KEY BARRIERS TO ICT UPTAKE IN FOREIGN LANGUAGE TEACHING IN VIETNAM: A CASE STUDY

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Abstract

Information and communications technology (ICT) has a high profile in education and has been increasingly integrated into teaching and learning at all levels in Vietnam. Logically, ICT, which is perceived to bring about numerous positive benefits, should be warmly received by all teachers. However, this is not the case for foreign language teachers in Vietnam. This paper provides a critical analysis of key obstacles to ICT uptake in foreign language teaching at tertiary level in Vietnam. This is a result of a case study at Hanoi University (HANU). The data were collected from 222 survey questionnaires and 43 semi-structured interviews with HANU teaching staff, leadership and ICT experts. The findings show that barriers existed at both institutional and teacher levels. Lack of guidelines, training and support for ICT use in teaching, and limited resources were among the key barriers. The implications of the study are also discussed. Developing objective understanding of the inhibiting factors could be significant for successful ICT integration into modern language teaching in the future.

Keywords: ICT, integration, barriers, foreign language teaching, Vietnam.

1 INTRODUCTION

Information and communications technology (ICT) has experienced fast development worldwide since the 1980s and has become an integral part in nearly all aspects of people’s life \cite{1-3}. Like other countries in the world, Vietnam places high expectations on ICT in education. The school year 2008-2009 was chosen by the Ministry of Education and Training of Vietnam as “the Year of ICT” \cite{4}. It seems that this theme will continue for the next few years.

Literature in the field of ICT in teaching and learning reveals both opportunities and challenges with regard to ICT adoption in education \cite{5,6}. In the area of foreign language teaching and learning, these opportunities and challenges could range from new, authentic resources, pronunciation drills, text manipulation to interactive practice, collaborative and communicative applications \cite{7,8}.

In Vietnam, various legal documents have been issued to create a conducive environment for ICT uptake in education. One of the key documents is the Directive No. 55/2008/CT-BGDĐT on strengthening ICT use in teaching and training in the educational system for the period 2008-2012 \cite{9}. Furthermore, the 14\textsuperscript{th} draft of the Education Development Strategy of Vietnam \cite{10} goes beyond today to set an ambitious target that by the year 2015, 80% of school teachers, and 100% of college and university teachers are expected to be able to use ICT effectively in their classroom teaching. Teachers at all levels have been assigned an important task to find ways to integrate ICT into the curriculum. ICT experience in other countries shows that ICT adoption seems easy for some teachers but difficult for others \cite{11,12}.

1.1 Aims of research

The extent and nature of ICT use by academic staff in Vietnam is varied \cite{13}. To the best of our knowledge, so far no research has been done about the factors affecting staff adoption of ICT in foreign language teaching in Vietnam. Thus, this paper aims to report and analyse evidence of a recent empirical study in a Vietnamese university regarding the staff’s perceptions of ICT barriers, then to make suggestions to reduce those obstacles for successful ICT integration in the future.
1.2 The case study university

The site of our case study is Hanoi University (HANU), a public university founded in 1959 in Hanoi, the capital of Vietnam. The university is well known for foreign language training, and mainly serving students coming from the north of Vietnam. Major foreign languages taught at HANU include English, French, Chinese, German, Korean, Japanese, Russian, Spanish and Italian. Recently, foreign languages have become the language of instruction for some courses, e.g. English is being used to teach business administration, tourism, international studies, finance, banking and computer science; Japanese for computer science, etc. Moreover, 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 increasing demands of society [14].

HANU is a prestigious training institution. For over a decade, most of important programs on foreign languages training for senior Government officials and pre-departure students have been conducted at HANU. The university is also a main provider of interpreters and translators for the Government and other international organisations nationwide to meet the demand for the international integration process of Vietnam. HANU has been making concerted effort to gradually move toward international education, increase the use of advanced technologies in teaching and learning in order to improve the training quality and enhance employability for its students in the future. Moreover, HANU is striving to become a research university matching with other universities in the Asia-Pacific region and the world. The university is proud to publish *The Journal of Foreign Language Science*, the only journal in Vietnam in the field of foreign language education. Since the year 2000 ICT facilities at HANU have been considerably improved thanks to the soft loans from the World Bank and other sources. However, availability of ICT facilities is not synonymous with ICT use by staff [14].

