E-learning in EFL education in Thailand's higher education: The role for lecturers making it work

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ABSTRACT

In Thailand, as in many other nations in Southeast Asia, e-learning has become the key issue in universities today and has a significant influence on current education (Hong & Songan, 2011; Welch, 2011). In this article, e-learning is defined as learning that is supported by information and communication technology (ICT). This study examines the use of ICT in English as a Foreign Language (EFL) education in higher education and outlines the role and response of lecturers concerning e-learning policy on different aspects of EFL education in the Thai higher education context. Data gathered from questionnaires and interviews show that lecturers from two Thai universities have favourable attitudes towards e-learning. The findings also demonstrate that there are some barriers to the take-up of e-learning in Thai EFL higher education which are: (a) insufficient ICT infrastructure; (b) lack of technical support; (c) insufficient ICT skills; and (d) resistance to change. These barriers are seen as key factors that need to be considered in building a richer e-learning environment and developing the best possible EFL teaching and learning practices in Thailand.

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INTRODUCTION

There is a significant change in teaching and learning at universities across the world in the era of ICT (Barrett, Higa, & Ellis, 2012; Garrison, 2011; Hu & McGrath, 2011). E-learning has the potential to offer new and alternative ways of teaching and learning and to increase the ability of students to acquire new skills (Sife, Lwoga, & Sanga, 2007). A large number of universities now offer classes that use e-learning in some form as an enhancement to face-to-face classes and as a means of delivering course content interactively (Fallows & Bhanot, 2005).

One of the strongest arguments for promoting e-learning lies in its potential to improve and even revolutionise teaching and learning (OECD, 2005). The introduction and development of e-learning has caused numerous changes in higher education, especially with respect to educational delivery and support processes (Bhuasiri, Xaymoungkhoun, Zo, Rho, & Ciganek, 2012). ICT-supported learning is viewed as having a major role to play in confronting the challenges of interactive and lifelong learning (Richards, 2006; Voogt & Plomp, 2010). ICT has the capacity to improve traditional teaching methods, enrich students' learning experience, and increase the potential impact of learning on performance (Pedro, 2005). However, in exploiting ICT and delivering e-learning opportunities, the question of how to make effective use of e-learning is complex. This is because different policy, financial environments, and administration may change the impact on the shape of e-learning provision in higher education (OECD, 2005).

Most universities in Thailand are now implementing e-learning. E-learning has been recognised as one of the important areas of Thailand's national information technology policy for the period 2011-2020, known as ICT2020 (Ministry of Science and Technology, 2011). ICT2020 is the national policy framework for ICT development, which aims at building a knowledge-based society focusing on the effective use of ICT.

The national policy ICT2020 is not the only contributing factor to bringing about the integration of ICT in higher education. Another important force is the National Education Act of Thailand 1999.

According to this Act, the government has a strong policy to reform higher education by means of technology in order to create more educational opportunities, reduce the difference in the knowledge levels of the population, and provide chances for lifelong learning in Thai society (Office of the National Education Commission, 1999).

The Thai Commission on Higher Education has developed and provided the UniNet ICT infrastructure to connect all universities in Thailand to the Internet for education and research purposes (Commission on Higher Education, 2005). The Commission continued to promote Thailand's information network systems among universities by establishing the Thailand Cyber University in 2005. The aims are: (a) to assist all universities to deliver distance learning via the Internet; (b) to ensure that all online courses are of a high quality and meet government standards; and (c) to promote the sharing of educational resources such as courseware, learning media, e-books, e-journals, and digital contents (e.g., research articles, theses, and dissertations) (Thailand Cyber University, 2006).

In Thailand, e-learning has been implemented throughout all levels of education for a variety of objectives, especially in higher education. Most universities use e-learning as a supplementary tool to enhance in-class instruction rather than using it as the principal teaching method (Siritongthaworn & Krairit, 2006). Universities have been offering e-learning opportunities in face-to-face and online modes, substantially focusing on ICT (Thailand Cyber University, 2006). This means that face-to-face learning is still the primary method of instructional delivery, while e-learning is used as an alternative by lecturers and students to enhance classroom teaching and learning.

The implementation of e-learning requires a cultural shift in which the change management process needs to be handled sensitively and strategically if it is to have any chance of being successful (Czerniewicz & Brown, 2009). In an e-learning environment, it is necessary for lecturers to know how to teach using ICT. Thus, encouraging the understanding of pedagogical approaches to e-learning is required for successful e-learning.

In the current study, the research questions focus on the responses of English lecturers to the adoption of e-learning, and on

the reported barriers to e-learning, with a focus on the strategies adopted to optimize EFL education in higher education in Thailand. The research questions are as follows:

1. What is the response of lecturers to the adoption of e-learning in Thai EFL higher education?
2. What are the reported barriers for the uptake of e-learning in Thai EFL higher education?

RESEARCH METHODOLOGY

Case studies

The case study approach was used to underpin this qualitative study of the use of ICT in EFL education in two Thai universities. The case study universities are Khon Kaen University (KKU) in Khon Kaen and King Mongkut's University of Technology Thonburi (KMUTT) in Bangkok. Both universities are among the leading Thai universities providing students with a campus wide e-learning environment, and are in the process of introducing ICT-based learning contexts (see websites www.kku.ac.th and www.kmutt.ac.th).

