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# ICT Training and ICT Use among Vietnamese Foreign Language Teachers

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*Abstract: Information and communications technology (ICT) devices have become increasingly available for teaching and learning in Vietnam. However, availability of ICT facilities and ICT use are two different issues. Teachers' ICT integration often depends on their level of ICT competency, which is closely linked with ICT training. This paper presents the results of a case study that investigated ICT training for foreign language teachers at a university in Vietnam. Survey participants (n = 222) were asked to report on ICT use in lesson preparation and classroom teaching, and provision of ICT training opportunities. Subsequently data were collected from semi-structured interviews (n = 43), during which interviewees addressed their ICT use, training in ICT and access to suitable technology. The findings of the study provide insights into the relationship between ICT provision and training, and ICT use in foreign language teaching in the Vietnamese context. Consideration of the findings suggests a need for on-going and regularly updated professional development programs with a focus on specific ICT skills for which language teachers profess a need.*

*Keywords: ICT Training, ICT Use, ICT Competence, ICT Skills, Foreign Language Teaching*

## Introduction

ICT has enjoyed rapid growth in Vietnam. Beginning with only 10,000 internet users when the internet was initially introduced into Vietnam in 1998, there were over 31 million users as of July 2012, accounting for approximately 35.42% of the population (VNNIC 2012). Much effort has been devoted to upgrading ICT infrastructure for schools and universities. With strategic cooperation from telecommunications corporations, (e.g. Viettel, Microsoft Vietnam and Intel Vietnam), the Ministry of Education and Training (MOET) of Vietnam has deployed free broadband internet connection to all provincial continuing education centres and community-based education centres nationwide. Great efforts have also been made to provide affordable computers for schools (Intel 2009).

Appropriate legal steps have been taken to create an environment conducive to the use of ICT in teaching and learning in Vietnam. Among these, Directive No. 55/2008/CT-BGDĐT is seen as a turning point in the strengthening of ICT use in education in Vietnam for the period 2008-2012 (MOET 2008b). The school year 2008-2009 was specifically chosen as the year for accelerating ICT practices in all training institutions in order to create a breakthrough for successful integration of ICT in the coming years. The 14<sup>th</sup> draft strategy for the educational development of Vietnam for the period 2009-2020 sets the ambitious target that by the year 2015, 80% of school teachers, and 100% of college and university teachers will be able to use ICT effectively in their classroom teaching (MOET 2008a). In 2008, the Prime Minister issued Decision No.1400/QĐ-TTg approving a national project on teaching and learning foreign languages for the period from 2008 to 2020 (Prime Minister of Vietnam 2008). The Decision focuses on professional development for teachers, ICT use in teaching and learning foreign languages and investment in technical facilities, e.g. ICT equipment and software, and digital language laboratories.

Literature regarding ICT practices in teaching and learning reveals both opportunities and challenges with regard to ICT adoption in education (Rybacki 2011). In the area of foreign language teaching and learning, these opportunities can range from new, authentic resources, pronunciation drills and text manipulation to interactive practice, collaborative and communicative applications. Some challenges can be lack of ICT skills, knowledge about ICT

integration, support and time (Dang 2011; Davies and Hewer 2012; Goktas, Yildirim, and Yildirim 2009).

However, the availability of ICT facilities and ICT use are two distinct issues. In other words, ICT availability does not guarantee ICT uptake. Nevertheless, a lack of ICT training could possibly lead to ICT under-use. "It is not the hardware that is at fault, nor the software that runs on it; it is the failure to train teachers to make the best use of the hardware and software" (Davies 2002, 2). As Davies suggests, teachers' ICT practices often depend on their level of ICT competency, which is closely linked with ICT training.

Little has been reported about current ICT training and ICT practices for language teachers in Vietnam. This paper examines university-level language teachers' use of ICT in relation to their ICT training in order to gain a better understanding of teachers' actual ICT practices and the need for appropriate ICT professional development in Vietnam. The data come from a case study investigating factors affecting ICT use by foreign language teachers at a university in Vietnam.

