (hands-on) Provide feedback when needed
II	**Responsive R2D2**		√		
		When prolem occurs, use tech in a different way possible	Tech does not work, apply traditional or any other ways possible	Integrate a variety of tech tools with traditional ways of teaching	

Comments:

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FOLLOW-UP INTERVIEWS
(POST-OBSERVATIONS)

INTERVIEW BACKGROUND

I have observed your class and wish to know further of how ICT can be flexibly integrated in the classroom. ICT refers to hardware, software and/or any digital and mobile learning/teaching devices employed in the classroom. For instance, the use of laptop, iPad, Word or Powerpoint can all be regarded as ICT tools.

This interview is intended to examine how flexible teacher can be in terms of ICT integration.

I have 5 major questions and I may wish to ask sub-questions for further clarification if possible as we proceed through the interview.

Are you ready?

Excellent! Let's begin the interview.

INTERVIEW QUESTIONS

Note for researcher:
(Question 1: Concerning one of the activities observed in the class
Questions 2 – 6: exploring the concept of flexibility
Questions 7-8: factors encouraging or discouraging the use of ICT)

	Questions	Answers Notes
1	I noticed that you were using your iPad/Laptop/iPhone. Could you please tell me what you used it for? Do you often use the iPad/laptop/iPhone for teaching?	A specific type of ICT used
2	Have your students been provided a wider choice of resources and modalities to meet their learning needs?	If yes → Flexibility *in study materials*
3	Within the course in general, in what ways do you and your students interact with each other?	If yes → flexibility in forms of *communication*
4	Are there any choices offered for students to complete their assignment/homework through ICT support?	If yes → flexibility in *types of interaction* within a course
5	Have your students had any relevant previous experience? If yes, are there any subgroup of courses offered to them through ICT assistance?	If yes → flexibility *in programme*
6	Where can students carry out different learning activities associated with the course, inside and outside class?	If yes → flexibility *in location*
7	What factors encouraging you to employ ICT for teaching the course?	ICT enablers
8	What factors make you feel disappointed in terms of ICT integration?	ICT barriers

APPENDIX J: Approval letter

Hanoi, 22 January, 2013

From: Van Giang Ngo

            PhD candidate, the University of Adelaide, Australia

TO WHOM IT MAY CONCERN

As the President of Hanoi University (HANU), I hereby approve Ngo Van Giang's request for access to HANU staff in connection with his data collection for his doctoral project 'Unleashing university teacher's flexible integration of Information and Communication Technology (ICT) in an EFL setting: A case study in Hanoi University'. The data collection will be administered in the period between 2013 and 2015. I hope that the research findings will be of significance to language teachers in particular and to HANU in general.

Van Giang Ngo 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.

Associate Prof., Dr. Nguyen Dinh Luan

President of HANU

(signed and sealed)

APPENDIX K: Contact independent complaints form

THE UNIVERSITY OF ADELAIDE
HUMAN RESEARCH ETHICS COMMITTEE

Level 7, 115 Grenfell Street, The University of Adelaide, SA 5005; Tel: (+618) 8303-5137, Fax (+618) 8303-3700

CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The Human Research Ethics Committee is obliged to monitor approved research projects. In conjunction with other forms of monitoring it is necessary to provide an independent and confidential reporting mechanism to assure quality assurance of the institutional ethics committee system. This is done by providing research participants with an additional avenue for raising concerns regarding the conduct of any research in which they are involved.

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

Project title	Unleashing university teachers' flexible integration of ICT in an EFL setting
Approval number	

This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (see http://www.nhmrc.gov.au/publications/synopses/e72syn.htm)

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project coordinator:

    Name: Ngo Van Giang (researcher)
    Telephone: + 61 435806998
    Email: vangiang.ngo@adelaide.edu.au

    Name: Dr Michelle Picard (principal supervisor)
    Telephone: + (618)-83133957
    Email: michelle.picard@adelaide.edu.au

2. If you wish to discuss with an independent person matters related to

    * making a complaint, or
    * raising concerns on the conduct of the project, or
    * the University policy on research involving human participants, or
    * your rights as a participant

    Contact the Human Research Ethics Committee's Secretary on phone (+618) 8303-6028.