KKU and KMUTT were chosen because of their different standpoints and cultures in terms of university size, student population, mission, administration, and higher education strategies. KKU is regarded as the largest and oldest campus-based regional university while KMUTT is a medium-sized Bangkok urban university. The mission of KKU remains essentially to offer course curricula to students and to engage in research. In comparison with KKU, KMUTT seems to have a stronger commitment to and support for e-learning at the policy level, as e-learning is seen as an important way to improve the quality of teaching and learning. Nonethless, both universities have strategic plans to cope with the radical changes involved in e-learning.

In terms of administration, KKU operates under the Ministry of Education, which has its own Minister of Cabinet. Unlike KKU, KMUTT is not subjected to the rules and regulations of the civil service system. KMUTT is the first public university in Thailand to be transformed into a university outside the civil service system. The

government gives KMUTT total control over its budget, allows it to own and manage property, and grants authority to set up new faculties and departments, as well as introduce new academic programmes.

In Thailand, different universities are at different stages in the level of their integration of ICT into teaching and learning. Thus, the two case study universities, which have different philosophical and theoretical stances, have been examined as regards to what they are trying to do with the provision of e-learning. By comparing these two universities is valuable as it will highlight different successes, issues, and barriers.

METHODS

In this study, questionnaires and interviews were used for data collection, in order to explain the multiple facets of the cases. The database is part of a larger study which fully examined the government e-learning policies, as well as the responses of students and lecturers concerning e-learning in Thai EFL higher education. Ethics approval was obtained before conducting the study.

The questionnaire aimed at assessing the current use of e-learning within EFL education in Thailand. The questionnaire was designed to measure lecturers' attitudes towards e-learning, and the overall satisfaction with EFL courses where ICT is used for teaching. The questionnaire also aimed to evaluate the current strengths and weaknesses of implementing e-learning into EFL courses in higher education.

In this study, the questionnaire was initially piloted with a group of lecturers to verify the construct validity and content validity. Content validity was examined by two experts. The reliability coefficient for the lecturer questionnaire was .85.

The sample for the lecturer questionnaire aimed to cover all lecturers teaching EFL in KKU and KMUTT. Some lecturers were contacted in person, while some were sent a package containing an invitation to participate in the research, a Participant Information Sheet, a Participant Consent Form, the lecturer questionnaire, and an addressed envelope with stamps for the return of the questionnaire.

All lecturers were given two-week time to complete and return the questionnaire.

Since the fieldwork was conducted near the end-of-year examinations period, lecturers in both universities were very busy. Consequently, Two-week lecturers were given two more weeks to return the questionnaire. Mailing envelopes with stamps were provided for all lecturers who did not return the questionnaire in two weeks.

The questionnaires were distributed to all lecturers teaching EFL in KKU (n=36) and in KMUTT (n=29). A total of 51 lecturers (KKU n=30, KMUTT n=21) returned the questionnaires, which accounts for 78.5% of the total number of lecturers teaching EFL in the two universities, indicating an acceptable response rate and demonstrating a strong commitment to e-learning.

An interview strategy was also adopted to enable the collection of personal responses to the research questions. The purpose of the interviews was to provide personal responses relevant to the key research questions and to issues emerging from the preliminary analysis of the questionnaire data of those who agreed to be interviewed. The questions include the perceptions of the effectiveness of e-learning, its major successes and problems, and the roles of the university in e-learning. The participants were asked about their experience of teaching with ICT in EFL courses. In addition, lecturers had the opportunity to comment on current practices in e-learning and to make recommendations for the improvement of e-learning.

Eight lecturers teaching EFL courses (four from KKU and four from KMUTT) participated in the interviews. Appointments were made with the lecturers and lecturers were notified of dates and times they would be interviewed.

The researcher decided to use unstructured interviews, in which the emphasis is placed on the participants' thoughts and encouraging participants to speak in more depth on the issues raised by the interviewer. Since the interviews were unstructured, time spent for the interviews with each lecturer varied. Each interview was of approximately 30-40 minutes duration. The interviews with individual

lecturers were audio-recorded with their consent. Since both the researcher and participants are native Thai speakers, the interviews were conducted in the Thai language. Subsequently, the interviews were transcribed and translated from Thai into English.

The data from lecturer interviews were analysed using content analysis to help identify and summarise important themes that emerged. Results were manually coded and grouped into themes according to the research questions.

The qualitative data are reported in terms of common. All names used in the data analysis and discussion of the findings are pseudonyms. The descriptive results of interviews were analysed to determine if the findings support those of the lecturer questionnaires.

FINDINGS AND DISCUSSION

Lecturers' responses to the adoption of e-learning in EFL education

According to Sang, Valcke, van Braak, Tondeur, and Zhu (2011), motivation is considered as an important factor influencing lecturer uptake of ICT in their teaching. Factors influencing motivation include positive and negative attitudes towards ICT. This section reports the findings from the lecturer questionnaire first and then the findings from the interviews are provided as support for the lecturer questionnaire.

Findings from the questionnaire

Table 1 reports the means and standard deviations for the questionnaire responses. Overall, the findings show that lecturers had positive attitudes towards the role of ICT in e-learning and in supporting their teaching practice. Statement 1 "ICT is particularly important for the running of the course I teach" appears to capture how lecturers perceived the importance of ICT and whether they used ICT in their EFL teaching. The mean response here was 4.31 (SD=0.86). Statement 2, which asked lecturers whether they were enthusiastic about using ICT in their EFL teaching received a very positive endorsement (M=4.47, SD=0.67).