1.3 Definition of ICT

The term ICT can have different definitions. It can refer to computers, digital cameras, the Internet, and the World Wide Web [15-17]. ICT could also be associated with computer-based and computer-related devices [16]. In this study, the term ICT is used to describe the computer-based, and the internet-related technologies, covering 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 about purposeful language teaching and learning [7, 18].

2 RESEARCH APPROACH

2.1 Methodology

An interpretative case study strategy [19, 20] was used in this research. The case study institution was carefully selected on considerations of ICT being used in all language departments, various age groups and mixed gender. A mixed methods approach was adopted to gain a panorama of ICT implementation and factors which could hinder academic staff from using ICT. It was therefore necessary to work with teaching staff, ICT staff and senior leaders, and to work at both individual level and institutional levels.

2.2 Data collection

Two main instruments of data collection were survey questionnaire and interview. Questionnaires were delivered and collected by administration assistants to 350 academic staff of 14 language departments and 2 language centres to gain both collective and individual view of ICT use and ICT barriers at our case study university. Only 222 questionnaires were returned, resulting in a response rate of 63%. The questionnaires aimed to gather information about the actual state of ICT facilities, training, support, ease of use, usefulness, inhibiting as well as enabling factors, and suggestions for good practices of ICT in language teaching.

After the completion of questionnaires, semi-structured interviews were conducted with academic staff (as ICT users), senior leadership (as policy makers) and ICT staff (as ICT trainers) (N = 43) (see Table 1). All the interviews were conducted on campus during the university working days and digitally recorded for later analysis. The interviews were a good chance for the participants to provide multi-
faceted insights into ICT implementation, quality of ICT facilities, causes of ICT barriers, ICT training, ICT vision, organisational culture, and attitudes toward ICT use in language teaching.

Table 1. Participants in questionnaire and semi-structured interviews

<table>
<thead>
<tr>
<th>Questionnaire (N = 222)</th>
<th>Semi-structured Interviews (N = 43)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>176 (~80%)</td>
<td>43 (~20%)</td>
</tr>
</tbody>
</table>

2.3 Data analysis

The responses from the questionnaires were coded, entered into an Excel spreadsheet for data displays before being transferred to the Statistical Package for the Social Sciences (SPSS) program for further analysis. Statistical analysis with SPSS was conducted according to the guidelines by Pallant [21]. As for the recorded interviews, they were transcribed, and then entered into the NVivo program for coding, data reduction and interpretation. The use of different data sources and approaches can strengthen the validity of the findings [22, 23].

2.4 Theoretical framework

The Unified Theory of Acceptance and Use of Technology (UTAUT) was used (see Fig. 1) to help interpret academic staff’s perceptions of ICT uptake in this case study. It is reasonably argued that this theory is a comprehensive framework in that it incorporated the influential constructs of eight theories and models relating to technology acceptance and use, namely the theory of reasoned action [24], the technology acceptance model [25], the motivational model [26], the theory of planned behaviour [27], the model of personal computer utilisation [28], the innovation diffusion theory [29] and the social cognitive theory [30]. Thanks to this combination, UTAUT could possibly explain “as much as 70 percent of the variance in intention” to use technology [31]. Some constructs deal with individual ICT users (e.g. age, experience, performance expectancy and effort expectancy), whereas others with broader contexts (e.g. social influence, facilitating conditions). In short, UTAUT provides useful lenses to better understand factors influencing ICT uptake at both individual and institutional levels.

![Figure 1. The Unified Theory of Acceptance and Use of Technology (UTAUT) [31]](image-url)
3 FINDINGS AND DISCUSSIONS

The data analysis revealed a number of key barriers to ICT uptake by academic staff to be summarised in Table 2. Those barriers are presented under two headings, i.e. barriers at the institutional level and barriers at academic staff level.