Statement of Audit Trail

Melbourne, 15ᵗʰ July, 2016

TO WHOM IT MAY CONCERN

I have had the chance to review the process of the study by Ngo Van Giang, the University of Adelaide and hereby certify that:

o   I have randomly sampled 11 interviews in Vietnamese and found that the transcripts accurately match what is said in respective audio interview files.

o   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.

o   The English translation of interview quotes reflects accurately their meanings.

o   I have also checked the English - Vietnamese versions of the study documents (i.e. the information sheet, consent forms, withdrawal forms, teacher questionnaire and observation form) and found that the meanings of the two versions are the same.

o   I have also checked the translation of the Vietnamese version of policy texts (i.e. the *MOET's Guideline on IT Task Implementation for the Academic Year 2009-2010* and the training manual entitled *Training for Teachers on ICT-Supported Pedagogy 2015*) and found that the meanings of the two versions are the same.

Best regards,

Dr. Xuan Thu Dang
Research Fellow and Academic (Sessional)
School of Education, Faculty of Arts & Education,
Deakin University
Melbourne Burwood Campus, 221 Burwood Highway, VIC 3125
Email: xuan.dang@deakin.edu.au
Website: https://www.researchgate.net/profile/XUAN_THU_DANG

BỘ GIÁO DỤC VÀ ĐÀO TẠO

ĐỀ ÁN NGOẠI NGỮ QUỐC GIA 2020

ĐẠI HỌC ĐÀ NẴNG

TRƯỜNG ĐẠI HỌC NGOẠI NGỮ

ĐỀ ÁN XÂY DỰNG
CHUẨN NĂNG LỰC ỨNG DỤNG
CÔNG NGHỆ THÔNG TIN
DÀNH CHO GIÁO VIÊN TIẾNG ANH

Đà Nẵng, Tháng 10/2013

ĐỀ ÁN XÂY DỰNG
CHUẨN NĂNG LỰC ỨNG DỤNG
CÔNG NGHỆ THÔNG TIN
DÀNH CHO GIÁO VIÊN TIẾNG ANH

Chỉ đạo nội dung:

PGS. TS. Phan Văn Hòa

TS. Trần Quang Hải

Nhóm thực hiện:

TS. Nguyễn Văn Long

ThS. Huỳnh Ngọc Mai Kha

ThS. Phạm Thị Tố Như

ThS. Nguyễn Thị Phương Thảo

ThS. Hoàng Như Quỳnh

ThS. Đinh Thanh Liêm

ThS. Nguyễn Hữu Anh Vương

Đà Nẵng, Tháng 10/2013

MỤC LỤC

TẬP HUẤN CHO CÁC GIẢNG VIÊN

VỀ PHƯƠNG PHÁP DẠY HỌC TÍCH HỢP CNTT

A. ĐẶC ĐIỂM NGƯỜI HỌC THẾ KỈ 21

1.1   Khởi động

Học viên cùng thảo luận trong nhóm và trả lời các câu hỏi của mình trên OneNote của nhóm:

- Bạn đã biết được những gì về các kỹ năng thế kỷ 21? Hãy suy nghĩ và đưa ra một danh mục các kỹ năng thế kỷ 21.

- Liệu có sự giao thoa nào nào giữa các kỹ năng thế kỷ 20 và 21 không?

- Tại sao ngày nay cần nhấn mạnh tầm quan trọng của các kỹ năng thế kỷ 21? Trước đây các kỹ năng thế kỷ 20 có được nhấn mạnh như vậy không?