TABLE 1

Lecturers' attitudes towards using ICT in EFL education

Statements	KKU & KMUTT			KKU			KMUTT		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
1. ICT is particularly important for the running of the course I teach.	51	4.31	0.86	30	4.13	0.93	21	4.57	0.67
2. I am enthusiastic about using ICT in my EFL teaching.	51	4.47	0.67	30	4.33	0.75	21	4.67	0.48
3. I am confident about using ICT in my EFL teaching.	51	3.86	0.72	30	3.80	0.71	21	3.95	0.74
4. ICT makes EFL teaching more interesting.	51	4.31	0.94	30	4.27	0.98	21	4.38	0.92
5. ICT enhances the interaction between the lecturer and students.	51	4.45	0.80	30	4.33	0.92	21	4.62	0.59
6. ICT increases flexibility in EFL teaching and learning.	51	3.39	1.09	30	3.20	1.03	21	3.67	1.15
7. ICT helps students become more effective in their EFL learning.	51	4.53	0.61	30	4.40	0.67	21	4.71	0.46
8. ICT increases students' motivation to learn EFL.	51	4.39	0.80	30	4.20	0.88	21	4.67	0.57
9. ICT increases students' ability to learn on their own.	51	3.86	1.00	30	3.63	1.03	21	4.19	0.87
10. ICT helps students develop better teamwork and collaborative skills.	51	3.61	0.87	30	3.37	0.89	21	3.95	0.74
11. The use of ICT is not appropriate for my EFL teaching.	51	2.35	1.03	30	2.57	1.16	21	2.05	0.74
12. Using ICT does not meet the needs of the courses I teach.	51	2.24	0.88	30	2.37	0.96	21	2.05	0.74

TABLE 1

Lecturers' attitudes towards using ICT in EFL education (continued)

Statements	KKU & KMUTT			KKU			KMUTT		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
13. ICT adds little to my knowledge of the courses I teach.	51	2.75	0.99	30	2.87	0.93	21	2.57	1.07
14. The use of ICT is a time-consuming activity.	51	4.33	0.68	30	4.50	0.50	21	4.10	0.83
15. Using ICT makes it more difficult to control the class.	51	2.57	0.98	30	2.77	1.10	21	2.29	0.71
16. Students do not have adequate ICT skills to engage in e-learning.	51	1.61	0.77	30	1.80	0.88	21	1.33	0.48
17. A heavy workload prevents me from using ICT in my teaching.	51	4.55	0.50	30	4.60	0.49	21	4.48	0.51
18. The use of ICT restricts the content of the course.	51	2.53	1.41	30	2.77	1.47	21	2.19	1.28
19. E-learning is counterproductive due to insufficient ICT resources.	51	4.33	0.47	30	4.37	0.49	21	4.29	0.46
20. E-learning is not as effective as traditional face-to-face learning.	51	2.33	1.19	30	2.63	1.29	21	1.90	0.88

Scale: 5=strongly agree, 4=agree, 3 unsure, 2 disagree, 1=strongly disagree

Statements 4 to 10 of the questionnaire covered lecturers' perceptions of the various advantages that ICT can bring to EFL education. The findings show that the lecturers acknowledged the potential of ICT in EFL courses. They strongly agreed that ICT enhanced the interaction between the lecturer and students (statement 5, *M*=4.45, *SD*=0.80) and that ICT helped students become more effective in their EFL learning (statement 7, *M*=4.53,

SD=0.61). None of the lecturers disagreed with both statements. In addition, lecturers also agreed that the use of ICT increased students' motivation to learn EFL (statement 8, *M*=4.39, *SD*=0.80). Overall, the findings suggest that KKU and KMUTT lecturers' attitudes towards ICT did not differ significantly. However, lecturers in KMUTT were slightly more satisfied with the benefits of e-learning.

Alongside positive attitudes, lecturers also reported negative attitudes towards ICT (statements 11 to 19). The majority of lecturers (96.1%) agreed that the use of ICT was a time-consuming activity (statement 14, *M*=4.33, *SD*=0.68). Interestingly, 100% of lecturers agreed that a heavy workload prevented them from using ICT in their EFL teaching (statement 17, *M*=4.55, *SD*=0.50).

The extent to which lecturers felt that they had insufficient access to ICT resources was associated with having negative attitudes towards e-learning (statement 19, *M*=4.33, *SD*=0.47). Most lecturers disagreed with statement 20 "e-learning is not as effective as traditional face-to-face learning" (*M*=2.33, *SD*=1.19).

Findings from the interview

In the interviews, lecturers were asked to express their attitudes to how e-learning affects EFL teaching and learning. All lecturers in KKU and KMUTT (*n*=8) who participated in the interviews gave positive feedback about the implementation of e-learning in EFL classrooms. Most lecturers saw the potential of ICT for EFL teaching and reported a wide range of positive pedagogical impact of e-learning such as the enhancement of face-to-face delivery (*n*=4), greater flexibility in teaching (*n*=3), and better communication and participation (*n*=3). Their comments included these statements.