## **Theoretical Framework**

The term ICT has different definitions. It may refer to educational tools that support the learning process in ways that are specifically related to the learning outcomes (Drent and Meelissen 2008) including the use of computers, digital cameras, the Internet, and the World Wide Web (Gillespie 2006; Davies and Hewer 2012; Finger et al. 2007). ICT could also be associated with computer-based and computer-related devices (Finger et al. 2007). In this study, the term ICT is restricted to describing computer-, and internet-based technologies, including both generic software applications (e.g. word processors, presentation software, email packages, and web browsers) and computer-assisted language learning (CALL) software applications plus useful websites supporting purposeful language teaching and learning (Davies et al. 2012).

The unified theory of acceptance and use of technology (UTAUT) provides a scaffold for interpreting the perceptions of academic staff regarding ICT use and ICT training (Venkatesh et al. 2003). UTAUT is considered a comprehensive model as it was developed from the influential constructs of eight theories and models relating to technology acceptance and use, namely the theory of reasoned action (Fishbein and Ajzen 1975), the technology acceptance model (Davis 1989), the motivational model (Davis, Bagozzi, and Warshaw 1992), the theory of planned behaviour (Ajzen 1991), the model of personal computer utilisation (Thompson, Higgins, and Howell 1991), the innovation diffusion theory by Rogers (1995), and social cognitive theory (Bandura 1986). The specific aspects of the UTAUT addressed in this paper, in relation to the use of ICT for lesson preparation and teaching are performance expectancy (i.e. usefulness of ICT to help teachers do their jobs better), effort expectancy (i.e. ease of ICT use) and facilitating conditions (i.e. ICT training for teachers).

## **Research Context**

The research context for this study is the case study university, Hanoi University (HANU), and its communities, i.e. the university leadership, university teachers of languages and ICT experts.

Since its establishment in 1959 in Hanoi, the capital of Vietnam, the university has been well known for foreign language training. The university is a main provider of interpreters and translators for the Government and other international organisations in Vietnam. Major foreign languages that are taught at HANU include English, French, Chinese, German, Korean, Japanese, Russian, Spanish and Italian. In addition, HANU also conducts Vietnamese studies at the undergraduate level for non-Vietnamese learners. In the future, the university is planning to increase the number of courses conducted in foreign languages to meet the emerging demands of Vietnamese society (Hanoi University 2011).

## Research Methods

This study employed a mixed methods methodology so that quantitative and qualitative data could inform and supplement each other to provide an in-depth understanding of teachers' reports of actual ICT practices and training.

### *Data Collection and Analysis*

As part of a more comprehensive study, a questionnaire was developed from the literature regarding ICT use in teaching, learning and framed by the constructs that constitute the UTAUT, detailing a range of 21 possible ICT uses as shown in Table 1 below. In addition, there were 4 questions regarding the forms, content and duration of ICT training. Finally, there was one question about ICT competency and one question about ICT confidence, both of which utilised a 4-point Likert response format, ranging from 'not competent/not confident' to 'very competent/very confident'. Of the 350 questionnaires distributed to all teaching staff of 14 language departments and 2 centres at HANU, 222 were returned, resulting in a response rate of 63%. Female teachers (n = 176, ~80%) outweighed male staff (n = 43, ~20%).

After the questionnaires were returned, semi-structured interviews were conducted with three groups: i) senior leadership of HANU representing policy makers (n = 18); ii) ICT experts representing ICT trainers (n = 2); and iii) language teachers representing ICT users (n = 25). Interview questions prompted participants to discuss issues for between 15 and 30 minutes. All the interviews were digitally recorded and then transcribed for further analysis.

As a result of employing both survey and interviews, the validity of the results was strengthened (Mertens 2010; Cohen, Manion, and Morrison 2011) because the findings from the two kinds of data could be contrasted and alternative interpretations tested in multiple ways.

Data collection was completed in late 2010. Quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS version 19) while qualitative data analysis was supported by the computer software package QSR NVivo version 8. All real names of participants in this study were coded (e.g. ID 01, ID 02, etc.) to ensure anonymity of participants.