1.2   Đọc và suy ngẫm

Học viên tìm hiểu thêm thông tin từ các nguồn sau (đường liên kết có thể tìm thấy trên trang Yammer của lớp học):

(1) http://www.stancoe.org/SCOE/iss/common_core/21st_century/21st_century_skills.htm

(2) http://www.p21.org/storage/documents/1.__p21_framework_2-pager.pdf

(3) http://vnexpress.net/tin-tuc/giao-duc/tu-duy-dinh-cao-ky-nang-cua-the-ky-21-2943088.html

(4) http://dantri.com.vn/ban-doc/top-10-ky-nang-mem-de-song-hoc-tap-va-lam-viec-hieu-qua-347212.htm

Sau khi tham khảo thông tin, kết hợp với kinh nghiệm của mình, học viên thảo luận trả lời các câu hỏi sau:

- Giáo viên có thể phát triển các kỹ năng thế kỷ 21 cho người học như thế nào?

- Dựa trên kinh nghiệm của bạn, khi tổ chức dạy học để phát triển các kỹ năng thế kỷ 21 cho người học, những kỹ năng nào cần dạy một cách trực tiếp và những kỹ năng nào có thể phát triển một cách gián tiếp?

- Vai trò của công nghệ trong việc tổ chức phát triển các kỹ năng một cách trực tiếp hoặc gián tiếp như thế nào?

B. THIẾT KẾ VÀ ĐÁNH GIÁ HOẠT ĐỘNG HỌC TẬP PHÁT TRIỂN KỸ NĂNG THẾ KỈ 21 CHO NGƯỜI HỌC

1.3 Thử sức và chia sẻ

Học viên được yêu cầu thiết kế một hoạt động học tập theo giáo trình mà học viên thường phụ trách hoặc thấy có sở trường.

Hoạt động học tập được trình bày trên OneNote theo mẫu sau:

> *Mục tiêu: Sinh viên cần đạt được kiến thức/kĩ năng nào?*

> *Hoạt động: GV làm gì? Và SV làm gì? Sử dụng công nghệ, thiết bị gì?*

1.4 Nghiên cứu về thiết kế hoạt động học tập phát triển kỹ năng thế kỷ 21

Học viên cùng xem các đoạn video giới thiệu tổng quan về thiết kế hoạt động học tập phát triển kỹ năng thế kỷ 21 theo các đường liên kết sau (các liên kết này cũng có thể tìm thấy trên trang Yammer của lớp học):

(1) Tổng quan về Thiết kế hoạt động học tập phát triển kỹ năng thế kỷ 21:
http://www.youtube.com/watch?v=xFlwkl7wzQI

(2) Thiết kế hoạt động học tập phát triển kỹ năng hợp tác:
http://www.youtube.com/watch?v=9_xNWyhSuAw

(3) Thiết kế hoạt động học tập phát triển kỹ năng ứng dụng CNTT:
http://www.youtube.com/watch?v=oOmGLgWVBdY

Sau khi xem xong các đoạn video, học viên thảo luận và trả lời các câu hỏi sau:

- Thiết kế hoạt động học tập phát triển các kỹ năng thế kỷ 21 là gì?

- Hãy nêu các thành phần chính của mô hình thiết kế này.

- Các hoạt động học tập trong giáo trình giảng dạy hiện tại của bạn có thể phát triển các kỹ năng của thế kỷ 21 cho người học như thế nào?

- Bạn có thể tổ chức học tập giáo trình này theo một cách khác không?

C. TPACK - MÔ HÌNH ỨNG DỤNG CNTT TRONG DẠY HỌC HIỆU QUẢ

1.5   Chia sẻ kinh nghiệm và trao đổi

Học viên theo nhóm trao đổi kinh nghiệm theo những gợi ý sau:

- Vai trò thực sự của CNTT trong dạy học là gì?

- Nếu bạn dự định ứng dụng một/một số công cụ CNTT vào một hoạt động học tập hoặc một chủ đề dạy học thì bạn cần cân nhắc những yếu tố nào khi soạn bài hoặc lên kế hoạch cho bài dạy?

1.6   Đọc và suy ngẫm:

Học viên đọc cá nhân các thông tin trong Phụ lục giới thiệu về mô hình TPACK. Học viên thảo luận trong nhóm theo các gợi ý sau:

- Các hoạt động học tập mà bạn đã đi qua trong lớp tập huấn này đã được ứng dụng mô hình TPACK như thế nào?