> *I think e-learning is very good because it provides flexible access to materials and other resources for students. I think students feel it simply meets their needs and allows them to learn more effectively. (Lecturer 4, KKU)*

> *E-learning enhances traditional classrooms and face-to-face learning. It's quite successful, and I can notice how students are happy and more interested in learning when they work with ICT. (Lecturer 8, KMUTT)*

Motivation is regarded as the key to success in learning a foreign or second language (Dörnyei & Ushioda, 2009; Lightbrown & Spada, 1999). From the lecturer interviews, lecturers had positive attitudes towards using ICT in terms of increasing student satisfaction (*n*=5) and motivation (*n*=3). This finding is substantiated by research into e-learning (e.g., Law, Lee, & Yu, 2010; Paechter, Maier, & Macher, 2010) which suggested that e-learning improves motivation and satisfaction in learning. Some comments included:

I find that student interaction and satisfaction improve when using ICT. They participate more in class. (Lecturer 2, KKU)

I think using ICT can improve and sustain student motivation. This can be done by offering them interesting online tasks and materials. (Lecturer 7, KMUTT)

Some lecturers (*n*=3) reported that the use of ICT can reduce their workload. These lecturers considered that they were able to prepare for teaching, through researching and creating materials, more effectively as a result of e-learning. These statements are shown below.

When students do online exercises like grammar or vocabulary, they can get immediate feedback. It's good for them, and also I don't have to spend hours correcting their work. (Lecturer 1, KKU)

I can download some reading materials from websites and design reading comprehension activities. Then, make them available in WebCT so that students can prepare themselves in advance. This can save my explanation time and also reduce my workload. (Lecturer 5, KMUTT)

From the lecturers' perspective, once implemented, e-learning reduced the amount of time needed to run EFL courses. With the help of an interactive learning system, students can learn on their own to acquire receptive skills and can be constantly monitored by the lecturers via the tracking functions of the online learning system. This finding is consistent with previous studies (e.g., Dawson, Heathcote, & Poole, 2010; Ellis, Ginns, & Piggott, 2009; Huang, Lin, & Huang, 2012) that indicated that Internet-based learning can lighten the lecturers' workload and help them do their work more

efficiently. It also suggests that classroom-based EFL instruction can make full use of the advantages that e-learning provides.

Barriers to uptake of e-learning in EFL education

In the interviews, lecturers were asked to identify major barriers that undermine the development and effectiveness of e-learning. Overall, many of the barriers reported by the informants to the study are unsurprising, and many apply to the development of e-learning in higher education more generally. These barriers are discussed below.

Insufficient ICT infrastructure

According to Becta ICT Research (2005), "an adequate level of access to the ICT infrastructure is the foundation of an institution's ability to deliver e-learning effectively" (p. 6). In this study, an absence of good infrastructure was considered as a barrier to the development of e-learning in Thailand. From the interview findings, lecturers commented that insufficient numbers of computers and computer labs were seen as barriers that blocked or discouraged students from using ICT more efficiently in their EFL learning. It can be seen that insufficient ICT infrastructure can hinder attempts to implement e-learning and may affect pedagogies adopted and the overall satisfaction of lecturers in e-learning. Thus, in implementing e-learning, it is necessary to ensure the readiness and availability of ICT infrastructure.

Lack of technical support

In the interviews, lecturers (n=3) saw some drawbacks when using ICT for teaching as there was lack of immediate technical support when having technical problems. This was consistent with a study by McLean (2005) which indicated that the perceived lack of technical support is one of the primary reasons lecturers elect not to engage in teaching and learning with ICT. Lecturers' statements regarding lack of technical support are presented below.

> *I think in our faculty there aren't enough technical staff. The university should employ more technical staff to help both lecturers and students. (Lecturer 1, KKU)*

I think one of the problems is that we don't have enough technical support. When having problems with technology, I find it's extremely difficult to handle them by myself. (Lecturer 6, KMUTT)

Insufficient ICT skills

It is acknowledged that the universities need to ascertain that lecturers have a competent level of ICT skills to participate fully in e-learning, as insufficient computer skills can affect the quality of e-learning (see Park & Son, 2009; Reeves & Li, 2012). From the interviews, most of lecturers generally considered themselves to be competent enough to teach effectively with ICT. However, there were two lecturers who worried about their own lack of confidence in applying ICT in their teaching as well as the pace of e-learning development. These statements are shown below.

I think everyone is aware of the potential of ICT, but we're also a bit worrying about using it or nervous about using it. (Lecturer 3, KKU)

I need to keep up with the development in e-learning. It's a fast growing aspect of education. (Lecturer 6, KMUTT)

Thus, it is necessary for lecturers to have basic ICT skills before they apply ICT in their teaching. Related to this is a concern about appropriate professional development opportunities in e-learning.

Resistance to change

Another barrier to the uptake of e-learning in EFL education is resistance to change in terms of the usability and efficiency of e-learning compared with a traditional paradigm of teaching and learning that is classroom-based and teacher-centred. While there is general awareness of the advantages of e-learning, there is also resistance to change among lecturers. A concern is that lecturers may not be able to accept and adjust to this new form of learning delivery. They are also uncertain about the effectiveness as well as perceived benefits of e-learning over traditional training methods.

How lecturers perceive the importance of e-learning influences how ICT is utilised and integrated into their teaching practices (Hassan & Ibrahim, 2010). In addition, lecturers with a low perception

of the importance of e-learning may not fully consider how to apply e-learning to enhance their students' learning. According to the interviews, although the overall satisfaction with e-learning was quite high, lecturers (*n*=2) still mentioned a lack of general awareness of the potential of e-learning and a lack of understanding of the changes needed in methods of teaching to reap the benefits of e-learning. Lecturers' statements regarding resistance to change are presented below.