Table 2. Major barriers to ICT uptake in foreign language teaching

<table>
<thead>
<tr>
<th>Major barriers</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HANU has no official document guiding the use of ICT in teaching and learning</td>
<td>3.14</td>
<td>.843</td>
</tr>
<tr>
<td>This official ICT guideline has not been well disseminated to all staff.</td>
<td>3.20</td>
<td>.828</td>
</tr>
<tr>
<td>ICT training is not customised according to the actual ICT skills of teachers.</td>
<td>3.12</td>
<td>1.127</td>
</tr>
<tr>
<td>The content of ICT training courses at HANU does not meet my need.</td>
<td>3.20</td>
<td>.979</td>
</tr>
<tr>
<td>I do not receive strong support for ICT use from HANU leaders.</td>
<td>2.61</td>
<td>.906</td>
</tr>
<tr>
<td>I do not receive strong support for ICT use from the leaders of my Department/Centre.</td>
<td>2.39</td>
<td>.950</td>
</tr>
<tr>
<td>Teachers have limited access to HANU computers.</td>
<td>3.22</td>
<td>.992</td>
</tr>
<tr>
<td>Only some classrooms at HANU are equipped with computers and internet connection.</td>
<td>3.83</td>
<td>.515</td>
</tr>
<tr>
<td>Teachers have to share HANU computers with others.</td>
<td>3.70</td>
<td>.655</td>
</tr>
<tr>
<td>Most of HANU computers do not have software for purposeful language teaching.</td>
<td>2.94</td>
<td>.924</td>
</tr>
<tr>
<td>I believe that ICT increases workloads for teachers.</td>
<td>2.82</td>
<td>1.113</td>
</tr>
</tbody>
</table>

Note: Range is 1-4, where 1 = disagree, 2 = disagree a little, 3 = agree a little, and 4 = agree

3.1 Barriers at the institutional level

At the institutional level, there seem to be three main obstacles such as lack of ICT guidelines, lack of appropriate ICT training and lack of appropriate support for ICT use. Those barriers have been also mentioned in the literature review by Mumtaz [32], Bingimlas [33] and in a report by the former British Educational Communications and Technology Agency [34].

3.1.1 Lack of ICT guidelines

According to the analysis of the survey data, lack of ICT guidelines was possibly perceived as the first barrier. It is generally agreed that a university needs to have an ICT plan, strategy or similar document to broadly express the rationales and expectations of ICT use [35-37]. In our case study, during the interviews, the senior leadership stated that the ICT guidelines were embedded in annual reports and posted to the university website. However, those guidelines could not be found on the university portal at the time of the data collection (second half of 2010). Over 80% of the survey participants reported that they had never seen or read the ICT guidelines. The majority of the respondents (92.5%) also
agreed that if the ICT guidelines ever existed, they failed to reach the staff, consequently leading to the absence of the sense of purpose and discrete ICT use by the teaching staff.

Suggestions for ICT guidelines: There are possibly two essential tasks which the senior leadership need to do: i) to issue a statement which states the goals of ICT use with clear steps/stages of implementation, and ii) to disseminate this document to all staff in different ways, e.g. talking about it at meetings, uploading it to the university website and keeping at least a printed copy in each department, etc. HANU does not have to do everything from scratch but can learn and adapt from ICT master plans or guidelines of other universities in the world.

3.1.2 Lack of appropriate ICT training

Annually HANU conducts ICT training courses for teaching staff. However, the training is not well planned in advance. There is no training schedule for each month. Most of training workshops are often conducted on an ad-hoc basis when there is a new software program for administrative work or a new language laboratory. ICT workshops covered only basic and generic skills such as internet searching, word processing and PowerPoint presentation rather than focusing on specific programs with potentially more specific for language teachers such as audio editing, video editing, e-lecture preparation, etc. Survey respondents reported that during the two academic years 2009 and 2010, teaching staff received about 5-10 hours of ICT training on average. For over 80% of respondents, the frequency of those ICT training courses fell short of staff’s expectations. Besides, ICT training content is often decided by the senior leadership without consultation with academic staff about which ICT skills they want to learn. Consequently, the quantity and quality of ICT training do not meet the actual needs of teaching staff, leading to their limited ICT use.