## Results

The results of data analyses relating to ICT training, ICT use and relationships between them are reported below. These constructs reflect three aspects of the UTAUT, namely facilitating conditions (i.e. ICT training), performance expectancy (i.e. usefulness) and effort expectancy (i.e. ease of use).

### *Facilitating Conditions - ICT Training*

In order to strengthen ICT literacy for teachers and keep them updated with technology, HANU organises several annual ICT training workshops for all teachers. ICT training was described as an on-going process rather than a one-off event at HANU. In general, teachers appeared aware of the need for ICT training as this was mentioned by 39.5% of the interviewees. For example: "I think that technology is constantly changing that's why I need to keep up with development of new technology" (ID 04)<sup>1</sup>. However, only a small number of academics surveyed (n = 78; 35.5%) attended the training workshops provided by the university. This was possibly due to a clash between the time of ICT training workshops and teachers' timetables (e.g. classroom teaching during week days or administering tests during weekends) preventing teachers' attendance. For example, one teacher said "I know the university has organised some ICT training courses but unfortunately I could not attend those courses because I had some classes to teach and could not manage the time" (ID 08). Moreover, a number of interviewees (n

<sup>1</sup> Interviews were conducted in Vietnamese. The examples presented here have been translated by the first author.

= 3) reported that teachers were probably not engaged because they were not consulted about their time availability, current ICT proficiency and/or training needs. “[Have you heard of or attended any ICT training courses organised by HANU?] If there is such a notice about those ICT training courses, seriously I have never heard of it, and if there are such courses, they are not many, and perhaps sometimes in a certain year there were no courses at all” (ID 14).

### ***Forms of ICT Training***

Despite the availability of training programs, university-sponsored opportunities were not the main source of ICT learning for the university language teachers. The results of the quantitative data analysis showed that language teachers picked up ICT skills from three main sources, i.e. self-learning (n = 198; 89.2%) and learning from other colleagues (n = 157; 70.7%), but only to a much lesser extent through learning from the training workshops organised by the university (n = 69; 31.1%). “I mainly learn ICT skills from my friends and colleagues at the University, kind of learning from each other; it is not like attending formal classes of ICT training” (ID 26).

It is interesting to note that informal learning of ICT skills was more widespread than the formal training conducted by the university. It seems that self-learning was the most common way of gaining ICT skills, possibly because teachers could decide what skills to learn, and where, when and how to learn them. One teacher revealed: “I mainly teach myself ICT skills. There are plenty of books teaching you how to use different software. I buy those self-study books from the bookshops and read them at home” (ID 23).

### ***Duration of ICT Training***

From the perspective of the teachers, the duration of ICT training was insufficient. According to the survey respondents, on average, academic staff received between one and ten hours of ICT training over 2 years (n = 34). Over 80% of the survey participants were not satisfied with the frequency of ICT training workshops. From their perspective, a sufficient level of teachers' competency and confidence in ICT use could not be developed with only a few hours of training. Consequently, as many as 70% of the survey respondents felt ‘not confident/a little confident’ and 75% of them felt ‘not competent/a little competent’ in ICT integration. One teacher shared the following example: “As you know, taking email for example, if we don't open our email for a few days, we may forget the password; it's the same with those techniques, if we don't practise them every day, we will easily forget how to use them. So, with only 1 or 2 ICT training workshops a year, it is really difficult for us, teachers, to become ICT competent” (ID 20).

### ***Content of ICT Training***

According to frequency analysis, over half of the content of the ICT training provided by HANU was focused on basic skills development. Respondents reported attending sessions on internet search skills (n = 33), word processing (n = 30), PowerPoint presentation (n = 28), Excel (n = 12), and the program “English Discoveries Online” (n = 12). There were some higher-level skills also attended such as e-lecture preparation (n = 22), audio editing (n = 22), and video editing (n = 9). Audio and video are essential in language learning but surprisingly audio/video editing sessions were attended by only a small number of participants. Furthermore, little was introduced regarding web-based programs, e.g. wikis, blogs and VoiceThread.