> *Sometimes I lack enthusiasm and commitment to e-learning. I also have inadequate understanding of the role of ICT in the development of my courses. I'm not confident about assessing students in e-learning courses. (Lecturer 3, KKU)*
>
> *I feel I lack the background knowledge to participate in online teaching policies. I also concern about the quality of e-learning due to a lack of clear standards. I think there's a need to ensure that e-learning is as good as traditional learning. (Lecturer 6, KMUTT)*

While all lecturers (*n*=8) reported the positive impact of e-learning, they (*n*=4) also addressed some concerns such as the level of self-managing of students, the students' familiarity with classroom-based methods, the reliability of technology, and the importance of face-to-face learning.

It can be seen that e-learning may cause resistance to change due to a paradigm shift from traditional classrooms in a teacher-centred culture towards a student-centred culture utilising e-learning. Therefore, the university should provide more specific support for lecturers who are reluctant to use ICT in an e-learning environment in order to allow them to take the first step in approaching e-learning in their EFL courses. The findings also highlight the need to allocate more time to lecturers for the development of online content.

Quality issues for e-learning in EFL education

The findings from the questionnaires and the interviews were analysed to examine lecturers' suggestions for further development of e-learning in Thailand. A number of issues emerged that universities should consider in optimizing the quality of e-learning in EFL education. These issues involve the roles of universities in

supporting e-learning, the readiness and availability of ICT infrastructure and resources, the availability of technical staff, and professional development in ICT.

Current roles of universities

According to Bates and Sangrà (2011), higher education institutions should develop a strategic plan in relation to the different types of students and should consider the corresponding technological infrastructure, tools, and functionalities. In the lecturer questionnaire, lecturers were asked about university roles in supporting e-learning development.

The findings from the questionnaire showed that lecturers in both KKU and KMUTT agreed that "the university demonstrates a strong commitment to improving e-learning" (M=4.08, SD=0.82). It should be noted that in KMUTT this statement received a very positive endorsement (M=4.90, SD=0.30) indicating that KMUTT appeared to have a stronger commitment to improving e-learning compared to KKU.

Moreover, the majority of lecturers agreed that "the university encourages them to use ICT in EFL teaching" (M=4.22, SD=0.57). However, lecturers in KKU found that "the university's approach to e-learning is still in the trial and development stage" (M=4.23, SD=0.56). In addition, they also felt that the university did not give them adequate time to implement e-learning in their EFL classrooms. In KKU, lecturers disagreed with the statement "the university gives me adequate time to implement e-learning in my EFL teaching" (M=1.87, SD=0.34). Thus, the provision of more time to develop and embed lecturers' use of e-learning in everyday teaching practice could be a key enabling for further developing and increasing the use of e-learning in EFL education.

In relation to technical support, lecturers disagreed with the statement "my university provides efficient technical support in the use of ICT in e-learning" (M=2.25, SD=1.16). This is similar to the interview findings which indicate that there was lack of immediate technical support when having technical problems. In both KKU and KMUTT, lecturers felt that the university provided them sufficient

access to ICT to meet their current needs (*M*=4.22, *SD*=0.94); however, they perceived students' access to ICT as inadequate (*M*=2.06, *SD*=0.64). Interestingly, lecturers in KKU perceived that the university provided inadequate training in the use of ICT (*M*=1.50, *SD*=0.50), while lecturers in KMUTT felt that the university provided them adequate training in ICT (*M*=4.05, *SD*=0.66).

In the interviews, lecturers perceived institutional readiness in terms of development strategies (*n*=5) and financial readiness (*n*=4) as influential criteria for successful e-learning implementation. Since e-learning needs a high level of initial investment, some lecturers (*n*=5) suggested that the university should promote collaboration with other universities by sharing ICT resources and transferring ICT expertise across universities. These statements are shown below.

> *I think our university should share ICT resources and human resources with other universities. This can save costs in e-learning. (Lecturer 4, KKU)*

> *I would say that the university should develop new e-learning content, efficiently and at low cost. This includes the reuse of standardised learning content provided by the partner universities or organisations like Thailand Cyber University. (Lecturer 5, KMUTT)*

Suggestions for quality in e-learning

Suggestions from lecturers about quality in e-learning can be valuable in shaping and improving strategies for the development of e-learning. From the interviews, all the lecturers (*n*=8) regarded the issue of quality in e-learning as very important. However, some KKU lecturers (*n*=3) stated that there was a lack of actual implementation and information about specific quality approaches in the university. There was a reported lack of enthusiasm among lecturers for quality processes and resentment towards top-down approaches to quality in e-learning. In addition, lecturers (*n*=4) mentioned their preference for a 'bottom-up' or 'department-driven' approach to quality issues. Some comments included:

> *As you know, sometimes the university just wants us to use e-learning. Sometimes they should ask us first what we really want*

and the strategies that we want to implement in our own department. (Lecturer 4, KKU)

E-learning should build on bottom-up approaches, what we're actually coping with and what we really need. These ideas are necessary, I think. (Lecturer 7, KMUTT)

It can be seen from the interview findings that there was a perceived need for bottom-up initiatives in order to ensure local grounding, involvement, and innovation. Thus, in order to successfully integrate ICT, both top-down and bottom-up approaches are needed. In Thailand, the government plays a significant role in the strategic policies and funding of higher education in general and in e-learning in particular. Some lecturers (*n*=3) provided views on what the government roles should be in promoting quality of e-learning and ICT support in EFL education. These statements are shown below.