Suggestions for ICT training: HANU should use a bottom-up approach by asking academic staff (i.e. the actual users of ICT in classrooms) about the ICT skills which they find useful for their teaching. On that basis, a yearly plan for ICT training should be made and well disseminated to all staff. If conditions allow, all ICT training workshops should be digitally recorded and stored online so that academic staff can watch those clips as many times as they want. Academic staff should be officially encouraged to use ICT and share their ICT experiences with others. This suggestion is also recommended by other researchers [38]. HANU should also make full use of free online training videos such as [39].

3.1.3 Lack of appropriate support for ICT use

It is possibly fair to state that HANU has made special efforts to improve ICT facilities over the years, e.g. buying more computers, LCD projectors, digital databases, and installing more servers [40]. However, availability of technologies does not mean that they will be put into use. As a public university, HANU has no budget lines for financial incentives to promote ICT adoption. Reward regimes are absent. Currently, those who are high and medium users of ICT do not receive any rewards or official recognition.

“We only receive unofficial praise or our students pass on good words to others, that’s all. Perhaps we don’t receive any material incentives” (Interviewee, ID 22).

Similarly, nothing happens to low and non-users of ICT. Therefore, nearly 50% of survey respondents perceived that staff-oriented support for ICT use is still missing.

Suggestions for ICT support: While there are still no financial incentives for ICT use, perhaps the university leadership should make full use of a non-financial incentive mechanism, e.g. official recognition at university meetings, commendation papers, support for conference attendance, etc.

3.2 Barriers at academic staff level

At staff level, the barriers seem to be more practical and include limited ICT resources, lack of ICT confidence and competence, and fear of increased workloads.

3.2.1 Limited ICT resources

Over 80% of the respondents reported that they had limited access to computers. At the time of the study, there were about 1000 desktop computers in HANU. Most of the desktop computers were concentrated in the main library (250 computers) and 12 computer labs (520 computers), and are shared by both academics and students. With the total number of about 15,000 students and 350

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1 Interviews were conducted in Vietnamese. The excerpts presented here have been translated by the first author.
language lecturers, the number of computers was far below the demand. Less than 60% of respondents reported having access to desktop computers at the university. Consequently, the frequency of computer use by academics was not high, i.e. 46.2% reported that they sometimes used a computer at HANU, 15.6% rarely, and 4% never. In each department there was only one or two usable desktop computers for shared use. According to 70% of the survey participants, the quality of those computers was much less than adequate. Therefore, those machines were only used to check emails or read e-newspapers rather than for lesson preparation purposes.

Laptop computers are not available for loans at HANU. The viewpoint of HANU leadership is below.

The university can only invest in the ICT infrastructure, for example investments in improving the internet network, but about the equipment [laptop computers], it is the responsibility of the individual lecturer. The university cannot provide everything. (Interviewee, ID 42)

Many lecturers spent their pocket money buying a computer for personal use. The survey results revealed that a high percentage of teaching staff (66.2%) reported having a laptop, but these laptops were personal property and were intermittently brought to classrooms. The general impression of academics is that it is not fair to use personal property for teaching work at the university.

Suggestions for ICT resources: The university should make it easier for ICT to be integrated in normal classrooms, e.g. providing internet access (wired or wireless), mobile computer carts, mobile LCD projectors, explaining the current status of limited ICT resources on campus and encouraging academics to bring their personal laptops to classrooms.