The survey data show that 77.1% of respondents reported that training content did not seem to meet the needs of teachers teaching different subjects. “I think that the training content is not enough because each teacher has a different need. Some need technology relating to audio and video while others need technology to search for and organise information. So I think that if we want to meet the needs of everyone, we need to divide teachers into different groups and each group will focus on learning the content they are interested in ...” (ID 26).

ICT training, in whatever forms it takes, is intended to increase teachers' knowledge about how to operate different ICT tools and to pave the way for ICT integration. In the next section we

report on teachers' uses of ICT in order to be able to explore the relationship between ICT training and ICT use.

### ***Performance and Effort Expectancy - ICT Use by Language Teachers***

This section describes and analyses teachers' perceptions of ICT use and their actual ICT practices in foreign language teaching at HANU. A large majority of respondents (91.2%) reported that they use ICT in foreign language teaching. This high percentage is consistent with teachers' awareness of general ICT benefits (100%) and their widespread belief in the usefulness of ICT in language teaching (99.1%).

Teachers use ICT for two main purposes: lesson preparation and classroom teaching.

#### ***ICT Use in Lesson Preparation***

Most survey respondents (97.1%) agreed that ICT would enhance lesson preparation. Frequency analysis, as shown in Table 1, revealed six tools that were most frequently used by language teachers, namely word processing (89.2%), internet search (81.1%), internet download (73%), PowerPoint presentation (70.7%), email (65.3%) and web browser (55%). "I can say that I use the internet and especially Microsoft Word every day. I have to access the internet to search for more information..." (ID 04).

Lesson preparation was mainly done at home. It seemed that teachers knew how to make full use of online resources. The internet was utilised as a 24/7 open library for teachers to locate extensive authentic resources for language practice. "For speaking skills I use the internet resources more often than computer software... Websites provide many suitable materials and I can choose valuable resources" (ID 13).

After being downloaded, those materials were processed into handouts or PowerPoint presentations. Audio-visual resources with authentic accents and real life issues were perceived to provide meaningful input for students' practice of different language skills. "As for the four macro skills such as listening, speaking, reading and writing, especially listening skills I have to prepare listening lessons. Sometimes I haven't got listening resources so I go to the internet and download relevant listening resources, or use available audio CDs, or I record my voice so that students can practise listening skills" (ID 04).

There is a strong relationship between ICT use for lesson preparation and for classroom teaching ( $r = .657$ ,  $p = .000$ ). In other words, those teachers who used ICT at home to prepare for lessons were more likely to use ICT in classrooms.

Table 1: ICT use for lesson preparation and for classroom teaching

ICT use for lesson preparation	Valid Percent (%)	ICT use for classroom teaching	Valid Percent (%)
Word processing	89.20	PowerPoint presentation	65.30
Internet search engine	81.10	Internet search engine	40.50
Internet download	73.00	Web browser	36.50
PowerPoint presentation	70.70	Word processing	33.80
Email	65.30	Voice recording	31.10
Web browser	55.00	Internet download	22.10
Voice recording	39.20	Audio editing	14.40
Audio editing	30.20	Email	13.10
Spreadsheet	27.50	Mindmapping	8.10
Education blogs	25.20	Video conferencing	6.30
Mindmapping	18.50	E-lecture making	5.00
Movie making	16.20	Education blogs	5.00
Video editing	9.90	Excel	3.60
E-lecture making	9.90	Hot potatoes	3.60
Photo editing	9.00	Movie making	3.20
Voice chat	8.10	Video editing	3.20
Hot potatoes	7.70	Photo editing	3.20
Screencasting	6.30	Screencasting	3.20
Video conferencing	5.00	Voice chat	2.30
Podcast	3.60	Podcast	1.80
VoiceThread	1.80	VoiceThread	0.90