I think the government should provide adequate budgets to support e-learning. Otherwise it'll never work. (Lecturer 1, KKU)

We've technical constraints. Sometimes, the Internet network isn't as good as it should be. Limited budget, I suppose. The government should provide more budgets for the university if they really want e-learning to go on. (Lecturer 4, KKU)

The findings indicate that there are a number of issues which the universities should consider in maximising the quality of e-learning in EFL education. These issues involve the readiness and availability of ICT infrastructure and resources, and professional development in ICT which are discussed below.

The readiness and availability of ICT infrastructure and resources

From the interview findings, lecturers stated that reliable and sufficient ICT infrastructure and network (*n*=8) as well as moderately priced Internet access (*n*=3) were necessary conditions for successful e-learning. Some comments included:

In my opinion, one of the biggest challenges to e-learning is reliability. E-learning requires stable and secure technical systems, good bandwidth, and good content. (Lecturer 1, KKU)

The technology has to be reliable, simple, and easily accessed by students. Otherwise, e-learning will never work. (Lecturer 8, KMUTT)

The findings in this study are consistent with the recommendations in the literature which suggest that e-learning sustainability and the transformation of teaching in ways that fully exploit ICT depend on equitable access to e-learning infrastructures (Seale & Cooper, 2010).

The availability of technical staff

Limitations in the availability of technical staff are considered as barriers for Thai universities in implementing effective e-learning. From the interview data, all lecturers (*n*=8) stated that there was a need for more technical staff to meet the demand for ICT support and to help lecturers with the didactic content of their e-learning materials and with any technical problems they might experience. They (*n*=5) suggested that the university should recruit adequate numbers of skilled specialist staff (e.g., web designers, computer staff, technical staff). Lecturers also identified sufficient availability of technical staff as important ways to encourage them to use ICT (*n*=4) and to make the e-learning experience easier (*n*=3). One lecturer in KKU stated that the ICT department can help provide technical support, and that this department should not include academic staff as they already have a heavy workload.

It can be seen that the management of human resources should be ready for the challenge of e-learning. This includes the sufficient availability of technical staff to help designing, creating, and delivering successful e-learning. The university should also acknowledge the need to recruit a broader range of technical staff to complement academic staff to maximise the quality of e-learning.

Needs for professional development in ICT

The effectiveness of e-learning is greatly influenced by the skills and enthusiasm of lecturers who work with it (Jung & Latchem, 2012). The concept of professional development is widely seen as a key to sustainable e-learning in higher education (OECD, 2005). The data

illustrate current practices and professional development needs among lecturers wishing to introduce new practices in ICT professional development.

In the questionnaire, lecturers were asked to indicate their needs for professional development in ICT on a five-point Likert scale. In addition, they were asked to indicate three topic areas or skills which would be valuable to them in developing their capacity to use ICT more efficiently in their EFL teaching. The lecturers strongly agreed with the statement "I am interested in professional development in ICT programme" (M=4.59, SD=0.49). In KKU, lecturers showed that they were not satisfied with current professional development activities that were available (M=2.03, SD=1.27).

In terms of locations and time for professional development programmes in ICT, lecturers preferred to be trained on the university campus rather than off the university campus (M=4.41, SD=0.57). Interestingly, the majority of lecturers agreed that professional development programmes should be organised during office hours (M=4.00, SD=0.84). This can be explained by the interview findings that they did not want professional development programmes in ICT to be burdensome and increase their workloads and office hours.

A study by Blignaut, Hinostroza, Els, and Brun (2010) showed that collaboration between higher education institutions is considered as a central issue for ICT integration and development. In the questionnaire findings, lecturers indicated that professional development programmes should be organised with colleagues from other departments/faculties within the university (M=3.98, SD=1.02) and with other universities (M=3.82, SD=1.05). This is congruent with the interview findings.

In the interview findings, lecturers (n=3) mentioned that professional development opportunities in e-learning in the area of EFL to date have been limited. Lecturers reported a lack of training in ICT could affect the way they integrated e-learning in their pedagogy. The lecturers' unfamiliarity with using ICT, insufficient ICT skills, and low confidence in using ICT can cause negative attitudes and lead to difficulties in implementing effective e-learning. In addition, it can be seen that the university experienced a high demand for increased

training and professional development for lecturers. Lecturers (*n*=5) suggested that more training in the integration of ICT into EFL teaching should be provided. Lecturers (*n*=5) stated that they wanted to work collaboratively with other universities in order to exchange their experiences in ICT.

In the interview data, lecturers (*n*=8) indicated that time constraints can have a drastic effect on professional development in ICT. All lecturers (*n*=8) reported few opportunities to attend voluntary professional development in ICT. They felt unable or unwilling to commit a significant amount of time to professional development in ICT unless it is compulsory. Thus, the university's organisational processes need to allow for adequate time to be given to enable lecturers to acquire appropriate knowledge and ICT skills. Some comments included:

> *I don't have enough time for professional development in ICT. (Lecturer 4, KKU)*
>
> *Professional growth takes time and support, but sometimes I feel I don't have enough time to attend workshops held at the same time of my teaching hours. (Lecturer 6, KMUTT)*

It takes time and effort to implement ICT into teaching practice. This can be best done in conjunction with colleagues, in a supportive and collaborative environment where ideas can be explored and discussed together (Voogt, 2010). A strategy for sharing good practice could usefully support the capacity for lecturers to learn from others' experience. Two lecturers in KKU suggested that collaboration between novice and expert lecturers in e-learning should be established to reflect their own experiences of using e-learning in their EFL courses. This would have the benefit of introducing novice lecturers to understand the current e-learning situation and instructional strategies and to assist them in preparation for their own e-learning teaching plan.