- Hãy nêu một câu hỏi liên quan đến nội dung vừa đọc.

1.7   Trải nghiệm Trò chơi TPACK

Mô tả về phương tiện của trò chơi:

Các học viên theo nhóm được cung cấp ba tập giấy với 3 màu khác nhau: Mầu xanh, mầu vàng và mầu trắng. Các tấm thiệp màu xanh gồm khoảng 10 kỹ thuật/phương pháp dạy học mà phần lớn các học viên biết tới (Ví dụ: thảo luận nhóm, viết lên một tờ giấy, bài giảng/ghi chú, giao tiếp với chuyên gia, tình huống…). Những tấm thiệp màu vàng gồm khoảng 10 công cụ CNTT mà học viên thường biết tới và tiếp cận (Ví dụ: Word, PowerPoint, Excel, blog, wiki, Yammer …). Những tấm thiệp mầu trắng đề cập đến các chủ đề/nội dung dạy học thông thường mà học viên có thể biết.

Các bước tiến hành trò chơi:

Vòng 1: Học viên chọn bất kỳ ở mỗi tập thiếp một tấm thiệp thuộc một màu (một về chủ đề nội dung, một về công nghệ và một về kỹ thuật/phương pháp dạy học). Các học viên lần lượt chia sẻ với nhóm về lý do họ nghĩ 3 tấm thiệp có thể là phù hợp với nhau hoặc không có sự phù hợp. Nếu một nhóm hoàn thành vòng này nhanh họ có thể quay lại qua phần kết nối và tìm cách "sửa" sự kết nối bằng cách thay thế một hoặc hai tấm thiệp.

Vòng 2: Học viên chọn bất kỳ hai thiệp của mỗi loại. Trong tình huống này, lần lượt các học viên đề xuất mình muốn lựa chọn nội dung của tấm thiệp còn lại sao cho phù hợp với hai tấm thiệp mà họ đã rút ngẫu nhiên được. Học viên chia sẻ sự kết hợp này với cả nhóm, nêu bật lí do họ nghĩ tại sao đó là sự kết hợp tốt. Nếu một nhóm hoàn thành vòng này nhanh họ có thể quay lại qua phần kết nối và tìm cách "sửa" sự kết nối bằng cách thay thế một hoặc hai tấm thiệp.

Vòng 3: Mỗi học viên rútmột tấm thiệp và được chủ động lựa chọn hai tấm thiệp còn lại sao cho có sự phù hợp nhất giữa ba tấm thiệp. Cũng có thể các học viên cùng ghép các tấm thiệp với các chữ cái in đằng sau là T, P, C, A và K để tạo thành chữ TPACK và cùng xem mức độ phù hợp ở mặt nội dung của các tấm thiệp này.

1.8 Thảo luận

Sau khi kết thúc trò chơi, các học viên thảo luận theo những gợi ý sau:

- Bạn học được gì thông qua trò chơi này?

(Câu trả lời có thể nhập vào One Note của nhóm, sau đó chia sẻ những điểm chính của nhóm trên Yammer).

- Tại sao sự "phù hợp" giữa công nghệ, phương pháp giảng dạy và nội dung kiến thức lại quan trọng?

- Việc sử dụng One Note, Yammer và Padlet qua các phần thảo luận vừa rồi có giá trị gì? Mỗi một công cụ này hỗ trợ sự giao tiếp/hợp tác ở một mức độ cụ thể như thế nào?

- Mục tiêu cuối cùng của quá trình dạy học là gì? Tại sao chúng ta phải xem xét việc ứng dụng CNTT vào trong dạy học?

- Bạn có thể chia sẻ với đồng nghiệp về mô hình TPACK như thế nào?

- Hoạt động học tập này bạn có thể cải tiến như thế nào?