### *ICT Use in Classroom Teaching*

ICT use differs partly according to the provision of facilities. There existed two different settings in the case study university: medium-technology and no-technology classrooms. The first setting consisted of 12 computer labs (with 520 computers) and the main library (with 250 computers) but the internet connection was neither fast nor reliable. In the medium resource and medium access context, the most popular tool for teachers was PowerPoint (n = 145, 65.3%), followed by internet search engine (n = 90, 40.5%), web browser (n = 81, 36.5%), word processing (n = 75, 33.8%), voice recording (n = 69, 31.1%), and internet download (n = 49, 22.1%) (see Table 1). On the other hand, in the no-tech context, which covers all remaining classrooms, those teachers who wanted to use ICT had to bring their own laptops and data projectors to classrooms and they made little use of ICT.

Regarding ICT use in teaching different language skills and subjects at HANU, frequency analysis showed that teachers used ICT the most in teaching listening (n = 94, 55.8%) and speaking skills (n = 59, 36.5%) (see Table 2). Extensive resources on the internet provide teachers and students with authentic language input and various accents for language practice. Survey respondents reported some popular sources of audio-visual materials such as YouTube, TeacherTube, broadcasting corporations (e.g. ABC, BBC, CNN, etc.) and the like. ICT was not used much in teaching writing skills (n = 17, 10.5%) and other subjects/skills.

Table 2: Frequency analysis of teachers' use of ICT according to language skills/subjects

Skill/subject-based ICT use	Valid percent (%)	Skill/subject-based ICT use	Valid percent (%)
Listening	55.8	Cultures & Civilisation	9.7
Speaking	36.5	Pronunciation	9.2
Reading	16.4	Translation	8.8
Interpreting	15.1	Grammar	8.2
Vocabulary	12.7	Literature	5.3
Writing	10.5	Phonetics	3.7
		Lexicology	3.7

When ICT was integrated into language lessons, teachers noticed a meaningful impact on teaching and learning. Academics reported that ICT improved their teaching performance (98.1%), increased productivity (96.7%) and helped develop the expertise in their subject areas (94.9%). As for students' benefits, teachers perceived that ICT increased students' study motivation (100%), promoted deeper understanding of subjects (92.5%), provided ubiquitous opportunities for language skill practice (90.5%) and enhanced employability for students in the future (95.7%).

Despite the positive views of all respondents, the frequency of ICT use by teaching staff at HANU was not high. Only 46.2% of respondents sometimes used a computer at HANU, 15.6% rarely, and 4% never used it. This was possibly due to limited access to ICT facilities and low quality of facilities. Less than 60% of respondents reported having access to desktop computers at the university. Over 70% of the questionnaire respondents agreed that the quality of the desktop computers was much less than adequate.

***Relationship between Performance Expectancy (PE), Effort Expectancy (EE), Facilitating Conditions (FC) and ICT Use***

Logically, any ICT tools, which are regarded as easy and useful, are more likely to be used and vice versa. In our study, correlation analysis showed a statistically significant association between performance expectancy and effort expectancy, and ICT use for both lesson preparation and classroom teaching (see Table 3). Some ICT tools, e.g. word processing, presentation software, internet search and download, are frequently used by teachers because those tools are considered as very useful and very easy to use.

Table 3: Correlations between PE, EE, FC and ICT use

		ICT use for preparation	ICT use for classroom teaching
PE Performance expectancy (i.e. usefulness)	Pearson Correlation	.283**	.229**
	Sig. (2-tailed)	.000	.001
	N	205	205
EE Effort expectancy (i.e. ease of use)	Pearson Correlation	.343**	.330**
	Sig. (2-tailed)	.000	.000
	N	203	203
FC Facilitating conditions (i.e. ICT training)	Pearson Correlation	-.160*	-.006
	Sig. (2-tailed)	.028	.931
	N	189	189

However, it is interesting that facilitating conditions had a negative relationship with the use of ICT for lesson preparation ( $r = -.160$ ,  $p = .028$ ). This means that even though ICT training is viewed by teachers as essential for lesson preparation, the current level of ICT training is insufficient and does not meet teachers' needs. Moving on to classroom practice, facilitating conditions showed no significant relation with ICT use in the classrooms ( $p = .931$ ) (see Table 3). Table 2 shows that there is substantial, but not dominant use of ICT in a range of classroom practices. However, the negative relationship between ICT training and ICT use (presumably reflecting perceptions of its inadequacy) suggests that practices in the classrooms are affected by factors other than ICT training.