Various modes of professional development in ICT were reported, for example, seminars, workshops, short training programmes, long-term courses, one-on-one sessions, presentations by peers, and self-training/self-study. In addition, professional development can be university/faculty-led or specialised centre-led. Workshops or

training sessions were the preferred mode of ICT professional development among lecturers (*M*=4.43, *SD*=0.50). The second preferance for ICT professional development was self-paced learning with CD-ROM, text, video, or online materials (*M*=3.82, *SD*=1.05).

The content of training needs to match lecturers' ability, interests, and needs. The content of professional development in ICT reported by lecturers ranged from general technological know-how (e.g., the use of basic software such as Power Point to advanced multimedia software such as Flash and Dreamweaver, the use of Bulletin Board, and the use of Learning Management System), to pedagogical skills (e.g., how to facilitate online discussions, how to implement ICT in a course, and how to evaluate students when using ICT in a course). In other words, lecturers required ICT professional development in both technological and pedagogical areas.

EFL lecturers' roles in making ICT in education work

The findings suggested the university should provide a careful plan of professional development in ICT to meet lecturers' needs. Lecturers perceived there should be more training provided in the integration of ICT into EFL instruction. The university should ensure the provision of a coherent set of training options that reflects lecturers' needs and best practice. ICT professional development programmes should be strengthened in a practical sense, with elements of ICT integration into EFL classrooms being clearly indicated and adapted to students. Effective ICT professional development should be provided to help lecturers move beyond basic ICT skills towards addressing a combination of technical and pedagogical skills in integrating ICT into EFL teaching.

Key issues for quality assurance in e-learning in Thai higher education can be summarised as follows:

1. Institutional development, including a budget appropriate for improving the underlying ICT infrastructure and for supporting e-learning activities and anticipated needs of students, lecturers, and staff;

2. Professional development through funding and providing appropriate professional development in ICT, collective as well as individual.

The findings from this study provide practical guidelines to help set up appropriate quality assurance systems that will enable the university to establish and maintain e-learning quality in pursuit of sustainability. All of these development issues have to be considered in order to improve the success of e-learning in higher education in Thailand.

The case study approach has allowed the researcher to examine the implementation of e-learning in EFL education in higher education in Thailand. However, there are some limitations in this study that need to be identified.

Given the time and resource constraints, the study is limited in scope. It is appreciated that each university in Thailand is different. While this study provides insights into the mechanisms and challenges of e-learning that may usefully be applied in other contexts, the conclusions drawn are tentative and at best can be taken as indicative rather than conclusive. The study cannot be said to give a representative conclusion of e-learning implementation in higher education institutions in Thailand as a whole. Thus, it would be valuable for future research to include analysis of more courses in several universities. It is recommended that further research should be conducted with other populations of lecturers in other Thai universities in order to examine similarities and differences.

More precise results could be obtained from a longitudinal study in which students and lecturers are followed for a period of time. In such a longitudinal design, it would be possible to provide students and lecturers with experience with particular forms of ICT and measure their perceptions at some later point in time to identify the long-term effects of e-learning.

CONCLUSION: SUSTAINABILITY OF QUALITY E-LEARNING

E-learning intersects numerous fields of thought and practice, and cannot be trivialised into a simple formula for success (Bowles,

2004). This study has engaged with multiple issues relating to implementing e-learning in Thai universities. E-learning is expected to grow significantly in the future. Successful implementation of e-learning requires clear regulations of the university, sufficient and efficient infrastructure, strategic planning, sensitive management, and continuous improvement. Sustainability of e-learning depends on a commitment to collaborative development and continuous quality improvement that systematically incorporates feedback from all involved in the teaching and learning process. The implementation of e-learning and the use of ICT in EFL education in Thailand is a complex issue and requires a well-designed and collaborative effort involving the authorities, the universities, the lecturers, and the students.

Results from this research provide pedagogical and administrative strategies that could assist in building a richer e-learning environment and provide the best possible EFL teaching and learning opportunity in Thailand. Finally, it is hoped that this study will serve as a contribution to as well as a practical guideline for the implementation of e-learning in higher education to strengthen e-learning development in the future.

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REFERENCES

Bates, A., & Sangrà, A. (2011). *Managing technology in higher education: Strategies for transforming teaching and learning*. San Francisco, CA: Jossey-Bass.

Barrett, B. F. D., Higa, C., & Ellis, R. A. (2012). Emerging university student experiences of learning technologies across the Asia Pacific. *Computer & Education*, *58*(4), 1021-1027.

Becta ICT Research (2005). *ICT and e-learning in further education: The challenge of change*. Coventry, UK: British Educational Communications and Technology Agency.

Bhuasiri, W., Xaymoungkhoun, O., Zo, H., Rho, J. J., & Ciganek, A. P. (2012). Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty. *Computer & Education*, *58*(2), 843-855.

Blignaut, A. S., Hinostroza, J. E., Els, C. J., & Brun, M. (2010). ICT in education policy and practice in developing countries: South Africa and Chile compared through SITES 2006. *Computers & Education*, *55*(4), 1552-1563.

Bowles, M. (2004). *Relearning to e-learn: Strategies for electronic learning and knowledge*. Carlton, VIC: Melbourne University Press.

Commission on Higher Education, Thailand (2005). *The commission on higher education year book 2005*. Bangkok: Sahamitr Printing.