1.9 Xem thêm:

http://www.tpack.org/

http://www.matt-koehler.com/

Edit Library

http://punyashra.com/

Using TPACK-in-Practice to Design Technology Professional Learning Opportunities for Teachers

Kiến thức Nội dung Sư phạm Công nghệ (TPACK): The Developmet and Validation of an Assessment Instrument for Preservice Teachers. JRTE, 42 (2) 123 – 149. (Sự phát triển và hiệu lực của một công cụ đánh giá các giáo sinh. JRTE, 42(2) 123-149)

2 GIỚI THIỆU VỀ MÔ HÌNH TPACK

2.1 Tổng quan về TPACK

TPACK (Technological Pedagogical Content Knowledge) là mô hình xác định những kiến thức mà người dạy cần có để có thể giảng dạy hiệu quả với sự hỗ trợ của CNTT.Ý tưởng về mô hình này đã nảy sinh trên cơ sở của nhiều công trình nghiên cứu và thật ra rất khó xác định tác giả của mô hình này.Rất nhiều công trình nghiên cứu đã nêu ra rằng CNTT không thể xem là một thành tố độc lập trong quá trình giảng dạy.Hoạt động giảng dạy hiệu quả cần có sự kết hợp CNTT với phương pháp sư phạm và kiến thức chuyên môn. Bài báo "Technological Pedagogical Content Knowledge: A framework for teacher knowledge" (TPACK: Một mô hình về kiến thức của giáo viên) của Mishra & Koehler (2006) thường được giới thiệu khi nói về mô hình này.

Mô hình TPACK gồm có 3 thành tố chính đanh xen lẫn nhau như sơ đồ dưới đây:
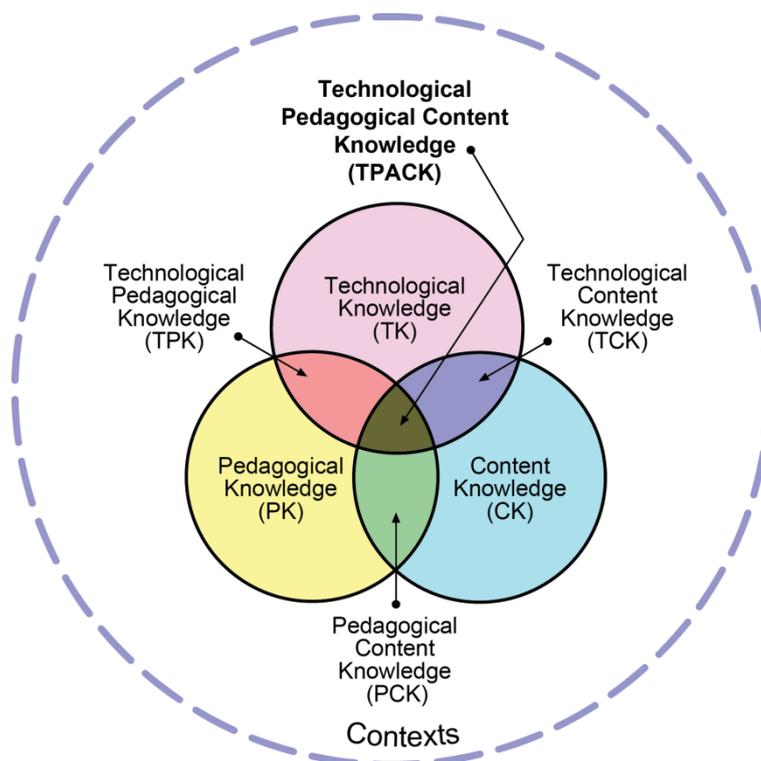
Ba thành tố chính của TPACK được thể hiện bằng 3 vòng tròn, mỗi vòng tròn là một mảng kiến thức quan trọng của giáo viên: kiến thức về lĩnh vực giảng dạy (CK – Content Knowledge), kiến thức về phương pháp sư phạm (PK – Pedagogical Knowledge) và kiến thức về CNTT (TK – Technological Knowledge). Ba mảng kiến thức này khi kết hợp lại với nhau sẽ tạo một mô hình tổng hợp về năng lực cần có của giáo viên gọi là TPACK (Technological Pedagogical Content Knowledge). Mô hình TPACK cũng đề cập đến các dạng kiến thức mới hình thành do sự tương tác của 3 mảng kiến thức trên:

1. Kiến thức phương pháp sư phạm sử dụng trong lĩnh vực giảng dạy (PCK – Pedagogical Content Knowledge). Ví dụ kiến thức về các kĩ thuật dạy nghe, nói, đọc, viết đối với giáo viên ngoại ngữ; kiến thức tổ chức cho người học học tập và nghiên cứu qua các thí nghiệm thực nghiệm của các môn khoa học.

2. Kiến thức về các công cụ CNTT chuyên dùng trong lĩnh vực giảng dạy (TCK – Technological Content Knowledge). Ví dụ việc hiểu biết về các công cụ phần mềm nhận dạng giọng nói, chấm bài luận tiếng

Anh tự động đối với giáo viên dạy tiếng Anh hay khả năng sử dụng phần mềm mô phỏng các kiến thức trừu tượng trong dạy học các môn khoa học tự nhiên.

3. Kiến thức về các công cụ CNTT hỗ trợ những ý tưởng, kỹ thuật/phương pháp giảng dạy cụ thể (TPK – Technological Pedagogical Knowledge). Ví dụ, nếu giáo viên dạy tiếng Anh theo hướng giao tiếp (communicative language teaching) thì cần có kiến thức về những công cụ web 2.0 như wiki, forum, Skype để hỗ trợ các kỹ thuật luyện các khả năng giao tiếp qua mạng hoặc nói chuyện trực tiếp của sinh viên. Hoặc để tổ chức các khóa học trực tuyến thì tối thiểu người giáo viên cần biết sử dụng một Hệ quản trị học tập hoặc Hệ quản trị nội dung nhất định.

Để việc ứng dụng CNTT vào giảng dạy có hiệu quả, người giáo viên cần có cả 3 mảng kiến thức trên nhưng việc vận dụng, mức độ tham gia của từng khối kiến thức trong những hoàn cảnh, bài học cụ thể phải linh hoạt.

2.2 Sử dụng mô hình TPACK

Theo Mishra và Koehler (2006), mô hình TPACKlà một khung lý thuyết giúp các nhà giáo dục và quản lý thiết kế những hệ thống giảng dạy và đào tạo hiệu quả hơn. Trước hết, mô hình TPACK chỉ ra sự kém hiệu quả của những mô hình đào tạo giáo viên chỉ đơn giản tập trung vào một loại năng lực nào đó.Mô hình này chính là cơ sở cho việc phân tích kiến thức, năng lực của giáo viên và từ đó có những giải pháp đào tạo giáo viên đáp ứng yêu cầu giảng dạy của thế kỉ 21.Ngoài ra, TPACK cũng tạo cơ sở để giáo viên thiết kế những hoạt động học tập hiệu quả hơn.TPACK đã chỉ ra là việc học đạt hiệu quả cao nhất khi thầy trò cùng sử dụng sức mạnh của CNTT để khám phá tri thức trong môi trường học tập có gắn kết chặt chẽ với thực tiễn. Cụ thể hơn, TPACK có thể hỗ trợ giáo viên thiết kế và đánh giá một hoạt động học tập hiệu quả bằng cách nêu ra những câu hỏi liên quan đến các thành tố của mô hình TPACK, ví dụ:

1. Ý tưởng/kịch bản giảng dạy cho hoạt động học tập này có giúp đạt được mục tiêu của bài học/chủ đề không? (CK)