## Conclusions and Implications

The results of the case study show that ICT training impacts ICT use for lesson preparation but not ICT practices in the classroom. The more training teachers receive, the more skillful teachers get, the more ICT confident and competent they become, the more likely they are to use ICT for lesson preparation. The correlation analysis also shows statistically significant relationships between ICT use (for lesson preparation and classroom teaching) and both effort expectancy and performance expectancy. The more useful and easier ICT tools are, the more likely teachers are to use those tools. This study shows that despite an overall institutional approach intended to promote the use of ICT, use of the UTAUT framework shows that facilitating conditions do not have the same relationship with teacher uses of ICT as do performance and effort expectancy.

In relation to facilitating conditions, despite the annual organisation of formal ICT training at HANU, the training duration is insufficient, the level of teacher attendance is low and the training content is rather basic, with the main focus on how to use Microsoft Office, internet search and download. As a result, the most frequently used tools by teachers are Word, PowerPoint, internet search and download. Other Web 2.0 tools, such as blogs and VoiceThread, are barely used, thus there is little evidence of innovative changes in teaching and learning.

These findings have some practical implications for ICT training in the future. One of the main aims of ICT training is to equip teachers with ICT skills relevant to their teaching. However, the results showed that ICT training focused on discrete technical skills rather than on how to use those skills to prepare for and/or to teach specific subjects/language skills. Moreover, even if academic staff could ideally absorb all the ICT skills introduced in the training sessions, their ICT mastery appears to be a necessary condition rather than a sufficient condition for the integration of ICT into everyday teaching and learning (Trucano 2005). It is generally agreed that

“while computers will not replace teachers, teachers who use computers will eventually replace teachers who don’t” (Clifford 1987, 13).

Therefore, if ICT training is to become more influential, teachers, as the main ICT users, should be consulted on the set of ICT skills relevant to the subjects they are teaching. In addition, teachers should be trained in how to use Web 2.0 tools to transform the quality of teaching and learning languages. It is also interesting to note that most teachers pick up ICT skills through self-training or learning from other colleagues. Therefore, an ICT peer support group should be established in each department to provide on-demand and just-in-time assistance.

It is essential for the university leadership to develop teacher-centric training workshops and learn from useful guidelines such as TESOL technology standards framework (Healey et al. 2008), UNESCO ICT competency framework for teachers (UNESCO 2011), and guides for institutions and teachers in ICT integration into language teaching and learning (Kumar and Tammelin 2008; Rozgiene, Medvedeva, and Straková 2008; Williamson and Redish 2009). In general, teachers think differently and learn new things differently (Leach et al. 2005). So it is sensible that ICT training should be organised in various ways to accommodate those differences, e.g. combining face-to-face with online training, using both printed materials and digital resources on the internet, etc. It is advisable that ICT training should be recorded and uploaded to a repository to support anytime, anywhere learning and revision of ICT skills. Relevant ICT training resources should be collected or developed and stored in an online repository for 24/7 access by teachers. A good example is the website of teacher training videos (Stannard 2011) providing short, step-by-step online training tutorials on the use of different ICT tools.

ICT facilities should be installed in each classroom. There should be internet connection and at least one computer in each classroom to promote ICT-based classroom practices.

Further research may be needed to identify appropriate forms of training for teachers in how to use ICT effectively to improve pedagogical practices, e.g. using online, self-study videos and peer support groups, and how to measure the impact of ICT use on outcomes of language teaching and learning. Other factors affecting ICT use in classroom teaching should also be further studied.

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*Ubiquitous Learning: An International Journal* sets out to define an emerging field. Ubiquitous learning is a new educational paradigm made possible in part by the affordances of digital media.

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