Czerniewicz, L., & Brown, C. (2009). A study of the relationship between institutional policy, organisational culture and e-learning use in four South African universities. *Computers & Education*, *53*(1), 121-131.

Dawson, S., Heathcote, E., & Poole, G. (2010). Harnessing ICT potential: The adoption and analysis of ICT systems for enhancing the student learning experience. *International Journal of Educational Management*, *24*(2), 116-128

Dörnyei, Z., & Ushioda, E. (Eds). (2009). *Motivation, language identity and the L2 self*. Bristol, UK: Multilingual Matters.

Ellis, R. A., Ginns, P., & Piggott, L. (2009). E-learning in higher education: Some key aspects and their relationship to approaches to study. *Higher Education Research & Development, 28*(3), 303-318.

Fallows, S., & Bhanot, R. (2005). *Quality issues in ICT-based higher education*. London: Routledge.

Garrison, D. R. (2011). *E-Learning in the 21st century*: *A framework for research and practice.* London: Routledge.

Hassan, A. E., & Ibrahim, M. E. (2010). Designing quality e-learning environments for higher education. *Educational Research, 1*(6), 186-197.

Hong, K. S., & Songan, P. (2011). ICT in the changing landscape of higher education in Southeast Asia. *Australasian Journal of Educational Technology*, *27*(8), 1276-1290.

Hu, Z., & McGrath, I. (2011). Innovation in higher education in China: Are teachers ready to integrate ICT in English language teaching? *Technology, Pedagogy and Education*, *20*(1), 41-59.

Huang, E. Y., Lin, S. W., & Huang, T. K. (2012). What type of learning style leads to online participation in the mixed-mode e-learning environment? A study of software usage instruction. *Computers & Education*, *8*(1), 338-349.

Jung, I., & Latchem, C. (2012). *Quality assurance and accreditation in distance education and e-learning: Models policies and research*. London: Taylor and Francis.

Law, K. M. Y., Lee, V. C. S., & Yu, Y. T. (2010). Learning motivation in e-learning facilitated computer programming courses. *Computers & Education*, *55*(1), 218–228.

Lightbown, P. M., & Spada, N. (1999). *How languages are learned*. Oxford: Oxford University Press.

McLean, J. (2005). Addressing faculty concerns about distance learning. *Online Journal of Distance Learning Administration*, *8*(4). www.westga.edu/~distance/ojdla/winter84/mclean84.htm.

Ministry of Science and Technology (2011). *Executive summary: Thailand information and communication technology (ICT) policy framework (2011-2020)*. Bangkok: Ministry of Science and Technology.

OECD (2005). *E-learning in tertiary education: Where do we stand?* Paris: OECD Publications.

Office of the National Education Commission (1999). *National Education Act B.E. 2542 (1999)*. Bangkok: Seven Printing Group.

Paechter, M., Maier, B., & Macher, D. (2010). Students' expectations of, and experiences in e-learning: Their relation to learning achievements and course satisfaction. *Computers & Education*, *54*, 222–229.

Park, C. N., & Son, J. B. (2009). Implementing computer-assisted language learning in the EFL classroom: Teachers' perceptions and perspectives. *International Journal of Pedagogies and Learning*, *5*(2), 80-101.

Pedro, F. (2005). Comparing traditional and ICT-enriched university teaching methods: Evidence from two empirical studies. *Higher Education in Europe*, *30*(3-4), 399-411.

Reeves, T., & Li, Z. (2012). Teachers' technological readiness for online professional development: Evidence from the US e-learning for educators initiative. *Journal of Education for Teaching, 38*(4), 389-406.

Richards, C. (2006). Towards an integrated framework for designing effective ICT-supported learning environments: The challenge to better link technology and pedagogy. *Technology, Pedagogy and Education*, *15*(2), 239-255.

Sang, G., Valcke, M., van Braak, J., Tondeur, J., & Zhu, C. (2011). Predicting ICT integration into classroom teaching in Chinese primary schools: Exploring the complex interplay of teacher-related variables. *Journal of Computer Assisted Learning*, *27*(2), 160-172.

Seale, J., & Cooper, M. (2010). E-learning and accessibility: An exploration of the potential role of generic pedagogical tools. *Computers & Education*, *54*(4), 1107-1116.

Sife, A., Lwoga, E., & Sanga, C. (2007). New technologies for teaching and learning: Challenges for higher learning institutions in developing countries. *International Journal of Education and Development using ICT*, *3*(2), 57-67.

Siritongthaworn, S., & Krairit, D. (2006). Satisfaction in e-learning: The context of supplementary instruction. *Campus-Wide Information Systems*, *23*(2), 76-91.

Thailand Cyber University (2006). *Thailand cyber university report to sub-committee of parliament in educational affairs.* Bangkok: Thailand Cyber University.

Voogt, J. (2010). Teacher factors associated with innovative curriculum goals and pedagogical practices: Differences between extensive and non-extensive ICT-using science teachers. *Journal of Computer Assisted Learning*, *26*(6), 453-464.

Voogt, J., & Plomp, T. (2010). Innovative ICT-supported pedagogical practices: Results from the international study of information technology in education. *Journal of Computer Assisted Learning*, *26*(6), 449-452.

Welch, A. (2011). Introduction: Challenge and change in Southeast Asian education in the global era. In A. Welch (Ed.), *Higher education in Southeast Asia: Blurring borders, changing balance* (pp. 1-20). New York: Routledge.