2. Phương pháp sư phạm nào hỗ trợ tốt nhất cho ý tưởng giảng dạy này? (PCK)

3. Các công cụ CNTT cần được sử dụng như thế nào để giúp người học lĩnh hội kiến thức hiệu quả nhất? (TCK)

4. Với phương pháp sư phạm mà giáo viên muốn sử dụng thì công cụ CNTT nào sẽ hỗ trợ hiệu quả nhất? (TPK)

5. Giáo viên cần biết công cụ CNTT nào để triển khai hoạt động học tập này? (TK)

6. Tất cả các yếu tố trên cần được phối hợp thế nào để hoạt động học tập đạt hiệu quả cao nhất? (TPACK)

2.3 Thực hành mô hình TPACK

Nhằm giúp giáo viên hiểu rõ mô hình TPACK, TS.Matthew J Koehler đã thiết kế một trò chơi trên website của mình gọi là TPACK Game. Trò chơi được cung cấp ở link sau:

http://www.matt-koehler.com/the-tpack-game/the-tpack-game-p/

Khi vào website, giáo viên sẽ có 3 vòng tròn C, P và K xen lẫn nhau như sơ đồ TPACK. Một trong 3 thành tố này không có và thể hiện bằng ba dấu hỏi chấm (???.). Nhiệm vụ của giáo viên là nghĩ ra thành tố cần thiết và đề xuất một hoạt động học tập phù hợp.

Given a random content area to teach, and pedagogical approach, figure out a technology and an activity to combine them

C
Expository writing

P
Drill & practice

?
???
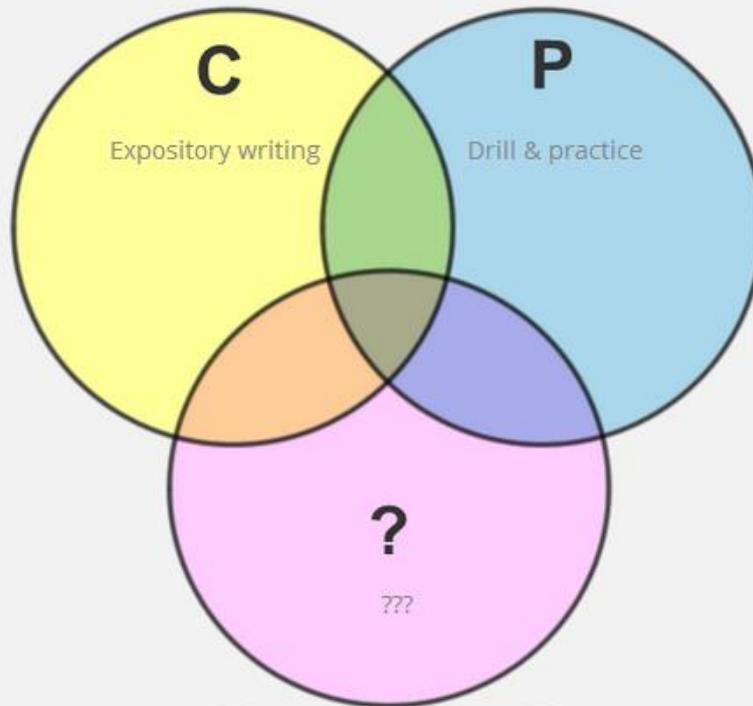
Give me a new problem: Missing T, Missing P, Missing C

Ví dụ, ở ảnh chụp màn hình trên, nội dung bài học là viết bài luận văn, phương pháp giảng dạy sử dụng là luyện tập lặp đi lặp lại. Công cụ CNTT có thể sử dụng là phần mềm Hot Potato để thiết kế các bài tập chuyển đổi qua lại cấu trúc câu mô tả quan hệ nhân quả, so sánh, giải thích v.v… Hoạt động học tập đề xuất: Giáo viên yêu cầu người học viết bài luận so sánh cuộc sống thành thị và nông thôn. Để chuẩn bị trước khi viết, người học lên 1 trang web có bài tập chuyển đổi cấu trúc câu thiết kế bằng phần mềm Hot Potato. Giáo viên cũng có thể sử dụng công cụ Wiki, Blog hoặc Word Online để tạo điều kiện cho người học cộng tác trực tuyến trong quá trình cùng thực hành kỹ năng viết luận này.