3.2.2 Lack of ICT confidence and competence

In our case study, the obstacles to ICT usage are not due to fear of technology but due to the lack of staff confidence and competence. Nearly 70% of survey participants did not feel confident or only a little confident in using ICT for teaching languages (see Table 3). Male staff seemed to be more confident in ICT than female staff. However, the Pearson chi-square test of significance shows that the male-female difference in confidence level is not significant (p = .204). Confidence is closely related to competence. 62.7% of survey respondents felt a little competent in ICT and 12.4% not competent. One of possible causes related to ICT training content which mainly focused on basic ICT skills such as email, internet search, download, word processing and powerpoint presentation. Respondents reported difficulty when it came to specific software to support language teaching, e.g. voice recording, screencasting, software to design grammar exercises (e.g. Hot Potatoes), video editing, audio editing, movie making, e-lecture making and podcasting.

Table 3. Frequency of staff confidence and competence in ICT use for teaching

<table>
<thead>
<tr>
<th></th>
<th>% ICT confidence</th>
<th>% ICT competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not confident/competent</td>
<td>11</td>
<td>12.4</td>
</tr>
<tr>
<td>A little confident/competent</td>
<td>57.8</td>
<td>62.7</td>
</tr>
<tr>
<td>Confident/competent</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Very confident/competent</td>
<td>3.2</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Suggestions for ICT competence: To address the ICT confidence and competence of academic staff, the university should strengthen the staff-centred ICT training. Staff are encouraged to learn from one another and share what works or does not work during ICT implementation.

3.2.3 Increased workloads

In general, to prepare a technology-enhanced lesson takes a lot of time and effort [41, 42]. This view was shared by over 60% of survey participants. It is our observation that teaching staff prefer to deliver teaching with the least effort, i.e. teaching what is available in printed textbooks rather than spending more time on using technology. Using ICT in teaching requires lecturers to spend extensive time, first to learn how to use new technology, next to try it for lesson preparation, and then to teach lessons with ICT. All those require a lot of time and commitment of already busy staff. Over 60% of respondents reported feeling that ICT increased their workloads.

As for lecturers, increased workload means having less time for new technologies or new software. A single demonstration of how to use an interesting software program is not enough. Several illustrations are not enough either. ICT users need to have time to actually try out this new software program by themselves; it could be a failure or success; but that's the way they learn how to use new technology. Unfortunately, our teaching staff have no time for that, I mean, let's look at their workloads; they have many hours of classroom teaching, a lot of lesson preparation, and on top of that they have to teach
extra classes to supplement family’s income. All that affects their time availability to learn how to use ICT (Interviewee, ID 38).

Suggestions for reduction of workloads: Anecdotes of ICT benefits should be shared among staff. There is a general agreement that although it is time consuming to prepare ICT-enhanced lessons at first, it will take less time when staff ICT use becomes more skillful. Moreover, those lessons can be quickly adapted to be used again in the future.

4 CONCLUSIONS

The analysis of both quantitative and qualitative data in this case study identified some main barriers to ICT uptake at the institutional and staff level. The findings in this study should not be considered a pure list of discouraging obstacles to ICT adoption by staff, but more appropriately a valuable input for both senior leadership and academics to come up with an appropriate and evolving strategy to further encourage staff ICT usage in the future. The argument is not whether which barrier is the most urgent and should be solved first, however it means that an all-embracing approach should be undertaken to address those challenges in a comprehensive manner.

It can be noticed that only published work is quoted in this study, consequently leaving other unpublished work unexplored. Moreover, the limited scope of the study site – only one university in Vietnam – only reveals part of a bigger picture of ICT use in foreign language teaching in Vietnam. However, given the similar results of previous research on ICT use in education in both developed and developing countries [43, 44], it could be hoped that the study findings and suggestions described in this paper may be taken forward by university leaderships, academic staff and researchers in other contexts as well.

Suggestions for future research: Further research may focus on the impact of ICT use on language teaching; specific ICT skills/software essential for language teachers, if possible to be broken down into which ICT skills are suitable to teach which subjects; appropriate forms of on-going ICT training for language teachers; and frequently updated good practices for ICT use in language teaching.

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